HOW NATURAL ARE 'NATURAL DISASTERS'? VULNERABILITY TO DROUGHT IN SOUTHERN NAMIBIA COMMUNAL AREAS

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Vulnerability to drought in southern Namibia communal areas

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Abstract

This paper aims to show how so-called natural disasters are in many instances the result of a more complex range of factors than just natural causes. To achieve this, susceptibility to drought of people living in the communal areas of southern Namibia is used as a case study. Drawing on the emerging concept of vulnerability, the case study examines the socio-economic and political factors that influence people's vulnerability to drought. Using information gathered through literature and field trips, the paper identifies those socio-economic pressures that exacerbate the impact of successive droughts. As a result, it is argued that in order to reduce communal farmers vulnerability to drought, socio-economic interventions rather than classic 'hazard mitigation' measures are required.

Key words: vulnerability, mitigation, Namibia, drought, poverty.

Introduction

"*The term 'natural disasters' has become an increasingly anachronistic misnomer. In reality, it is human behaviour that transforms natural hazards into what should be called unnatural disasters.*" (Kofi Annan, 1999)

Past decades have witnessed a growing interest in disasters[1], especially because of increased media reporting of spectacular disaster events. What this paper aims to show is that many of what people perceive as 'natural' disasters are in fact the outcome of a much wider range of factors than just natural causes. Drawing on recent literature on vulnerability and on fieldwork in southern Namibia, the paper focuses on those conditions of the people that make it possible for a hazard to become a disaster. This

requires going beyond the natural hazard (in Namibia's case, drought) to considering the social and economic systems that play a vital role in determining vulnerability of the population at risk.[2]

Although this is often the case elsewhere, it is particularly important in southern Africa. Most of the natural hazards faced in southern Africa are not large scale, sudden events, and as a result, the region is often not viewed as vulnerable to natural hazards as other developing countries. Nevertheless, socio-economic and environmental vulnerability, rather than natural hazards, can lead to disastrous consequences from even modest hazards.

The paper starts with a brief overview of the evolution of the disaster field and explore the concept of vulnerability. This will be followed by an analysis of what sets the African continent experience within the disaster field apart from other countries. The case study will then illustrate the contributing factors that make people vulnerable to drought in southern Namibia.

The evolution of the disaster field

Defined by Burton and Kates (1964: p.413) as "*Those elements of the physical environment harmful to man and caused by forces extraneous to him*", traditionally hazards have been seen as "acts of God" or as exoteric forces, against which humanity had no defence. Humans were generally seen as having no responsibility in creating natural hazards and impotent to do anything, or very little, to mitigate them. Increasingly disaster events associated with natural hazards were seen as 'natural' disasters. While technological advances during the 20th century allowed for the reduction of disaster impacts (through mitigation[3], preparedness and relief measures) the emphasis remained on the naturalness of disaster events.

The consequence of this was the emergence of a technocentric approach, where science and technology were seen as the only way to cope with natural hazards. The application of measuring and monitoring techniques, sophisticated management strategies and

engineering structures (e.g. dams, levees) were seen as the only choices humanity had to withstand the vagaries of nature. Scientific effort was spent on the study of environmental triggers, rather than on human actions, with great emphasis placed on geo-tectonics, climatological, or biological 'trigger' events arising in nature (Bolt *et al.,* 1977; Bryant, 1991; Smith 1992). The hazard science and risk field have thus driven research into the disaster field for most part of the 20th century, building strong alliances with applied scientific disciplines (i.e. engineering). This scientific focus, and the fact that the field has been traditionally driven by the Northern hemisphere, has resulted in the majority of the literature being concerned with large scale, sudden events and their impacts on infrastructures. The policy making of agencies dealing with disasters was, and still is, heavily influenced by this approach.

During the past 20 years there has been a growing realization that the majority of disasters are not only the outcome of interactions between humans and the technological and environmental systems. The realisation of the fact that disasters are also the result of interactions among humans themselves, has led to the emergence of different theories. The 'structural' approach, based on Third World experiences, (in open disagreement with the technocentric approach) focuses on the human dimension and recognises social, political and economic factors as the main causes of disasters, since they directly influence the vulnerability of the populations at risk. An important tenet of this school of thought is its emphasis on the relation between poverty and human vulnerability to hazards. It is the poor people who often find themselves in the path of disasters and that have very few, if any, resources to lessen the impact of disaster events (Torry, 1979). Research also focused on issues of aid and relief to developing countries, refugee management, health care and nutrition (Cuny, 1983; D'Souza and Crisp, 1985).

Other schools of thought

While these two approaches have dominated the thought around disasters, the progressive popularity gained by the field in recent years has resulted in the emergence of other theories of disaster mitigation and management. Alexander (1991) identified other quite separate schools of thought (in addition to the above two approaches). Characterised by

its interest in developing countries, anthropological research (Torry, 1979; Oliver-Smith, 1990) has focused on local communities and the threshold points beyond which communities can no longer survive. Research also focused on the role of disasters in 'guiding' civilization and on the marginalisation of disadvantaged groups in developing societies. The sociological approach focuses on the human response to a disaster event and on the consequences that disasters have on community functions and organization (Quarantelli, 1978; Dynes, Marchi and Pelanda, 1987). The field of disaster medicine and epidemiology concentrates on the management of mass casualties, and the "*epidemiological surveillance of communicable diseases whose incidence rates may increase during the disruption of public health measures following a disaster*" (Alexander, 1991: p.3).

Geographers' interest in natural hazards stems originally from the works of Barrows' in the 1920s, on human ecological adaptation to the environment, and White's work during the 1950s on the increasingly high damages caused by floods in the United States (Burton *et al.*, 1993). This came at a time when there had been unprecedented efforts and expenditures for flood control and what emerged from White's work is that in many instances the application of technology might exacerbate, rather than 'control', the hazard itself (Burton *et al.*, 1993). In 1975, at a time when the disaster field was dominated by physical scientists and engineers, White and Haas advanced the notion that research on natural hazards needed to take economic, social and political aspects into account. They emphasized the role played by individual material wealth in determining unequal vulnerability to disaster losses (Mileti, 1999). Moreover, they also pointed out that 'picking up the pieces after disasters' was not enough. Rather than investing heavily on technological solutions, more effort should be concentrated on mitigation and vulnerability reduction through the equitable distribution among people of costs and benefits of disaster recovery (Mileti, 1999). The link between the application of technology, exploitation of the environment and human well-being has been further examined by geographers (Burton *et al.*, 1993; Mileti 1999) during the past decades, in the light of growing environmental awareness. Following Hewitt's critique (1983) of the traditional view of disasters more emphasis has been placed on the social element.

Although quite different, these diverse sets of literature share the belief that disasters are departures from 'normal' social functioning and that recovery means a return to normality (Blaikie *et al.* 1994). This view has been contested by what has been termed the 'vulnerability approach' that started to emerge during the late 1970s and early 1980s.

While prevailing views at the time saw disasters as the result of natural occurrences seen as 'external' to societies, some researchers started to question the 'naturalness' of disasters and began to look at what makes people vulnerable to hazards. Taking up to a certain degree some of the notions put forward by White and Haas (Mileti, 1999) researchers started to look at how society itself creates the conditions in which people face hazards differently. As Cannon (1994: p.13) argued, what is important is the "*condition of the people which makes it possible for a hazard to become a disaster*", not solely the hazard *per se.* Without denying the significance of natural hazards as trigger events, this approach emphasises the "*various ways in which social systems operate to generate disasters by making people vulnerable*" (Blaikie *et al.*, p.11, 1994). What Cannon (1994) pointed out is that disasters are not natural, rather hazards are natural, but in order for a hazard to become a disaster it has to affect vulnerable people. Risk is seen as a function of vulnerability since those individuals in society who are more vulnerable, are likely to be those most at risk to threats (Vogel, 1997). This approach has progressively gained importance within the disaster field and will be explored further in a later section.

Between the academic world and the work of the applied sciences there is a further category that deals with disasters, comprising civil protection (e.g. fire-fighters, emergency units) and relief organizations. The predominant ethos is that of humanitarianism – the alleviation of suffering in times of disaster. The approach used here has mainly evolved out of the experience and expertise of the international community in dealing with large-scale human suffering and risk management during and after World War II (Binder, 1999). Until very recently the aid community has not been interested in disaster prevention and mitigation. While the concept of mitigation is

increasingly being incorporated in the relief organizations' agendas, it hasn't as yet influenced practice on the ground (Alexander, 1997).

Critical issues within the disaster field

One of the main problems acknowledged by disaster practitioners is a lack of coherency in disaster management advocacy, a result of the fragmentation of the disaster field. Although, the different approaches discussed above should in a way integrate each other, the scientific community is still divided and while some authors concentrate on environmental triggers, others focus on the social sphere. Moreover, even among researchers focusing on a specific environmental trigger (or social aspect), there are specialists dealing with a particular aspect of hazards who have only limited contacts with other researchers. As a result their experience cannot be shared, even though there are substantial overlaps and common ground between them. In other words, there are different groups of people studying different parts of the same thing. This is perhaps not surprising for a field that combines social and physical factors, and in which some 30 different academic disciplines participate (Alexander, 1997).

Even though theory should guide action on the ground, there are massive differences between what theorists write about and what practitioners do. These different spheres - academic, practitioners, relief workers and civil protection structures – have evolved separately from one another with little exchange of knowledge between them. Although a great deal of research has been done it has been mainly carried out by the academic community. Findings are often not easily accessible to a wider audience of practitioners, decision-makers and communities.

Whilst this is generally the case, during the last decades some countries have attempted to bridge the gap between theory and practice. Most disaster policy is still dominated by technical interventions focusing on predicting the hazard or modifying its impact. Increasingly though disaster managers have started to realize how socio-cultural factors influence hazard mitigation, disaster preparedness and response. The traditional view of hazard and potential disasters as extreme natural events has been broadened to that of

'environmental' hazards, underpinned by a range of social, economic and political factors (Vogel, 1998).

Recently, countries like the United States and Australia have progressively shifted their focus towards hazard mitigation, rather than concentrating mainly on preparedness and response. White and Haas' work (1975) played an important role within the United States in influencing the massive shift in thinking from structural approaches towards disaster mitigation of the Federal Emergency Management Agency (FEMA) (Mileti, 1999). However, discrepancies still exist and this change is not reflected in government policies, particularly those related to aid and relief in less developed countries (LDC's). Australia has also recently adopted a more holistic view that includes risk and community vulnerability within the management of emergencies and disasters. This has moved the field from a narrow and hazard based approach to one that actively engages with the community at risk (Salter, 1999). Other countries (Japan, Philippines, some Latin American states and the Caribbean) have also shown a positive shift towards risk reduction as a result of significant investment into applied hazard science, strong political will and involvement of society at all levels.

This shift has not happened everywhere and in many countries the gap is still very pronounced. This is the case for many LDCs, where lack of financial means has been exacerbated by the industrialised countries' reluctance to share resources for disaster mitigation including technology and expertise (Alexander, 1997).

The 1990s United Nations International Decade for Natural Disaster Reduction (IDNDR) has also assisted this change. Although more technologically orientated, the Decade provided a useful platform for discussion between practitioners. Initially, the focus of the decade reflected the strength of the old perspective by failing to distinguish the naturalness of hazards from the human causation of disasters (Blaikie *et al.,* 1994). This focus on the behaviour of nature encouraged technical solutions to the supposed excesses of the 'as yet untamed' side of nature. After the 1994 Yokohama Conference,[4] an increased focus on reducing vulnerability at community level entered the IDNDR agenda

(Davis, 1999). Since then, the concepts of risk management and vulnerability have also entered the mainstream discussion. This has resulted in slow progress towards the integration of science and technology efforts with socio-economic considerations (Bhatt, 1999). Many individuals and institutions, particularly practitioners in developing countries, have begun to focus on local level disaster risk management (Maskrey, 1999).

While these developments are encouraging, many conceptual differences between practitioners remain, affecting interventions that will be tailored to suit different beliefs. Even though the concept of vulnerability reduction has gained increasing acceptance, Hamilton (head of the IDNDR Scientific and Technical Committee) and Press (1999, p.1927) argued that:

> *"...a measure of the progress of civilisation in the next millennium will be the degree to which the world community uses science and technology to improve the quality of life of people everywhere. Addressing the scourge of natural disasters that has afflicted humankind for countless generations is a worthy goal for a new era."*

For many, particularly decision makers, it is much easier to see 'uncontrollable' disasters as responsible for setting back progress and quality of life for poorer communities, rather than looking at how the dynamics of modern society and global markets increase their risk.

Vulnerability to hazards

One of the most significant developments in hazard research during the last two decades has been the growing recognition of the importance played by human vulnerability in the 'making' of disasters.

The re-definition of past theories stemmed firstly from the results of several researchers which showed a continual world-wide increase in the number of disasters leading to higher human and material losses (among others: Sheehan and Hewitt, 1969; Dworkin, 1974; O'Keefe *et al.*, 1983; Mileti, 1999). At the beginning of the 1990s, disaster related

expenditures cost the global economy more than $50 billion per annum, while death tolls varied from year to year around a global average of approximately 250,000 (Alexander, 1993: p.1). By 1997, statistics provided by Munich reinsurance showed that total damage costs had gone up to $60 billion per annum, an amount that still does not include non-insured losses of poor people around the world (Holloway, 1999). Since this has not coincided with an increase in the frequency of natural hazard events (Blaikie *et al.*, 1994; Wijkam and Timberlake, 1984) and in spite of an unprecedented commitment to reduce the impact of natural hazards, the increasing number of disasters and losses could only be explained through increased levels of vulnerability. Secondly, in many instances the outcomes of similar disasters in different social and economic contexts are dramatically different and can only be explained by the spatial variation of human vulnerability (Cannon, 1994).

Blaikie *et al.* have defined vulnerability as:

> *"the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard. It involves a combination of factors that determine the degree to which someone's life and livelihood[5] is put at risk by a discrete and identifiable event in nature or in society"* (1994, p.9).

Vulnerability[6] is a dynamic factor (continuously modified by social changes) that can be seen as the outcome of the interplay of a wide range of socio-economic factors such as material welfare, education, politics, age, gender and religion (Degg, 1992). As a result of this, an environmental process, which may pose a severe threat to one particular society, may not be a hazard at all for a society with different characteristics. While it is difficult to identify those processes and conflicts that influence people's vulnerability to disaster, what is becoming increasingly clear is that to reduce vulnerability, disaster mitigation needs to tackle social issues.

One of the most obvious reasons why this has not happened, particularly in developing countries, is the fact that those conditions that make some people vulnerable do, at the

same time, make life more comfortable for other segments of society. Although there is a general consensus that views underdevelopment as a causal agent in higher levels of vulnerability in developing countries (among others: Wijkam and Timberlake, 1984; Smith, 1992) economic development by itself does not necessarily reduce vulnerability if its gains are unevenly distributed. As O'Keefe *et al.* (1983, p.266) argued " *As population continues to expand and as resources continue to be controlled by a minority*[7] *the real standard of living drops for much of the world's population thus increasing their vulnerability*". It is both the economic system and the way in which a society is structured that determines income and access to resources of the different people in society, clearly affecting their capacity to cope with hazards (Cannon, 1994; Blaikie *et al.*, 1994; Vogel, 1997). Many academics and practitioners are increasingly realizing that disasters are often caused by unsustainable forms of development, poorly managed risk and vulnerability.

A tool for disaster analysis that can be used to identify processes and factors that increase people's vulnerability, is the pressure and release (PAR) model (Fig.1) put forward by Blaikie *et al.* (1994). The model shows disasters as the result of two opposing processes: on one side there are those processes generating vulnerability, and on the other physical exposure (Blaikie *et al.* 1994). Those processes contributing to vulnerability can be linked to several 'root causes' (i.e. political and economic systems), and 'dynamic pressures' (i.e. lack of investments, training, etc).

While the impact of the event will depend on the pressure generated from either side, the 'release' idea conceptualises disaster reduction: in order to relieve the pressure, vulnerability has to be reduced. As Blaikie *et al.,* pointed out, the model is rather simplistic since the hazard is seen as isolated 'from the conditions that create vulnerability'. Moreover it does not provide for changes in vulnerability following a disaster event. The application of the PAR model though is useful in visualizing casual factors and processes that heighten peoples' risk. The model could be integrated with a comprehensive livelihood analysis that will clearly illustrate the composition of current livelihood strategies of households and how these may predispose communities to risk.

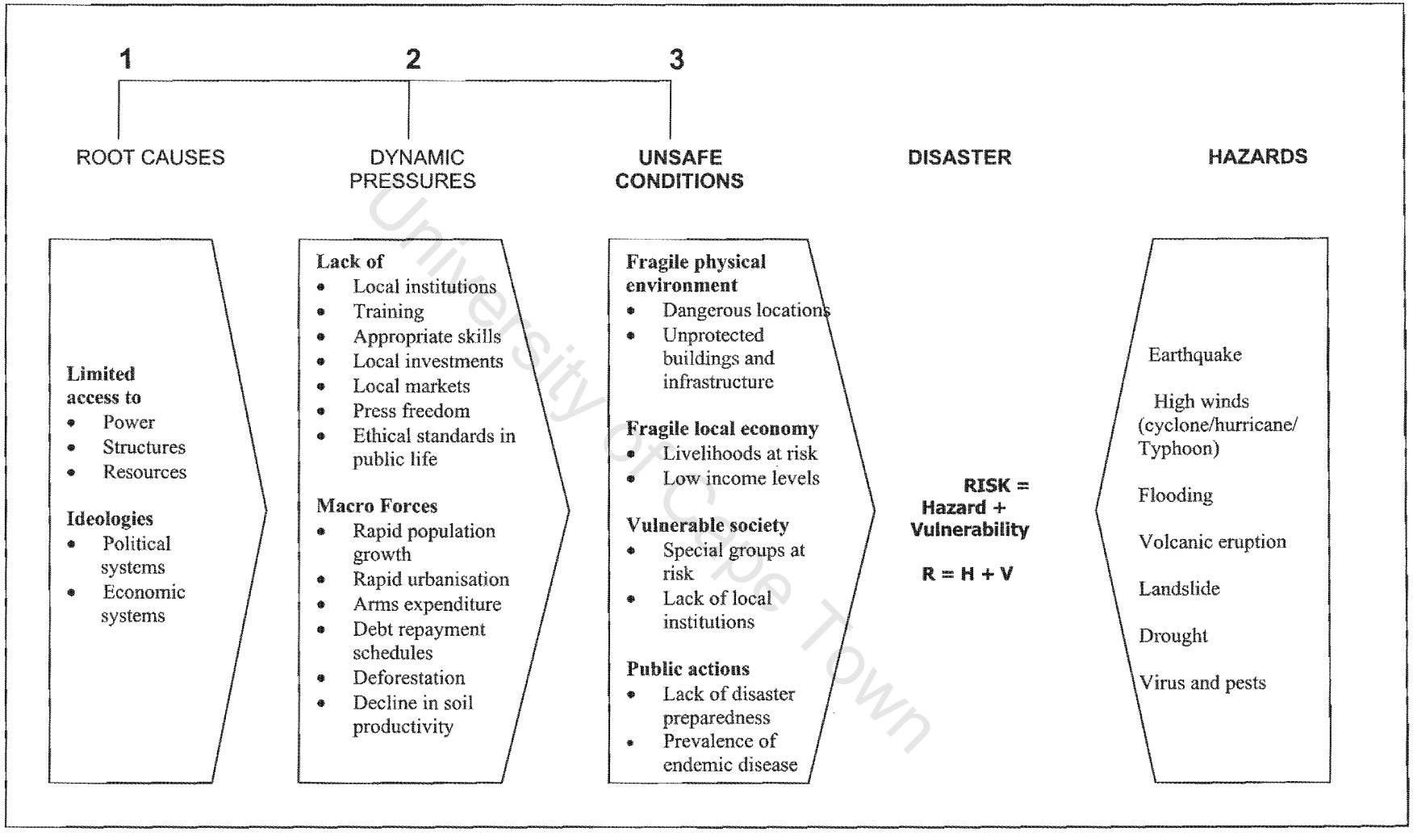

Fig. 2 'Pressures' that result in disasters: the progression of vulnerability. Source: Blaikie *et al.*, 1994

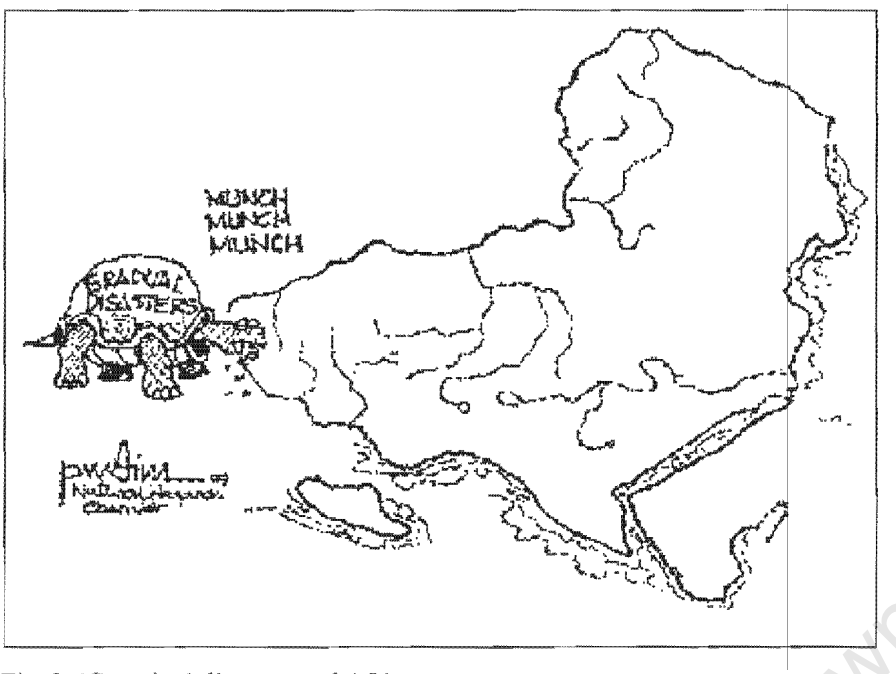

Fig. 2: 'Creeping' disasters and Africa.

Source: Natural Hazards Observer (1999) Vol. XXIII, No. 6.

The African context

Whilst the previous sections summarized the evolution of the disaster field within the 20th century, specific attention needs to be given to how the field has evolved within the African context and what sets Africa 'apart' from the experience of other countries. What has made a difference in the evolution of the disaster literature and research in Africa has been both the nature of the event and the nature of the response, at both national and international level.

As already mentioned, most of the literature (and practice) within the disaster field has been formulated for the developed world (especially the USA) and when transferred to Africa (and other LDCs) it has shown to be of doubtful validity (Alexander, 1991). The main focus on large-scale, sudden events (hurricanes, cyclones, volcanic eruptions, earthquakes or floods) and their impacts on infrastructures has little attraction for a continent where the risk profile is considerably different. Although much of Africa also faces these types of occurrence, most of the natural threats in Africa are not dramatic sudden onset events, but relatively slow onset hazards occurrences. Drought, land degradation, desertification and HIV/AIDS (among other diseases) are responsible for

vast human, crop, livestock and environmental losses (Holloway, 1999) In many instances, the application of science and technology has not been able to prevent or mitigate so-called 'natural' disasters, often brought on by socio-economic circumstances. Disaster managers generally work on the assumption that "*disasters disrupt an otherwise functioning social, economic and political reality*" (von Kotze, p.148, 1999) and try to restore 'normality'. But in a continent with a long history of dispossession and unequal distribution of resources, it is often those 'normal' social, economic and political conditions that put people at risk in the first place.

Interventions in the African continent have traditionally been closely linked to complex emergencies and conflict. As a result the literature reflects a strong humanitarian bias and concentrates on the large-scale events requiring external assistance. Little attention has usually been given to the multiple small-scale events that are part of everyday life in rural Africa. Most disaster interventions are characterised by relief-oriented humanitarian assistance on a national or international scale. Usually disaster assistance is triggered by the actual disaster event, and rarely do emergency management agencies and NGOs address disaster prevention, the structure and functioning of economic and social sectors, mitigation and vulnerability reduction (Alexander, 1997; Binder, 1999). As a result, research has mainly focused on issues of war, refugees, food aid and relief. Although the extensive role of external agencies in providing relief has been crucial in alleviating suffering, there have also been negative consequences. Protracted aid has not only created a culture of dependency, it has also imposed a 'relief' view that has suppressed local coping strategies and the opportunity to consolidate indigenous knowledge.

International aid agencies usually bring in the expertise and resources and there is a tendency of taking 'control' of the situation and viewing the local population as passive and often 'naive' victims (Anderson and Woodrow, 1991). Both external and national interventions have tended to focus on emergency preparedness, relief and response seen usually as expensive, technical interventions aimed at the containment of the hazard. Decisions during relief operations are usually made by northern experts focusing on the technical/scientific aspects of the matter. As a result local knowledge and understanding

is usually overlooked, and traditional coping mechanisms are often disrupted by the mode of assistance (Anderson and Woodrow, 1991). Communities throughout southern Africa, for example, see droughts as "*recurrent events that have dominated the lives of the ancestors as much as they dominate the lives of people today*" (von Kotze, 1999: p.36) and have developed a range of coping mechanisms that can easily be disrupted by wrong interventions. The presence of international relief agencies also results in literature being generated by 'external' researchers and often published in their own countries. This has inhibited the emergence of local knowledge and understanding about risk, a crucial factor in vulnerability mitigation that needs to be locally, and not externally, driven. Moreover the language used within the hazard or disaster reduction fields is not easily understood within the framework of the different African languages. As researchers have pointed out (Holloway, 1999; von Kotze, 1999) most local languages do not differentiate between the words risk, hazard and disasters when literally translated, although they might have the same concepts in their meaning systems. Greater effort is thus required by risk reduction practitioners to build conceptual and perceptual bridges between scientific and indigenous interpretations of risk. In this regard, little effort has been expended in Africa compared to Asia or Latin America (Holloway, 1999).

While other developing countries in Asia and Latin America have generated their own science, in Africa research is often not encouraged unless funded by foreign aid, and usually tends to focus on preparedness and relief operations. Among other reasons that might have inhibited the emergence of local knowledge is the fact that Africa has been more unstable than other continents. In Africa's newly constituted democracies issues related to development and national security have been historically "*associated with struggles for independence and freedom from political, military and other forms of oppression*" (Holloway, 2000, p.81). This has meant that unlike other countries, African states have not given priority to sustainable efforts needed to reduce the impact of natural hazards. Furthermore, in Africa the IDNDR message has been associated with averting large-scale natural events that may or may not happen at some future point. In a region where urgent survival issues dominate people's lives and where large sudden-onset

occurrences are relatively rare, disaster reduction is hardly viewed as a priority by the media, educators and policy makers (Holloway, 1999).

The vulnerability assessments that have been conducted in several African countries have generally focused solely on vulnerability to food security (Vogel, 1997), rather than being multi-sectoral like in other regions (e.g. Asia, Latin America). This is because in Africa the concept of vulnerability has evolved out of the relief literature on food security. This has meant that food security has been equated to food relief during emergencies and interventions (and literature) have focused on preventing widespread malnutrition and losses of life during emergencies, rather than on understanding and protecting the livelihoods of those at risk (Holloway, 1997). Vulnerability outside this context is seldom addressed by decision-makers or disaster managers. This is often because vulnerability causal factors are seen as too diffuse or deep-rooted to address or because to address these issues would in fact challenge the status quo of ruling elites in African countries. At both national and local level there is usually little political will to address the issue of long-term disaster reduction by implementing mitigation measures, especially when any new disasters results in cash flows entering the country as aid.

Unfortunately, there is little long-term value in focusing on hazards without addressing vulnerability and its causes, as it is clearly illustrated by the case study on southern Namibia presented in the next sections.

Namibia's southern communal areas: case study

Namibia, the driest country south of the Sahara, lies on the southwest coast of Africa. The south of Namibia is especially arid and thus very vulnerable to desertification due to stresses caused by human activities. During the last 15 years, Namibia, and southern Africa as a whole, has experienced a procession of droughts that had serious consequences, particularly for rural communities. Unfortunately, the only event that has been documented to a certain degree is the 1992/1993 drought. This is probably because

this was a large-scale event that affected all southern African countries and attracted lots of 'interest' from foreign donors and aid agencies.

The southern region of Namibia is divided into the Karas and Hardap regions. Although the 2 regions cover about one third of the total surface of Namibia, they are very sparsely populated and account for only 7.7% of the population of Namibia, which translates to approximately 123,300 people (Ministry of Health and Social Services, 2000). The Hardap and Karas regions have a population density of 0.73 people/km^2 and 0.45 people/km^2 respectively (Department of Rural Development, DRD, 1992). The southern communal areas are comprised of Namaland between Keetmanshoop and Mariental (Namaland 2 145 098 ha), the Bondelswarts area (171 126 ha) southwest and the Warmbad area (14 523 ha) south of Karasburg (DRD 1992). The location of the southern communal areas is shown by Fig.3.

The weather is characterised by high temperatures, low humidity and high evaporation rates, which greatly exceeds rainfall (Boonzaier *et al.*, 2000). Rainfall is low, uneven and extremely variable (both temporally and spatially), and lengthy periods of drought must be regarded as normal. It is not unusual that extended dry periods are followed by abnormally wet years, accompanied by flooding (Boonzaier *et al.*, 2000). Drought periods often coincide with El Niño events in the Pacific Ocean and wet years with La Niña events. The southern communal areas are located in a summer rainfall area (mainly between January to April) where rainfall ranges between 50 to 200mm per year (Tarr, 1998). The main agricultural activity within the communal areas is small stock farming since, due to the arid nature of the regions, no dry land crops can be cultivated.

The area, and Namibia as a whole, is considered to be particularly sensitive to the effects of global climate change. Although there are many possible future scenarios and a great deal of uncertainty, the predominant views see southern Africa as becoming hotter and drier by the year 2050 (Hulme *et al.*, 1996). An alternative view suggests that future global warming will entail more rainfall in southern Africa. Whether precipitation increases or decreases though, temperatures in the area will almost certainly rise (Hulme

et al., 1996; Tarr, 1998). This will lead to increased evapo-transpiration, which could adversely impact water balance in the area, with implications for both farming and water supply (Tarr, 1998).

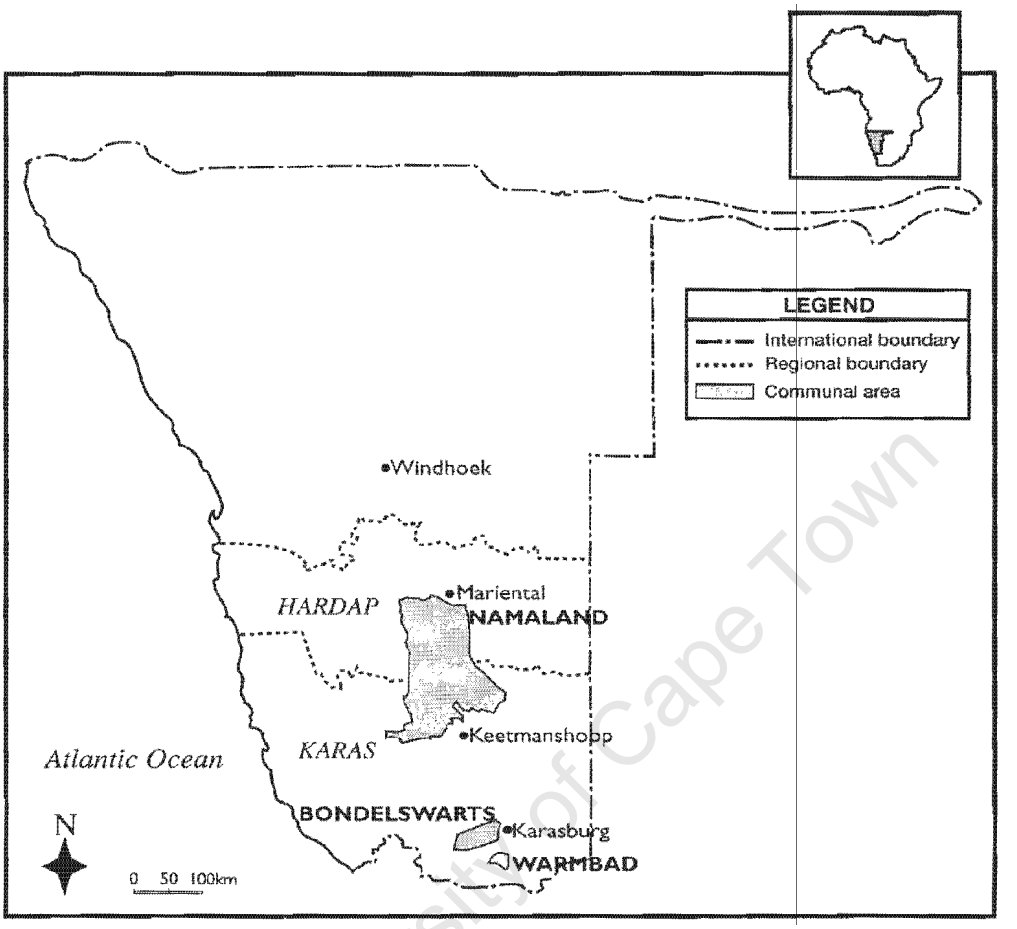

Fig. 3: Location of communal areas in the southern regions of Namibia

Environmental conditions have progressively declined in communal areas[8] where overstocking has resulted in overgrazing and slow, but relentless land degradation. Overuse and environmental degradation need to be seen within the context of high poverty levels amongst rural communities. Impacts of successive droughts on people living in communal areas have become increasingly more severe and there is little doubt that vulnerability to drought in these regions has steadily increased.

The next sections will look at the causal factors and processes that have shaped the lives of communal farmers in southern Namibia and on the capacities and resources that people can draw on during times of crises. This analysis will follow the PAR model

'structure' put forward by Blaikie *et al.* (1994) and illustrated in Fig. 1, p.11. By analysing the root causes of vulnerability we will be able to identify those processes and factors that are influencing people's ability to cope with drought. These are then schematically represented in Fig. 4, p.21. Causal factors, processes and vulnerable conditions are highlighted in bold throughout the text.

Root causes of vulnerability (Refer to Fig. 4, p.21)

"...drought in Namibia is broadly a question
of poverty. During drought years [...] life
for the majority of people in the rural areas
becomes intolerable..." (Giorgis, 1995)

Poverty[9] can be seen as the main root cause[10] of vulnerability to drought in the communal areas. In Namaland poverty is the result of different factors, which combine life in a harsh environment to historical, political and social dynamics. Past colonial rule was responsible for a systematic process of impoverishment through discriminatory policies such as homeland systems, contract labour system and influx control (Devereux *et al.*, 1995). Extensive stock-farming has been the dominant land use in the study area since pre-colonial times. However since then access, ownership and utilisation of pasture has not remained constant (Boonzaier *et al.*, 2000) resulting in a highly skewed and unequal distribution of land.

Historically, the south of Namibia has been inhabited by the Nama who employed a nomadic pastoral regime, utilising the available natural resources. Daily living involved the migrational herding of flocks of sheep and cattle and their life was well adapted to the difficult environmental conditions. Nomadic pastoralism did not result in overgrazing (due to smaller herds and constant tracking of pasture availability) or disrupt migration patterns of other animals (Boonzaier *et al.*, 2000). The advent of colonialism drastically altered land use practices. In 1884 parts of Namibia were declared a German Protectorate and steady German encroachment of land continued throughout the 1890s. Extensive interventions in the landscape (e.g. artificial watering points, fencing, roads and railways)

opened up the area, allowing for the sedentary and market-orientated stock production seen today (Boonzaier *et al.*, 2000).

The brutal suppression during the 1904-1907 Herero-Nama rebellion against colonial rule, marked the start of a history of dispossession for indigenous people. The German state initiated a policy to expropriate Nama and Herero lands. By 1907, all Nama and Herero lands officially belonged to the State. Afterwards a small portion of land was officially reserved for the Nama in the south, but for the greater part, Nama were living as illegal 'squatters' in previously ancestral land (Boonzaier *et al.*, 2000). During the First World War, the Union of South Africa successfully invaded German South West Africa, and the 1919 Versailles treaty awarded a mandate to South Africa to govern the territory. From then, Namibia was administered under South African laws. In 1948, South Africa refused to hand over its mandate to the newly created United Nations and continued its occupation, integrating its apartheid policy into Namibian society. The indigenous people consequently experienced ethnic segregation and 'separate development' during the era from World War II up to independence in 1990 (Boonzaier *et al.*, 2000). Discriminatory land and **labour policies**, an **extractive economy** and **restrictive trade practices** reduced Namibia to a captive market for South African goods and created a highly bimodal distribution of income (Devereux *et al.*, 1995). The unequal division of land was formalised by the Odendaal Commission in 1964[11] when Namaland, and a number of other **Reserves, were established**. This effectively ensured that Nama (and black people in the rest of Namibia) would have few social, economic and political rights (Boonzaier *et al.*, 2000). The rest of the land in the south was in the hand of white farmers.

After independence, little changed with regard to settlement patterns. Present land tenure regimes in the south are still a reflection of the area's complex political history and communal farmers are confined to approximately 10% of the total land farmed in the two regions. Pre-colonial nomadic practices are no longer possible and the resultant sedentarisation of the livestock and overstocking of animals (due to limited land available to communal farmers) has had a negative impact on the semi-arid environment. **Unequal access to land** is seen by many as the main cause of rural poverty in Namibia (Giorgis,

1995). Moreover, a shortage of alternative income sources among farmers forces them to maximise herd size, with cultural factors also playing a role in this respect, thus exacerbating overgrazing and land degradation.

The effects of periodic drought have been severe. Land and natural resources degradation in Namaland means that it can hardly support the estimated 30,000 people living there and many are being forced to leave the communal areas to search for employment elsewhere (Giorgis, 1995). This is not only the result of unequal access to land. People living in communal areas **do not have secure, exclusive tenure** over land and natural resources. This means that others cannot be excluded from using natural resources that have been well managed by someone else (NAPCOD, 1996). Communal farmers have thus no incentive for focusing on sustainable management of the land. Moreover the lack of rights over the land means that they are not able to obtain credit (to buy land or fodder) from banks since they have no guarantee to offer. Many see maximising the size of their herds as the only viable option to prepare themselves for drought years, when losses of livestock are inevitable. These problems have been exacerbated by fencing off of land by wealthy individuals for their own use. This reduces the amount of land available to communal farmers and livestock mobility even further. Overgrazing of the remaining land is thus inevitable (NAPCOD, 1996). The recent Land Tenure Bill (2000) states that fencing in communal areas is illegal, unless permission by the Minister has been granted (Boonzaier *et al.*, 2000). Unfortunately, the Bill fails to deal with the more important issue of **land tenure**. While many have criticised the lack of public consultation during the drafting of the Bill, people point at a **lack of political will** in wanting to re-address historical inequalities (Staphanos, pers.comm., 2000). The situation is complicated by the struggle of traditional authorities to preserve the status quo and remain the 'custodians of the land' in communal areas (Boois, pers.comm., 2000).

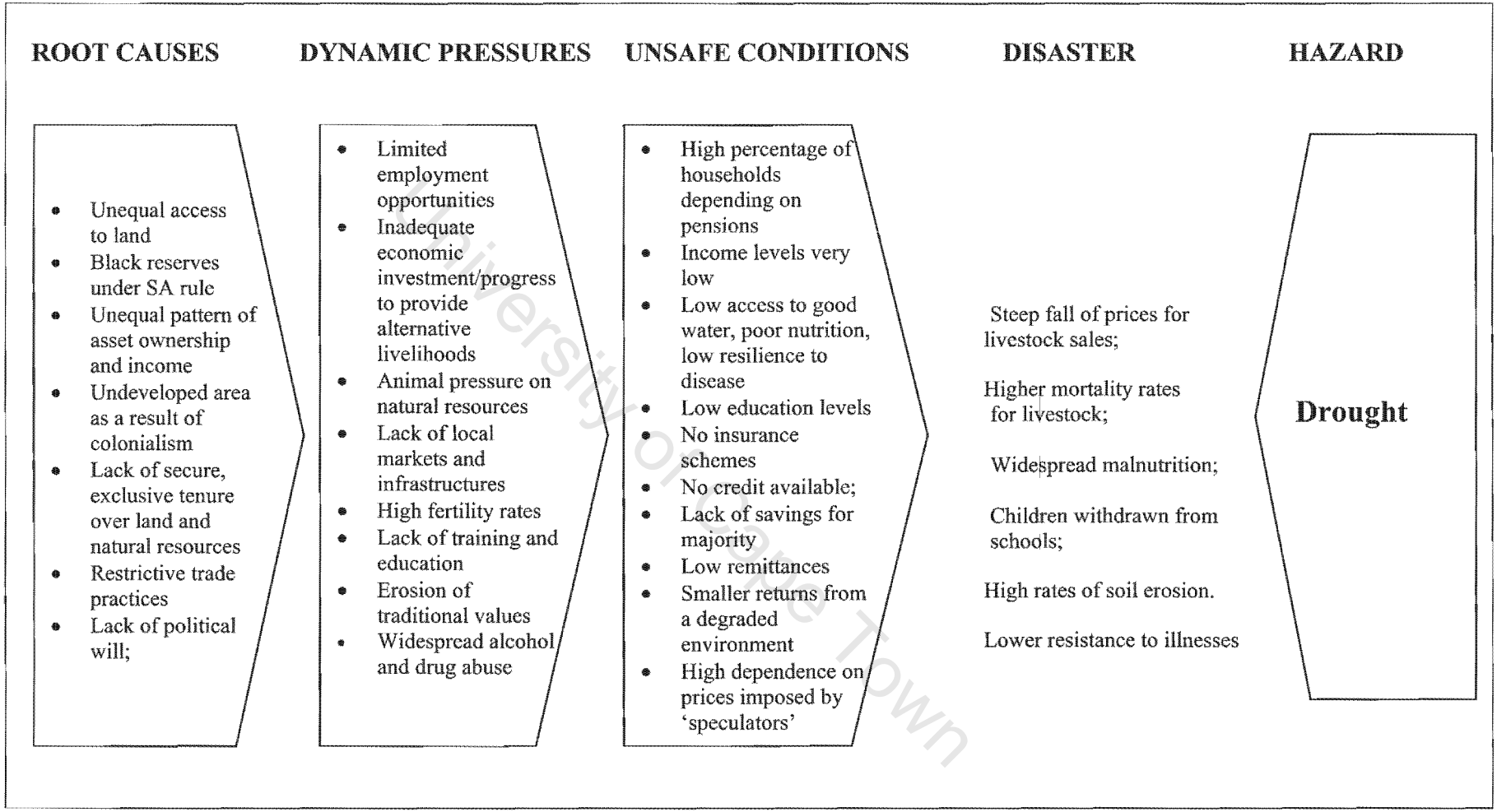

Fig. 4: Pressures leading to vulnerability to drought in the communal areas of southern Namibia.
Adapted from: Blaikie *et al.*, 1994.

Dynamic processes (Refer to Fig. 4, p.21)

"...no amount of calamity [..] descending from the clouds lightning or stealing from the darkness like pestilence, could alone provide the substance of [this] story. The calamities do no simply happen, nor are they sent; they proceed mainly from actions, and those the actions of men." (A C Bradley, 1906).

As a result of its history, low population density and barren landscape, the **south is not well developed**. Communal areas in particular **lack infrastructures and easy access to transport, social services, markets**. Levels of poverty are high and a striking feature is the almost exclusive reliance on pensions and livestock. The informal sector is practically non-existent mainly as a result of lack of access to markets, low population density and limited purchasing power among people (Boonzaier *et al.*, 2000). Moreover, long distances to bigger settlements cause constraints with regard to transport costs and competition with imported goods. Donkey carts are the most important means of transport. The people who own the donkey cart do not necessarily also own the donkeys or horses they need for running the cart. The carts are therefore lent to other community members in exchange for firewood collection, cash or other services (DRD, 1992). Self-employment within the communal areas encompasses mainly mobile shops, local shops and the occasional place for repairing donkey carts or bicycles. Occasionally goods are exchanged for services, e.g. for collecting firewood, washing clothes or herding animals (DRD, 1992).

Within the communal areas there are limited formal employment opportunities in the public sector (teachers, extension officers, nurses and hostel staff), churches and the occasional job as farm worker or shepherd (DRD, 1992). Devereux *et al.* (1993) noted that farm workers in Namibia are usually poorly paid, with a mean income per households in 1992 of approximately US$ 30 per month. Although this does not include payment in kind (food, clothes given by the employer), it clearly illustrates many households struggle to make ends meet in a country where prices for basic necessities are usually high as almost everything is imported from South Africa. Generally remittances

from family members working in urban areas play a small role in supplementing meagre (if any) local incomes. **Unemployment** rates in both regions are high and stand at around 41% for the Hardap region and 23% for the Karas region[12] (Central Statistics Office, 1991) although Giorgis (1995) pointed out that in rural areas underemployment, rather than open unemployment is the main problem.

In the absence of any substantial food crop production, food security for families in communal areas is closely related to their cash income (Devereux *et al.,* 1993). Old age pensions play a crucial role in communal areas as the main source of income. Often whole families survive on the NS200 per month received by the pensioner. High dependency on pensions poses a major threat to household food security since, when the monetary flow ceases through the death of the pensioner, many families cannot afford to buy basic necessities. The number of female-headed households within the settlements is high due to male migration, and due to the fact that is common to find a grandmother living together with some of her children and grandchildren (DRD, 1992).

Although the majority of people in communal areas own livestock, many families own very few animals and they can hardly make a living out of them, particularly in dry years when there is less grazing available and losses of stock are common (Devereux *et al.*, 1995; Kocito, pers.comm., 2000). Animals are considered an investment and saving capital, which can be turned into cash during emergencies. A coping strategy for farmers during drought is to reduce their stock numbers (Rooi, pers.comm., 2000). Unfortunately in times of drought livestock prices decline considerably with market speculators taking advantage of the situation. As a result the farmers are left with less livestock and are often not able to buy livestock back even during years of good rain. Although the sale of animals is not an important contributor to the cash income, milk and meat provided by the animals are vital in supplementing food bought from shops. Collection of veld fruits is done to a varying degree, but it is quite limited (Devereux *et al.*, 1993).

Inadequate provision of education and vocational training is one of the most severe and enduring legacies of colonialism (Devereux *et al.,* 1995). Educational levels,

although improving, are extremely low throughout the communal areas, with many adults never having attended school. Poor families are often hard pressed to pay for school uniforms, school or hostel fees. Secondary schools are located outside communal areas and the added cost of boarding school is frequently too high for many families. Often children leave school when their parents can no longer afford to pay for their education. (Devereux *et al.,* 1995). Present day lack of investments in workforce training results in workforce being employed from South Africa, at higher costs than local labour (Devereux *et al.,* 1995). Few people in the settlements have access to energy supply and paraffin lamps, candles and firewood are the most common form of light. Firewood is also the main energy source for cooking, and very few people use paraffin and gas. The use of a gas stove requires a starting capital for the stove and the gas bottle and is therefore inaccessible for the majority of people living in communal areas (DRD, 1992).

Low income, poor living standards and low levels of education are exacerbated by **high fertility rates** (the growth rate for Namibia is 3.1%) in both regions and a high incidence of teenage pregnancy (Boonzaier *et al.*, 2000). Young women who become pregnant have to leave school and rarely can afford to go back. Loss of traditional support mechanisms for unwed mothers and lack of a legislation forcing unmarried men to contribute financially to their children's upbringing, has led to the impoverishment of many women (Devereux *et al.,* 1995). A slight decline in population numbers within communal areas is probably due to higher mortality rates due to HIV/AIDS prevalence and of out-migration (Boonzaier *et al.*, 2000). Young males (and increasingly women) migrate to bigger centres to seek employment and leave children with their grandparents.

Economic poverty in communal areas is reinforced by the political and psychological disempowerment felt by many communities. A **dependency syndrome** has developed as a result of the paternalistic practices of the colonial administration and the expectations (largely unfulfilled) of improved living conditions generated during the independence struggle (Devereux *et al.,* 1995). The active repression of community initiatives and agency-community partnerships has not only impoverished communities, but has also removed much of the incentive for communities to take control of their own destinies[13].

This has been compounded by the provision of aid from the government and foreign donors and by obstructive traditional leaders who tend to hinder rural development, rather than promoting it (Devereux *et al.,* 1995). The increasing influence of western culture and the expectations it raises, a progressive erosion of traditional values, poor living standards and unemployment have exacerbated problems of alcohol and substance abuse, especially among the younger generations (Boois, pers.comm., 2000; Uldrich, pers.comm., 2000).

Although reversing 100 years of colonialism is not easy task, there is a pervasive sense amongst Nama communities of 'being ignored' by the government (Boois, pers.comm., 2000; Chiminello, pers.comm., 2000). After independence, when the government started with development projects they focused mainly on the northern regions. While this can be explained by higher population numbers in the northern regions, people in the south feel that the Nama continue to be discriminated against, despite new political circumstances.

Unsafe Conditions (Refer to Fig. 4, p.21)

As the next section will show, pressures derived from root causes and dynamic processes have resulted in what Blaikie *et al.* termed 'unsafe conditions' for the majority of the population living in communal areas. Processes identified as 'root causes' have effectively influenced the allocation and distribution of resources and resulted in the marginalisation of communal farmers in the south. These roots causes have then been translated into people's vulnerability (unsafe conditions) by those processes identified as dynamic pressures that have contributed to: a **high reliance on pensions**; **low-income levels**; **poor nutritional and health status**; **absence of insurance** or **credit schemes** for the majority of the population; **low remittances** from relatives; **reliance on food aid** during emergencies; a **degraded environment** which yields smaller returns; a **lack of power over livestock sale prices** and a feeling of disempowerment and **dependency** on government handouts (Fig. 4).

Effects of the 1992/3 drought event (Refer to Fig. 4, p.21)

"...hazards are natural, but in general disasters are not, and should not be seen as the inevitable outcome of a hazard's impact" (Cannon, 1994).

As Blaikie *et al.* (1994, p.5) wrote, vulnerability results from social, economic and political processes "*that influence how hazards affect people in varying ways and intensities*". Droughts are, and always have been, a normal part of life in southern Namibia but today the naturally low and variable rainfall is seen as more of a problem and affecting more people than it did in the past (Seely *et al.*, 1995). These perceptions are correlated with increasing populations of people and domestic livestock and changing farming practices, livelihoods, life styles and expectations of people. While droughts are usually defined in terms of shortage of rainfall, their effects are not only on water supplies but on people's livelihoods as well. Seely *et al.* (1995: p.51) define drought as "*low and variable rainfall conditions negatively affecting people and their domestic animals*". Impacts of drought vary with respect to different persons or households and to the resources that each household or individual has access to.

Not much attention has been given in the past to southern Namibia by researchers, international agencies and NGOs, probably because of its low population density. Little is documented also with regard to drought and the 1992/93 event is the only episode that has been researched and documented to any significant degree in Namibia. Information on the impacts of drought events on people are therefore scarce, and some of it inferred from countrywide reports rather than from studies at local level.

During the 1992/3 drought, livestock mortality greatly exceeded sales: livestock owners were either unwilling or unable to sell animals in significant numbers before they died or became unmarketable. Devereux *et al.* (1993) estimated that during the drought mortality reduced mean goat herds by about 40%. Households herd size in communal areas nationwide was estimated at 30, and by the end of 1992 had diminished to 17 (the minimum herd size for goats to maintain viability over time is estimated at 30-35). These data refer to communal areas in both southern and western regions and are inferred from

a sample of households interviewed in 1993. As such these data cannot give an accurate perspective on impacts in southern communal areas but do show the likely implications for many households in the south. With herd reduction in many instances below viable levels, the impacts for household incomes are severe, given the central role of goats as savings. Many households may never recover and be able to reconstitute their herds. Out-migration towards urban centres increases during drought and leads to higher numbers of female-headed households.

Fig. 5: 'Namaland': goats grazing on the available vegetation. Photo: Kuiper S

Across the whole country, from 1992 to 1993, the number of households selling their animals diminished by approximately 50%, and **earnings from the sales decreased** drastically. This was probably due to less animals available for sale, deteriorating quality of the animals and lower than average prices (Devereux *et al.*, 1993). What this clearly illustrates is the importance of a steady and reliable source of income whose value does not vary with drought or other economic shocks to the households

Although scarcity of data makes it difficult to determine the extent or type of dietary changes induced by drought, household **food consumption levels fell** during the drought throughout the country. Consumption dropped to only one meal a day in rural areas, usually for people within the 16-59 age bracket suggesting that rationing was done to protect food intake of children and elderly people (Devereux and Tapscott, 1993). Because of a paucity of forests and rivers, households in the south cannot supplement their diets with wild foods or fish. Water sources may become erratic or no longer usable, resulting in increased time needed for collecting water. Tending of animals is also disrupted since longer distances need to be walked to reach grazing and water (Devereux *et al.,* 1993). When this increased workload is seen within the context of reduced food intake, the negative implications for individual nutrition and health status are clear.

Another coping strategy during drought, is to reduce spending on non-essential items. Children from communal areas might be withdrawn from school in order to save money on school fees and related expenses (uniforms, books, stationery) or because they are needed at home to tend animals or fetch water (Devereux *et al.*, 1993). Moreover, children may be too hungry to either walk to school or to concentrate on lessons when at school, unless they are staying at boarding schools in which case meals are provided. Since the poorest households are the most likely to **withdraw children from education**, the drought can be seen as entrenching long term poverty through this and other coping strategies such as the borrowing of either food or cash (Devereux and Tapscott, 1993). Assets sales during stressful times in southern communal areas are negligible (Kocito, pers.comm., 2000) probably because people do not have much to sell and because of their distance from markets.

As Blaikie *et al.* (1994) pointed out, hazards themselves do alter the set of resources available to households and alter the pattern of recoverability of different groups of people. In southern Namibia recent drought events have clearly intensified people's vulnerability, thus illustrating the inadequateness of seeing disasters as the result of natural events detached from social systems. The case study clearly illustrates the

relationships, outlined in Fig.4, between different 'pressures' and their effect on people's ability to cope during droughts.

Approach to Drought management in Namibia

Following the impact of the 1992/3 event, drought has been recognised as a serious threat to people's livelihoods by the Namibian government. Prior to independence, the government did not embark on countrywide disaster preparedness. Independence from South Africa in 1990 marked the end of a guerrilla war and has only provided the government with few years to engage all sectors of society in the development process (Frayne, 1997). The country was divided into many second tier authorities based on tribal divisions and the government itself was a fragmented structure with different services and programmes. While the administration for whites had programmes in place to assist commercial farmers through subsidies, fodder and agricultural credit during drought periods this was not the case in the other administrations (Dumeni and Giorgis, 1993). Very little was done to detect, prepare for, mitigate or respond to the effects of disaster (drought, flood, etc.). The Namibian government therefore inherited very little, if any, institutional capacity to deal with emergencies, and especially so in marginalized communal areas of the country (Dumeni and Giorgis, 1993).

Up to present the government has mainly focused on relief. During the 1992/3 drought, relief operations and food aid kept many families alive. The government received substantial aid from the international community, and intervened mainly by providing food aid and subsidised fodder and mineral licks to communal farmers, setting up food-for-work projects, supporting selling prices through a livestock marketing subsidy and supply water for domestic needs through water tanks and boreholes drilling (Devereux *et al.,* 1993; Vogel, 1997). Several problems[13] were identified with relief interventions, emphasizing the need for a long-term strategy rather than ad hoc interventions during emergencies (Devereux *et al.*, 1995).

Lack of data on the 1994/95 and 1995/96 drought events doesn't allow for a comparison on government interventions (Vogel, 1997). What is clear though, is that government's action to date has been reactive, attempting to limit the socio-economic impact of drought, rather than being part of an ongoing proactive strategy. Relief and food security are also the main focus of the Namibia National Disaster Plan. The policy sees disasters as "*a serious disruption of the functioning of a large segment of Namibia's population*" (Giorgis, 1998: p.4) and recovery as a "*return to normality*" (Giorgis, 1998: p.6). But, even in 'normal' years life in communal areas does not change much for people. As Giorgis (1995) noted, the problems that emerge during drought in Namibia are not directly caused by the natural phenomenon, rather by government failure to address social and economic disparities. While relief is vital during emergencies to alleviate the effects of drought, the focus needs to shift to long-term disaster mitigation measures that have at their core vulnerability reduction.

Although government interventions have not yet focused on vulnerability reduction, the recent Namibia Drought Policy and Strategy (NDPS) of 1997 adopts a more proactive approach to drought management. The NDPS, drafted by the National Drought Task Force (NDTF) in collaboration with relevant Ministries, identifies low rainfall as a normal feature of life in Namibia. Moreover, the policy is *"concerned with shifting responsibility for managing drought risk from the Government to the farmer, with financial assistance only being considered in the event of an extreme or 'disaster' drought being declared"* (NDTF, 1997: p.9). The policy envisages a shift in the role of government from providing aid, to supporting farmers in managing risk on their farms. Reduction of long-term vulnerability to drought is envisaged as happening through drought mitigating technologies and practices and the creation of an enabling policy and service environment. The policy identifies as necessary steps to combat drought the following: decentralisation; granting of land user rights to communal farmers; poverty reduction; investment in agricultural research, extension and veterinary services; agricultural finance and marketing.

Although the policy represents a step forward in drought mitigation, contradictions exist between the policy and actions taken by the government. For example while the policy sees decentralisation as essential to promote development in rural areas, not much has happened since 1992 when the process was started. A general perception of people in the south is that there is not real political will to achieve decentralization (Besson, pers.comm., 2000; Uldrich, pers.comm., 2000). Moreover, the policy recognizes the importance of granting exclusive tenure rights to communal farmers for vulnerability reduction, but this issue has not been addressed by the Land Tenure Bill (2000) recently passed by Parliament. This also hinders any attempt at obtaining credit through agricultural financing institutions by communal farmers. The lack of a comprehensive poverty reduction strategy, is also seen by many (Devereux *et al.*, 1995; Giorgis, 1995) as discouraging development efforts by local government, NGOs and international agencies

Reversing patterns of vulnerability

While many have pointed out at high rates of population growth as main cause of environmental degradation and poverty in communal areas, this may be too simplistic. In a country where 71 % of the GDP is controlled by the wealthiest 5% of the population, it's hardly surprising that the majority of the population has difficulty covering their basic needs, with the poorest 25% of the population earning less than US$ 90 per year (NDTF, 1997). Namibia as a whole has a generally healthy economy based on the export of a range of primary products (minerals exports ranks high) and tourism (Devereux *et al.*, 1995) and it is necessary that cash flows be redirected towards development and poverty interventions, rather than in supporting armed conflict in neighbouring countries.

While some researchers (Seely *et al*; 1995) have emphasized the importance of education, training and awareness in changing 'people's attitudes', this is certainly not enough if not addressed within a framework of extensive social interventions. The majority of people living in communal areas are not resorting to activities that exacerbate the impacts of drought out of ignorance or purely for cultural reasons, but because often there are no other options available to them. People are aware of problems of overgrazing

and land degradation, but without credit or other incentives there is little they can do (Boois, pers.comm., 2000).

Although not an easy task, much can be done to reverse vulnerability to drought of communal farmers. While it is not within the scope of this paper to provide an exhaustive review of socio-economic interventions that would reduce vulnerability to drought, the following interventions have been identified by communal farmers as important. Probably the most crucial government intervention needed to improve conditions in communal areas, is the introduction of secure, exclusive tenure on land and natural resources at the community level. It would be counterproductive to grant exclusive tenure over land while, for example, allowing open access to all livestock at water points (NAPCOD, 1997).

Other options available to the government are the purchase of land for distribution to land scarce or landless families or increasing access to the market for land by offering selective subsidies to prospective buyers. Even though a resettlement programme has been in place since 1996, the resources currently devoted to the purchase of commercial farmland for resettlement of poor farmers are far too low to have any significant impact on alleviating pressure in communal area (NDTF, 1997). The introduction of incentives that will enable wealthier farmers to buy commercial farms and move out of communal areas, would also relieve lots of pressure over natural resources.

There are many other interventions that people felt would have a positive impact on their livelihoods. One of them is government regulation of market prices of livestock during auctions, and especially for the duration of drought periods. The predominant view is that "people buying the animals don't pay well, so even if you think a goat is worth 200 they only pay you 130" (Kocito, pers.comm., 2000). Re-introduction of free vaccines for livestock and free/subsidised diesel for boreholes diesel pumps were also seen as important. The government has withdrawn both subsidies very recently, and poorer communal farmers might not be able to afford vaccines or might not have enough money to buy diesel and hire transport to be able to go and buy the fuel. Access to water and

'healthy' animals are crucial to increase resilience to drought-induced shocks. Education was also seen as very important and suggestions ranged from the subsidizing of hostel and school fees for poorer children (particularly during drought emergencies) to the necessity of having a vocational Politecknicon where students could be equipped with 'real skills' (i.e. carpentry, wielding, etc.).

These are only few of the many suggestions put forward by people. What needs to be understood by government, NGOs and donors agencies is that vulnerability is linked to socio-economic dynamics, and it is only by addressing them that initiatives to effectively decrease vulnerability can be developed. Consultation with the communities affected is essential and an important role can be played by local NGOs, churches and community-based organizations to channel development initiatives aimed at vulnerability reduction.

Conclusions

"Would you tell me please, which way
I ought to go from here?" said Alice.
"That depends a good deal on where
you want to get to" said the cat.
(Carrol L, 'Alice in Wonderland')

Droughts are an inevitable part of life in Namibia. While this reality cannot be changed, the government can act to mitigate the effects of drought in communal areas by reducing people's vulnerability. The case study has shown that vulnerability to drought is very much the result of 'normal' life for people in the communal areas of Namibia. This is a clear example of where investments in classic hazard mitigation would not improve things much. For people living in communal areas, interventions that address development priorities are the first step toward drought mitigation.

At present though, most of the efforts of those concerned with disasters management in Namibia are focused either on emergency preparedness and response or on one rather narrow aspect of vulnerability, that of food security. The concept of vulnerability reduction through socio-economic interventions at community level has not yet entered

mainstream discussion at government level. However, without political will to address social and economic disparities, the situation in communal areas will not improve and the government could find itself dealing with a situation of permanent emergency. With each drought vital resources are lost and communal farmers will become increasingly vulnerable to destitution.

This is certainly not an easy task for a young democracy like Namibia, but putting vulnerability reduction at the core of its disaster management strategy and to proactively engage with the community at risk, is a step forward in achieving sustainable development for the country as a whole.

PERSONAL COMMENTS

Basson, T. (2000) CEO, Hardap region.

Boois, S. (2000) Sustainable Animal and Range Development Programme (SARDEP), Representative, Karas/Hardap Regions.

Chiminello, A. (2000) Bishop of the Catholic Church, Keetmanshoop.

Kocito, M. (2000) Kanekobis.

Rooi, S. (2000) Kaptain Witbooi, Gibeon.

Stephanos, J. (2000) Hardap Regional Councillor.

Ulrich, D. (2000) Namibia Development Trust (NDT), Keetmanshoop.

NOTES

1. The definition of disaster adopted in this paper is that of "an event associated with the impact of a natural hazard, which leads to increased mortality, illness and/or injury, and destroys or disrupts livelihoods, affecting the people of an area such that they (and/outsiders) perceive it as being exceptional and requiring external assistance for recovery", (Cannon, 1994: p.29). Blaikie *et al.* defined recovery as "the psychological and physical recovery of the victims, the replacement of physical resources and the social relations required to use them" (1994: p.21).
2. Risk is defined as "the expected losses (lives lost, persons injured, damage to property and disruption of economic activity or livelihood) caused by a particular

phenomenon. A societal element is said to be 'at-risk' or 'vulnerable' when it's exposed to known hazards and is likely to be adversely affected by the impact of those hazards if and when they occur" (Holloway and van Kotzee, 1996: pg.5).

3. Mitigation: it refers to measures, which can be taken to minimise the destructive and disruptive effects of hazards and thus lessen the magnitude of a disaster. Mitigation measures can be of different kinds, ranging from physical measures such as flood defences or safe buildings design, to legislation, training and public awareness. Mitigation is an activity which can take place at any times: before a disaster occurs, during an emergency or after disasters, during recovery or reconstruction (Holloway and van Kotzee, 1996: pg.7)
4. The programme for the International Conference in Yokohama in 1994 had a full session on Social Vulnerability Assessment.
5. Here, livelihoods are viewed as the 'command an individual, family or other social group has over an income and/or bundles of resources that can be used or exchanged to satisfy its needs. This may involve information, cultural knowledge, social networks, legal rights as well as tools, land, or other physical resources.' (Blaikie *et al.,* 1994: p.9).
6. Cannon (1994) identified 3 different aspects of vulnerability: resilience, health and preparedness. The degree of resilience of an individual or group to the impact of a hazard is closely linked to Sen's concept of entitlements and reflects economic resilience, including the capacity for recoverability. 'Health' indicates both the robustness of individuals (largely dependent on livelihood strength) and the existence and degree of social services (especially preventive medicine). The degree of preparedness of either an individual or a group depends on the protection available for a certain hazard and is linked to both people and social factors.
7. My emphasis.
8. Communal areas can be divided into 2 types: demarcated and open communal land. Demarcated communal land comprises land sited on previous commercial farms set aside by the Odendaal Commission for farming in the 1960s. Although the boundary and fences are in need of repair, they facilitate some degree of farm management and allow for a certain level of ownership of the land assets. Open communal land in

contrast, has no boundary or camp fences. Bondelswarts, Warmbad and the majority of Namaland are open communal lands. Although there are attempts at land allocation by traditional leaders, this land and to a lesser degree the demarcated communal land, is not administered as a common property resource. This results in minimal attempts at rangeland management by the 11 clans in the communal lands (Boonzaier *et al.*, 2000).

9. Within the context of this paper poor people are defined as those individuals, families and group of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in their own country (adapted from the European Union definition of poverty).
10. Although there is a strong correlation between the two, poverty and vulnerability are not synonymous. Not all of those who are poor are necessarily vulnerable to certain hazards (Vogel, 1997).
11. The Odendaal Commission effectively carved the country into 10 homelands and 'one commercial farm', forcing the black population to live on land of poor quality. While 95% of the Commercial farms are economically viable, only about 20% of the communal lands fall into this category (Giorgis, 1995).
12. The Central Statistics Office was contacted during 2000, but at present the only data available on unemployment in the Karas and Hardap regions is derived from the 1991 national census.
13. In the words of Antonio Chiminello bishop of the Keetmanshoop Diocese, the Nama "are still slaves. They still have the 'ja, baas' mentality of former times – still begging for food and clothing".
14. Among the various problems identified were: *ad hoc* targeting of vulnerable population resulted in the exclusion of many vulnerable people from receiving food aid; poor preparation for food-for-work programmes hampered the implementation and progress of such programmes; wealthy households often received fodder aid and in many cases this practice led to further degradation as it discouraged destocking (Devereux *et al.*, 1993; Vogel, 1997).

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