

Natural Disasters and Development in Botswana: What can communities do to cushion themselves against the adverse effects of floods?

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Abstract

The global village is overwhelmed by various disasters. Tsunamis cause havoc for Asian countries while the hurricanes, lightening, cyclones and floods equally affect America, Europe, and African countries. These disasters coupled with other threats such as volcanic eruption, earthquakes continue to pose serious threats to the development of nations. This paper explores how communities in Botswana can be empowered to cushion themselves against the adverse effects of floods. Evidence from the authors' work in the area of disasters in Botswana as well as existing literature is used to support some of the arguments raised in this paper. The main argument of this paper is that communities in Botswana are less resilient to survive the effects of floods because they are not adequately empowered. The paper therefore highlights several ways in which communities could be made resilient to the effects of floods.

Introduction

Community safety and resilience is fundamental for sustainable development in the techno era. The challenge to build safe and resilient communities depends on national leaders, communities, families and individuals' active participation in their development. Development must be a progressive movement from vulnerability to sustainable socio- economic levels of communities and individuals. Therefore, there is need to define functional roles of communities disaster risk reduction while exploring the weaknesses, strengths, and the extent of representation of current roles and responsibilities. The focus must be to strengthen disaster management within the community because disasters can and do undermine development goals. Disasters therefore, are a

course of concern for sustainable economic development and national progress. This paper seeks to address a global call of mainstreaming disaster risk reduction to community development initiatives. For the purpose of the paper, the word community refers to a group of individuals and households living in the same location and having the same hazard exposure, who can share the same objectives and goals in Disaster Risk Reduction (Victoria, 2008)

The Impact of Natural Disasters: A Global Perspective

The global village is overwhelmed by disaster of varying magnitude and worst catastrophes. For example, from 1971 to 2000 Philippines suffered from nearly 300 natural disasters that killed 34 000 Filipinos while from 1990 to 2000, 35 million people across the country were severely affected. To date, countries have suffered economic losses as a result of natural and / or human induced disasters (International Federation of the Red Cross and Red Crescent Societies (IFRC), 2004). Tsunamis cause devastation for Asian countries while the hurricanes, lightning, cyclones and floods equally affect America, Europe, and African countries. The complexity of natural disasters is compounded further by climate change that present with unpredictable weather patterns. As such, changes in weather patterns make community development a complex process and speeds up environmental degradation. United Nations (WCNDR, 2005) indicates that 2/3 of all disasters are climate or weather related. The impact of these disasters is multifaceted, complex and most importantly, has serious effects on development. First, disasters have adverse effects on countries' economies (Guo Qisheng et al (1999). For example, in China flooding disasters caused economic losses of 1666 hundred million Yuan (Guo Qisheng et al, 1999). Due to the escalation in costs, disasters are no longer a concern only for humanitarian actors but also for financial institutions as well like the World Bank, Inter American and Asian Development Bank, UNDP and Germany's GTZ (Inter American Development Bank, 2007). For example, in the United States of America hazards like hurricanes, cyclones, veldt fires, floods, and terrorism have caused massive destruction to infrastructural developments like roads, telecommunication, buildings and bridges, high mortalities and injuries, and consumed billions of dollars in humanitarian response.

Secondly, disasters often result in diseases, disabilities and loss of lives. Federal Emergency Management Agency (FEMA, 2009) states that in the United States, averages of 300 people are injured and 80 people killed each year by lightning. Although most victims survive, people struck by lightning often report a variety of long-term debilitating symptoms. Other associated dangers of thunderstorms include tornadoes, strong winds, hail, and flash flooding. Flash flooding is responsible for more fatalities, more than 140 annually than any other thunderstorm associated hazard.

Thirdly, disasters are associated with poverty and low socio-economic background both at individual and community levels. The Global Facility for Disaster Reduction and Recovery (GFDRR, 2007) at a symposium accepted that poverty gap is accentuated by natural disasters and the Millennium Development Goals have to address areas linked to vulnerability to natural hazards in the nations. UNDP (2008) states that 220 million people were found to be exposed annually to drought and African states were indicated as having the highest vulnerability to drought. Botswana has been grappling with the challenge of drought for a considerable period of time which has depleted completely the socio economic base of rural communities. Rains and storms come after a prolonged period of drought and famine and devastate millions of poor people as in Kenya and Ethiopia. As a result malaria and diarrhea cases increased and livestock was decimated by an outbreak of Rift valley fever (World Disaster Report, 2007). United Nations World Conference on Natural Disaster Reduction (WCNDR, 2005) reported that the impact is severe on those who already suffer as result of poverty and disease. This implies that African countries, Botswana included, have to work towards building community safety and resilience to natural variability of the climate.

Northern Kenya in 2006, suffered three years of crippling drought that were broken by severe floods that washed away the only road to the area. The bad road prevented supply of health kits and clean water to the marooned community. The area is a home for 3 million people with the highest levels of poverty and vulnerability to food insecurity. It was discovered that discrimination against minority groups in Kenya contributed to the plight of the affected community. Similar sentiments were raised in Guatemala where the lack of gender aggregated information contributed to loss of lives. Barun Mitra was quoted saying ‘information is power when information is credible, timely, locally relevant, and widely accessible to the population’ (UN, 2005, page 5).

Fourthly, disasters lead to experiences of trauma, sadness, depression and confusion because people are displaced from their homes and they loose property. These feelings are compounded by the fact that some survivors of disasters do not insure their property; therefore the damage and loss of property that accompanies disasters cannot be compensated. In addition to natural disasters, there are human induced threats that barricades preparedness and response efforts to natural disasters. Political instabilities in Democratic Republic of Congo, Zimbabwe, Sudan, and Uganda interfered with humanitarian assistance. Such political complication impact negatively on humanitarian interventions and contributes to unnecessary loss of life and suffering. Victoria (2008) attest that in Sri lanka increasing clashes between government forces and the LTTE along the line of control in Mannar district and other security concerns restricted access to districts affected by floods. This is supported by UNDP (2008) that states that the translation of drought

into famine is mediated by armed conflicts, internal displacements, HIV/AIDS, poor governance and economic crisis.

Additionally, corruption of African government officials and political leaders is one major promoter of vulnerability and poverty. United Nations International Strategy for Disaster Reduction (UNISDR, 2005) attests that corruption is a hindrance to disaster risk reduction and the elimination of poverty. Lavell (1999) argues that although poverty and vulnerability are not themselves synonym, it is generally accepted that poverty explains a significant part of the vulnerability that affects the vast majority of the population of developing countries, the poor suffer severely from the effects of disasters. As such to deal with disaster risk reduction there must be commitment to good governance. Good governance must be enriched by transparency and accountability amongst the elected officials, bureaucrats and civil servants, and the elimination of practices that are a source of corruption. Acknowledging that natural disasters add an extra burden to the already existing vulnerabilities is fundamental to risk reduction and sustainable development.

The relationship between disasters and developments

Developments whether technological, economical and / or physical bring along with them related threats and risks. These economic, infrastructural and / or technological threats must be identified and risk be mitigated prior to eventualities. UNDP (2007) states that disasters become necessary and inevitable result of development. They are built into the process and are the price to pay for the gains achieved by following a dominant growth model that guarantees growth and development for some and poverty and vulnerability for the majority. The UNDP advocates for fundamental changes in the growth development models because development project expansions targets areas occupied by the poor despite efforts to eradicate poverty. It is argued that disasters in developed countries reveal greater vulnerability of the poor and disadvantaged and a relative indicator of underdevelopment (UNDP, 2007). Guo Qisheng et al (1999) find disaster is an important restricting factor to sustainable development in terms of population explosion, resource shortage, environment depravation, and zoology unbalance. These they term the four factors educing sustainable development. Disasters siphon national and international resources by destructions caused and provision of short term responsive humanitarian services. The long term economic and social costs are left with communities themselves.

Global Action against disasters

Due to challenges presented by disasters globally, humanitarian actors, institutions, professionals and national governments have been working tirelessly to design strategies, identify key priority areas, appropriate measures to identify hazards and reduce risks. It was resolved that to meet poverty objectives it is necessary that potential hazard risk are determined and risk management approaches are taken into account while designing poverty reduction strategies or socio-economic development plans (GFDRR, 2007). International world conferences held from the early 1990's until 2004 are efforts manage disasters. In 2004 the Hyogo Framework of Action (HFA) was developed. The framework is meant to guide government and communities on how to mainstream disaster risk reduction in development. The framework appreciates the complexity and multifaceted nature of disaster management. As such, it should be the responsibility of every institution, individuals, communities and not only government.

An Overview of Existing Efforts to Address Disasters in Botswana

Botswana as a landlocked country is seriously affected by cross border floods, and diseases from South Africa, Angola, Namibia, Zimbabwe and Zambia. It is also prone to periodic droughts, floods and storms, veldt fires, lightening, animal, and human related diseases. As such, in 1997, the Government of Botswana developed a long term vision guided by seven (7) pillars towards prosperity for all citizens by 2016 (Presidential Task Group, 1997). The pillars are as follows: An educated, informed nation: A prosperous, productive innovation nation: A compassionate, just and caring nation: A safe and secure nation: An open Democratic and Accountable Nation: A moral and tolerant nation: and A united and proud nation. These pillars are interrelated and interdependent and girded towards prosperity for communities, a commitment towards sustainable development.

The fourth pillar envisions Botswana with established functional, efficient and effective risk reduction system against drought, animal diseases, floods, windstorms, veldt fires and rains to a safe and secure nation by 2016. This dream aligns with disaster risk reduction and the Hyogo framework of Action 2005-2015 (UNDP, 2008). In acknowledgement of the vision, the National Policy on Disaster Management (1996) identifies droughts, floods, windstorms, and veldt fires as prevalent hazards in the country. Section 12 of the policy, stated that each agency (government and non-governmental) is responsible for developing its own internal disaster plan detailing internal mechanism necessary for the definition of ministerial responsibilities at national, district, town, and city levels.

It is assumed that ministries and / or agencies posses disaster management technical knowledge and skills, which is a fallacy. Ministries or agencies may be experts in their professional

disciplines but not disaster management. Section 18 of the policy asserts that the implementation of disaster management projects and programmes rest chiefly with line ministries at national and district level because the necessary sectoral skills and expertise are housed within those ministries. This is good enough to abdicate some people from their responsibilities and their failure to take action on serious issues. It serves as a good excuse for the National Disaster Management office not to function effectively in their coordination role in disaster management.

The illusionary thinking characterizing the current policy leads to fatalism because disasters continue to defy simple and haphazard approaches. Therefore, a Government Ministry cannot on its own deal with disaster issues because of the multiple factors involved. The challenge to contain veldt fires in 2008 in Ghanzi, Kweneng, Kgalagadi, Nata and Maun, the current cholera cases, the outbreak of diarrhea in 2006, and foot and mouth in Matsiloje, Maun, and Ghanzi are typical examples, that a single ministry cannot contain and manage multi-faceted nature of disasters. The National Disaster Policy (1996) establishes District Disaster Committees to be composed of all heads of departments coordinated by the District Commissioner and Village Disaster Committee coordinated by traditional leaders. The districts and villages suffer more from frequent droughts, floods, destructive windstorms disasters and community members are the first responders to catastrophic event without training, knowledge and applicable techniques.

Community members are not a homogenous group. Some are elderly. Some are young; some are sick; with disabilities and therefore do not have capacity to play an active role in disasters limited mobility, low socio-economic base strong support base. Below are photos that examples of disaster incidents scenarios in different localities of Botswana. They during the Selibe-Phikwe windstorms, Maun torrential rains and floods, Tsolamosese, Ramokgonami in 2007, and the Gweta floods in 2008. The owners are people who have struggled to have a roof over their heads which were later destroyed by the windstorms and have



group. Some some live the full due to their and weak serve as responded to were taken



no money left to rehabilitate.



The key questions therefore are: who should ensure that these communities are organized, trained and equipped to reduce associated risk? How could this be done? These issues are addressed below.

Proposed community approach

SADC Disaster Management Steering Committee (2001) states that as far as preparedness measures are concerned, a bottom-up approach must be followed. When a disaster affects the community, the initial response is normally provided by the statutory emergency services of the local authority that is affected. The basic principle is that the local authority is responsible for disaster management and must address the full spectrum of disaster management from pre-disaster risk reduction to the post-disaster recovery phase. This has not worked for the country but lead to increased vulnerabilities, casualties, and unnecessary expenditures.

Local authorities must be equipped sufficiently with knowledge, skills, and techniques to conduct vulnerability assessments, develop contingency plans, design an institutional framework for risk reduction, preparedness, and response, establish locally relevant early warning systems, and recovery mechanisms. Successful interventions in pre-disaster, during, and post disasters are dependent on the readiness of the locals. The efforts should be directed towards reducing further risks and threats while the process follows democratic ideals with defined roles and responsibilities for all members of the community. It should be all encompassing from children, adults, families, groups, local leaders, institutions, and external actors. There is need for interventions that target various groups in the community, e.g children (out of schools, children living in the farms); youth, adults, elderly, people living with disabilities, VDC members, chiefs, professionals, etc.

Global Facility for Disaster Risk Reduction (GFDRR, 2006) recommended that nations and communities must integrate disaster risk reduction into development assistance framework

and poverty reduction strategies. The key factors for consideration are the development and implementation of hazard resistant building codes and standards; training programmes on risk reduction and mitigation for communities and civil servants; operational guidelines and policies for international and national finance institutions. The hazard risk assessment should include hazard mapping, building systematic inventories of housing and infrastructure stocks, and tracking of the social and economic losses caused by disasters (<http://www.gfdr.org>). There are six recommended steps towards increasing community resilience. These are community oriented; promote a collaboration and collectivity of efforts and resources to reduce risk.

- Partnership with municipal and provincial government units: it is imperative from the beginning to ensure collaboration with local authorities in order to ground the preparedness concept firmly in local planning, gain technical and financial support for implementing mitigation measures and long term sustainability.
- Disaster Action Team formation and training: at the heart of the programme is the group of community volunteers who receive trainings in hazard management, spread information, and work with the whole community to prepare a disaster action plan, which is the basis for deciding how to improve the safety of community resources.
- Risk and Resource mapping: is the necessary to map the most important hazards, showing who and what they are jeopardizing. The maps are used to protect the suitable mitigation measures to protect the community, and also as land use planning tools for the local government units.
- Community mitigation measures: based on the disaster action plan, the community establishes some kind of mitigation measures to reduce the impact from potentially relevant natural hazards.
- Training and education: it is important both to DAT training and for raising awareness within the whole community, training and education.
- Sustainability: this includes taking hazard preparedness into account and incorporating the main disaster action plan recommendations into local government units, land use planning and annual budgeting.

The approach is premised on the realization that communities must participate to reverse the world wide trend of exponential increase in disaster occurrences and loss from small and medium scale disasters. Thus the community becomes the primary focus of attention, the common unit which is affected by disasters, more importantly responds to the event because members are interested in protecting themselves from danger and harm. The community

based approach corrects the defects of the top-down approach in development planning and disaster management which failed to address local needs, ignored the potential of indigenous resources and capacities, and increased people's vulnerability. It will ensure that appropriate and effective actions are taken during emergencies such as setting up the early warning system, coordination and institutional arrangements, evacuation and emergency operations management, public awareness, disaster and evacuation drills and stockpiling.

Community based disaster management aims at reducing vulnerability and increasing capacity of vulnerable groups and communities to cope with, prevent, or minimize loss and damage to life, property, and the environment; minimize human suffering and hasten recovery. Prevention aspect covers measures to provide permanent protection from disasters or reduce the intensity / frequency of a hazardous event so that it does not become a disaster. The key indicators of resilience are safety, livelihoods security and sustainable economy, social and physical development (Victoria, 2008)

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