

Special Issue on Cyclone Idai

Volume 3
issue 1
Nov/Dec
2019

The Fountain

Journal of Interdisciplinary Studies



CATHOLIC UNIVERSITY OF ZIMBABWE

***THE FOUNTAIN JOURNAL OF INTERDISCIPLINARY
STUDIES***

VOLUME 3

ISSUE 1

November /December 2019

Special issue:

Cyclone Idai and Perspectives on Climate Change and Development.

CATHOLIC UNIVERSITY OF ZIMBABWE

THE FOUNTAIN – Journal of interdisciplinary studies

The Fountain, established in 2017, is a bi-annual interdisciplinary journal published by the Catholic University of Zimbabwe. The complex nature of the problems facing our world today require ongoing, thorough, evidence based and systematic inquiry from a variety of perspectives and disciplines. The Fountain seeks to provide a platform for debate and sharing research results by scholars from diverse backgrounds and areas of interest.

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ISSN:2520-4536X

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Tsholotsho Flood Survivors, two years on after the disaster.

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Editorial

This special issue of *The Fountain Journal of Interdisciplinary Studies – FJIS, Volume 3, Issue No. 1* of 2019 is dedicated to the victims of Cyclone Idai. This climate change related natural disaster was arguably the most significant event of 2019 in the Southern African region. Many would wish to forget it quickly. This is understandable given the devastation the cyclone wrought on people's lives, property, wild life and the natural habitat. But forgetting it quickly would rob the region of lessons to be learnt for the future. The articles in this *Issue* do not exhaust the many perspectives already given on Cyclone Idai, but they do contribute to insights that advance the knowledge at our disposal to mitigate future disasters.

In this issue, Godfrey Chikowore, J D Nhavira, C Munhande, M T Mashingaidze, and M Sibanda revisit the definition of the whole phenomenon of cyclones and anti-cyclones based on Claire Gillespie's work and offer a model of responses that affected countries could adopt. They underline the opportunities for development that the Cyclone offers to the most affected countries in the region, namely Zimbabwe, Mozambique and Malawi - countries which rank low on international development indicators. They offer a model that calls for development and industrialization that seize the opportunity to introduce new, resilient infrastructural technologies and certainly moving away from the DPT (Daga and Pole Technology) for building houses. This model is supported by the vision of the MDGs, UNSDG and Africa Agenda 2063. Chikowore *et al* argue that the experience of Cyclone Idai is an opportunity to fulfil these goals and advance the cultural and socio-economic development of the region to reach the levels of more developed countries.

Sophia Chirongoma, Sibiziwe Shumba and Susan Dube focus on the most affected areas in the eastern districts of Zimbabwe, that is, Chimanimani and Chipinge. They concur in several respects with Chikowore's call for post-cyclone industrialization and development. However, the thrust of their article is the graphic illustration of the after effects of the cyclone which aroused responses which demonstrated the best of the African ethic of Ubuntu/Unhu. Like Chikowore *et al* they decry the lack of preparedness by national institutions in Zimbabwe. Such preparedness and requisite responses would have mitigated considerably the fatalities and post-cyclone rehabilitation efforts.

Leonard Chitongo, Jacob Tagarirofa, Bernard Chazovachii and Timothy Marango give a global perspective to the occurrence of natural disasters in Asia - the hardest hit region of the world, and the Americas, before zooming onto Africa. Using global instances as illustrations, they explore the gendered responses to climate-change related natural disasters. In this they agree with the other authors in this *Issue* that women, children and the vulnerable elderly bear the brunt of cyclone disasters as happened in the case of Cyclone Idai. Drawing on examples in Asia, they recommend gendered responses to such disasters to mitigate the negative effects on the most vulnerable groups.

Recognizing that apart from the loss of human life, one of the most significant losses was housing, Bernard Chazovachii, Leonard Chitongo, Jacob Tagarirofa and Cassiano Rukomwe focus on housing, especially of the entrepreneurial poor who pre and post Cyclone Idai continued

with their efforts to secure for themselves decent housing against the combined odds of poverty and natural disasters. Like Chirongoma *et al*, Chazovachii *et al* call for the recognition of the efforts of the entrepreneurial poor to help themselves as agents rather than as victims in need of help in a top-down model.

The last article by C Nyoni, B B Muzembi, M Mhlanga, D Mureriwa, F Jaji, and M Muzire focuses on a previous cyclone that hit parts of Zimbabwe, reigniting the debate on the sustainability of post-disaster efforts when all the news cameras have left the disaster scene. The authors return to Tsholotsho which was struck by Cyclone Dineo in 2017 to assess the lives of the survivors three years after the disaster. Their overall conclusion was that while there was a flurry of activity just after the calamity, attention quickly shifted elsewhere leaving the victims pretty much to their own devices and fate. Their research revealed that many of the victims still cry foul of institutional support. All in all, the five articles in this issue serve as a useful resource for planning, policy formulation and disaster preparedness.

Natural Disasters and Development Opportunities: Cyclone Idai, challenges, integration and development alternatives in Zimbabwe and sub-Saharan Africa in the New Millennium.

By

Godfrey Chikowore¹, J D Nhavira², C Munhande³, M T Mashingaidze⁴, and M Sibanda⁵

Abstract

Stating the geophysical atmospheric conditions relating to Cyclone Idai and the impact it had on human and wild life, infrastructure and the economy, this study gives a definition and the challenges engendered by that disaster while proffering development alternatives for Zimbabwe and Sub Saharan Africa in general. Best articulated from a climate change dialogue perspective, cyclones and anticyclones constitute vibrant atmospheric processes or wind systems characterized by extreme weather conditions and patterns that have contrasting attributes. A cyclone can be described as a low-pressure system, whereas an anticyclone is a high-pressure system. Effectively, a cyclone, commonly known as a low, constitutes an area of low pressure where air masses meet and rise. The low, which typifies a cyclone, indicates bad weather, like heavy rain, hail and thunderstorms. As such winds in a cyclone blow counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. With respect to an anticyclone which is commonly referred to as a high, it constitutes an area of high pressure where air drifts apart and sinks, effectively indicating fair or fine weather. Because of the effective impact of the force related to the rotation of the earth, winds in an anticyclone blow clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere. Depending on the magnitude of the low (low pressure area) and the high (high pressure area) both wind systems could be catastrophic for human life, assets, domesticated animals, wild life and the economy in general. Such was the impact of Cyclone Idai. The study is developed around several key questions relating to the origin of cyclones, zonation, disaster management phases, transformation opportunities, impact on rural and urban communities and post cyclone industrialization and infrastructure development. Grounded in the theory of disaster management and transformation, the work employs descriptive and quantitative data analysis as well as qualitative data analysis and modelling. Contributions by Claire Gillespie (2018); Zimmermann and Stössel (2011); Van der Waldt (2013); Tau, Niekerk and Becker (2016); Contreras (2016) are central to this study. Considering the preparedness phase as critical in responding to cyclones, this contribution proffers alternatives that are more

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preventive, catastrophe evading strategies which could have been adopted by stakeholders as a measure to guarantee zero life loss and minimum property loss in the event of a warning issued of an impending cyclone. It proposes “emergency human-centered strategies” in the recovery phase, whereby development and transformation of cyclone affected rural–urban zones should be adopted in step with the global community practice.

Keywords/phrases: cyclone; anticyclone; restoration; transformation; industrialization and catastrophe free strategies; catastrophe free alternatives; mitigation.

Introduction

The United Nations Sustainable Development Goals (UNSDGs) have pronounced in Goal 13 that member states across regions of the world should “Take urgent action to combat climate change and its impacts” on one hand while on the other hand among many, Goal 9 pronounces the rationale to, “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. Cyclone Idai which struck Zimbabwe, Malawi, Mozambique and the Democratic Republic of the Congo [DRC] during the 13-20 March 2019 period, causing floods and extensive destruction to homes and cities, makes a constructive return to the development essence of Goals 13 and 9 become imperative. Beira in Mozambique, according to Medecins Sans Frontieres (2019) was hardest hit by the cyclone with more than 75 percent of the city affected. It would appear then that according to the UNSDGs, nations have an obligation to wage a combative engagement with “climate change induced” destructive weather and yet remain on a platform of a speedy return to restoration and normalcy. Restoration in receptive and progressive communities would above all have to assume a transformative character not short of industrialization and modernization. Rural and urban communities as well as forest parks affected by Cyclone Idai would be best reclaimed under Goal 9, which calls for the building of resilient infrastructure while promoting inclusive and sustainable industrialization and innovation.

Cyclones and anticyclones are extreme weather conditions with opposing characteristics, effectively, a cyclone, would be commonly known as a ‘low’, constituting an area of low pressure where air masses meet and rise. As such the ‘low’, which typifies a cyclone, indicates bad weather, like heavy rain, hail, wind and thunderstorms. What this means is that winds in a cyclone blow counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. As regards an anticyclone which is commonly referred to as a ‘high’, constitutes itself as an area of high pressure where air drifts apart and sinks, effectively indicating fair or fine weather. Naturally, due to the effective impact of forces closely related to the rotation of the earth, winds in an anticyclone blow clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere. A key objective of this investigation is; understanding the cyclone phenomenon as a natural atmospheric turbulent process; pronouncing the phases of disaster management; mobilization of post disaster phase restoration efforts; development cooperation based on the establishment of modern disaster resilient infrastructure and industrialization in affected rural and urban communities. The study is informed by the theory and practice of disaster and crisis

management espoused by Elias Opongo O (2018); Asghar, Alahakoon, and Churilov (2006); Bendito and Barrios (2016); Alexander (2016); Claire Gillespie (2018); Zimmermann and Stössel (2011); Van der Waldt (2013); Jha, Miner and Geddes (2012); and Lisa Schipper (2016) and Andrew Heywood (2011). They make relevant debates within the discussion framework whose content and methodology of investigation complement.

Categorically novel in this study is its effort to derive value from the development cooperation strategic frameworks in the United Nations Sustainable Development Goals (UNSDGs); Millennium Development Goals (MDGs); Southern Africa Development Community Regional Indicative Strategic Development Program (SADC RSIDP 2020) and the Agenda Africa (2063), which effectively avail governments opportunities to fully exploit the applicable phases of disaster management as nations refocus on fully fledged industrialization and modernization programs in the recovery phase. With Cyclone Idai and many other such disastrous weather conditions across world regions, first and foremost, nations, Zimbabwe included, should seriously take cognizance of early warning systems from the national, regional, continental and global meteorological institutions as a strategy for loss evasion and minimization.

Equally and on emergency note, the home parliaments, the legislature should speedily adopt emergency disaster budgets and motions to guarantee zero deaths, in the prompt disaster preparedness phase. Urgency should be accorded to disaster resilient infrastructure (roads; bridges; traditional homes, businesses, industrial and commercial structures; livestock holding pens and wildlife holding formations; radio and television communication; aerodromes and airports; alternative disaster resistant holding camps in rural and urban communities) all built on modern construction and technological standards. Changing socioeconomic cultural landscapes in which new settlements and modern rural settlements and urbanizing resettlement zones under the influence of transformative development cooperation programs should be the main feature of the restoration phases as reclamation efforts. Last but not least, the study recommends translating all assets, livestock and wildlife in rural and urban communities to adapted, repackaged insurance policies.

Literature

Considerably overwhelming are secondary sources on disaster management, cyclones and anticyclones, transformation, rehabilitation, cooperation and integration which inform constructive policy relevant to the debate on Cyclone Idai. In the journal *Southern Africa Today*, Vol 20, Number 4, June 2018, there is the article ‘Realigning infrastructure with industrialization SADC assesses progress’ which speaks of infrastructure as key to regional development with program reviews to guarantee alignment with plans to industrialize the region and the African continent. Industrialization could be a factor in the recovery phase in disaster management in Chimanimani and Inyanga that could fully be exploited given that Zimbabwe is a signatory to the SADC Charter and its Conventions. Economic revival programs after Cyclone Idai could benefit from the availed infrastructure development assistance. In another recent publication in *Southern*

Africa Today, Vol 21, Number 2, February 2019, entitled “SADC Integration–The need for implementation of regional strategies”, regional integration is seen as the major strategy for consolidating sustainable development and deepening regional ties to the benefit of citizens belonging to a shared community in southern Africa. *Global Politics* by Andrew Heywood, takes a globalist perspective and qualifies the hazards and immense development opportunities the world avails to receptive individuals, states and nations in a global future characterized by the non-existence of borders. The long, medium- and short-term socioeconomic revival and restoration programs in disaster regions could benefit much from shared resources. Chikowore G. made an informative contribution in 2017 on “The transformative essence of Japan’s Official Development Policy: Significance for millennium regional economic cooperation and integration in Southern and sub Saharan Africa 1980-2015 and Post 2015 Agenda Phase” published by the University of Zimbabwe Publications. This article gives insight into the productive use of disaster related aid. The revival of development in cyclone affected areas in developing nations could benefit from marshalling international aid on clear terms aligned to the broader industrialization programs in Southern Africa. This contribution proposes best strategies based on identification of priority sectors for regions. A Garret Nagle 2010 publication entitled “Development: Access to Geography” published by Hodder Education AN Hachette UK Company is relevant to the debate on restoration and development of disaster affected zones and national development in general. It emphasizes themes relevant for policy formulation and constructive debates on resettlement and development, environment and development, strategies for development as well as development and underdevelopment. This submission adds to the theory of disaster management as one of the several formal, secondary materials published specifically on Cyclone Idai.

Methodology

On methodology, this work benefits from the theories of disaster, crisis and risk management, aid, cooperation, integration, development and transformation from work done by Claire Gillespie (2018); Zimmermann and Stössel (2011); Kaulemu David (2011); Asghar and Churilov (2006); Bendito and Barrios (2016); Elias Opongo O (2018); Alexander (2016); Jha, Miner and Geddes (2012); Lisa Schipper (2016); SADC Today (2019); Andrew Heywood (2011); and Garret Nagle (2010). The methods employed interdependently in the study are descriptive and comparative data analysis, qualitative and comparative data analysis aided by explanatory tables and illustrative figures. Nevertheless, founded on a descriptive research design the work is augmented by descriptive analysis; explanatory data and an illustrative figure constitute the methodological core of this study.

Origin of cyclone: zonation.

Outcomes of atmospheric air masses movement over the land and seas between the equatorial and polar regions of the planet earth, Claire Gillespie (2018) broadly defined cyclones and anticyclones as a reflection of extreme weather conditions with diametrically opposing characteristics. Claire denotes the major difference between the cyclone and anticyclone noting that a cyclone constitutes

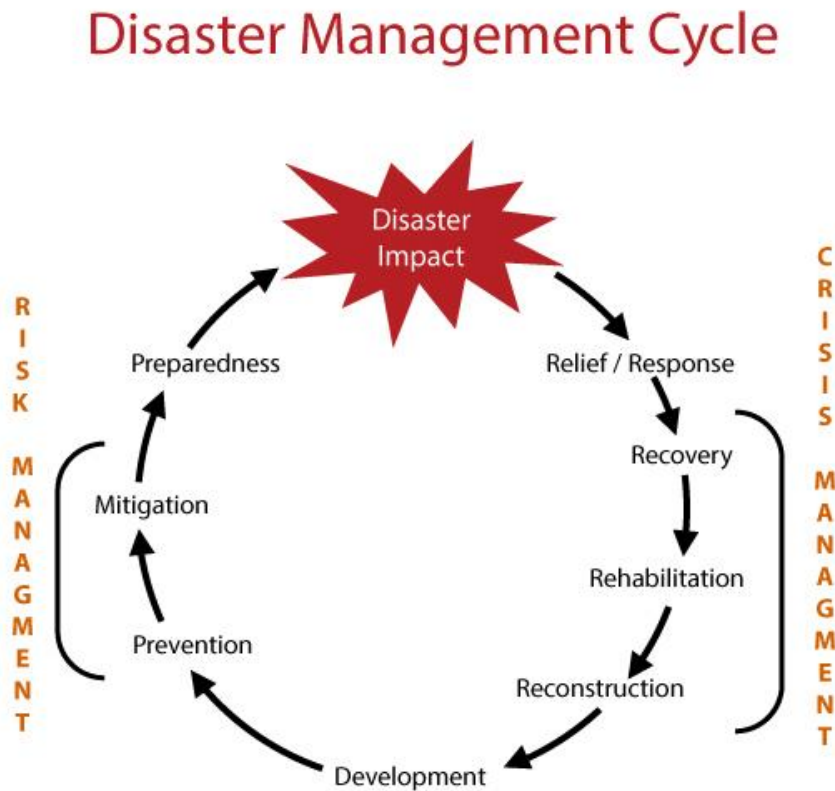
itself naturally as a low-pressure system where air masses meet and rise typically presenting bad weather. According to the Gillespie 's argument, in a cyclone winds blow counterclockwise in the Northern Hemisphere while in the Southern Hemisphere they blow in a clockwise direction. In cyclonic air masses and pressure dynamics, air near the ground is pushed toward the low-pressure center of the cyclone, and it then rises upward under pressure, expanding and cooling as it moves higher with humidity also increasing leading to cloudiness and high humidity within the cyclonic formation.

As regards the anticyclone which is commonly referred to as the 'high' meaning an area of high pressure where air moves apart - that is laterally - and sinks represents fair weather. In anticyclonic air masses dynamics winds blow in a clockwise direction in the Northern Hemisphere while in the Southern Hemisphere air masses, winds blow in a counterclockwise direction, as the force of Coriolis takes effect. Atmospheric air masses at the anticyclone center are pushed away from their high-pressure area and are simultaneously replaced by a downward blast of air from higher altitudes, Claire (2018). In that atmospheric dynamic, air masses compress and inherently heat up as they gush downwards, losing humidity and naturally leading to fewer clouds within the anticyclonic air masses. Inherently, an anticyclone is thus related with fine weather and not cloudy or rainy weather. One other critical and fascinating dimension of cyclones as they originate in the warm oceanic tropical zones, they inherently become known as tropical cyclones, storms and depressions. Tropical cyclones become a classification should the wind speed reach 34 knots or 39 miles per hour while again if the speed exceeds 65 knots or 74 miles per hour they become known as hurricanes and occur mostly in the eastern Pacific, the Atlantic Ocean and its adjoining seas. Equally, in the western Pacific Ocean and its adjoining seas, a hurricane becomes known as a typhoon, (ibid). The tragic experience of Cyclone Idai is related to the first instance where atmospheric air masses dynamic leads to cloudy, stormy and rainy weather.

Disaster management phases

Tragic losses commensurate with a destructive cyclone normally increase in severity depending on the manner in which the various players in disaster management respond to early warning systems, and the subsequent disaster resilient infrastructure that is prevailing in the area.

Fig 1. Disaster management phases for community reintegration and transformation.



Source: Municipal Corporation of Greater Mumbai. Disaster Management Department 31 March 2017. URL//dm.mcgm.gov.in disaster-management-cycle.

A natural disaster such as Cyclone Idai, inherently combines a crisis management and risk management side within which the disaster management four cycles or phases find expression, Figure 1. Relates to the crisis management side in which are the mitigation and preparedness phases which occur as disaster management improvements are made in anticipation of a disaster event. Cyclone Idai's destructive scale could have been greatly reduced, had it been that the mitigation and preparedness phases were accorded the deserved commitment by the affected governments of Zimbabwe, Malawi, Mozambique and the Democratic Republic of the Congo

(DRC) by the adoption of emergency bills in parliament and marshalling support locally and globally. The crisis management side of Cyclone Idai would have involved response and recovery phases which are a critical part of reconstruction and rehabilitation from which obtains development, (see Figure 1). Even as the phases are thus clearly delineated as noted in the commentary by the Greater Mumbai Municipal Corporation-Disaster Management Department (2017), the four disaster management phases do not always, or even generally, occur in isolation or in this precise order, as they often overlap and the length of each phase depends on the severity of the disaster. Clearly, the four disaster management phases which should conspicuously reflect a development-oriented restoration of the devastated zones, would take advantage of the windows availed by development cooperation programs which includes “Mitigation” which involves minimizing the effects of disaster. In practice this among other meaningful interventions includes building codes and zoning; vulnerability analyses; and public education.

The second phase is “Preparedness” which largely entails planning how to respond to an impending threat. As such among other critical interventions this involves preparedness plans; emergency exercises and training; and attention to warning systems. Coming third is the “Response phase” which implies efforts on minimization of the hazards created by a disaster. Interventions under this phase generally pertain to search and rescue; emergency relief, (see Figure 1). The last but not least disaster management phase is the “Recovery” which refers to efforts on returning the community to normalcy or daily routine. These interventions take the form of temporary housing; grants; medical care; and infrastructure development. Depicted in Figure 1, within the disaster management cycle or phases is the element of development which contextually has a narrower and broader definition depending on an understanding of the world and interpretation of reality.

A narrower definition would involve the grassroots level whereby communities are the main players and the participatory strategy is typically local while in the later, that is, broader definition the international dimension informed by profound knowledge of opportunities availed through development cooperation programs as the SADC RISDP 2020; Africa Agenda 2063 and the UNSDGs/Agenda 2030 with multiple local and international stakeholders is presupposed, *SADC Today* (2019). Under normal circumstances, the broader definition should inform the Cyclone Idai recovery process by focusing the territorial socioeconomic and cultural structure towards modernization driven by innovation and entrepreneurship. Affected territories certainly could not remain and return to the same old monotonous and passive development model but have to essentially assume a dynamic transformative development model focused on industrialization and urbanization in step with global trends. In this case the tendency to plan on a short, medium- and long-term transformation of affected zones in step with the world for such experiences is quite inevitable. Such a strategic approach is crucial especially under the efforts on consolidating and deepening regional integration and industrialization programs founded on the commonly adopted

concept of integrated infrastructure development across Southern and sub Saharan Africa. [*Agenda Africa 2063* (2015)., *SADC Today* (2018)].

Destructive magnitude of Cyclone Idai, as a humanitarian crisis.

According to the United Nations report by the Mercy Corps (2019), Cyclone Idai was categorized as the deadliest storm system in 2019 and even the worst disaster ever to strike the southern hemisphere. An estimated 3 million people were affected, with more than 1,000 deaths across the region and hundreds more missing. Mercy Corps (2019) further noted that almost 3 million people in southern Africa were affected by the trailblazing Cyclone Idai. In Mozambique the impact of Cyclone Idai left more than 200 people dead and more than 1,400 injured. An astronomic 17,000 houses were totally destroyed, which meant displacement of families and individuals in their thousands. The disaster preparedness phase for Zimbabwe remains highly questionable since more than 344 deaths were reported, with hundreds of people missing especially in Chimanimani. Again, in Zimbabwe 270,000 people were affected by the accompanying flooding and landslides and at least 90,000 families needed shelter. As Cyclone Idai further trailblazed through parts of Malawi, more than 840,000 people were impacted, with 56 deaths and 577 injuries while more than 94,000 people were estimated to have been displaced (ibid). Cities, towns and townships, schools were destroyed in combination and in some instances razed from their sites. Infrastructure, roads and bridges extensively collapsed in some sections inherently dictating a refocus of development processes and programs in the affected rural and urban communities.

The destructive potency of the cyclone in general assumed an irreversible character as it indiscriminately destroyed human life; assets; homes; infrastructure, industrial structures, wildlife, forests, agricultural produce, aviation and related national resources directly and indirect inflicting extensive damage to national economies. Considering that Zimbabwe, Mozambique, Malawi as well as the Democratic Republic of the Congo where the Cyclone Idai fizzled out, are all within the highly indebted poor countries, and are in the low-income economics categories, the cyclonic impact intensified the gravity of socioeconomic and cultural backwardness - that is poverty, hunger and disease. This will be through the immense geometrical increases in per capita debt burden for these sovereign states especially if the crisis management side of the Recovery Disaster Management Phase namely the rehabilitation, reconstruction and development programs is incompetently managed by the governments of Zimbabwe, Mozambique, Malawi and the Democratic Republic of the Congo (DRC). According to the World Bank Report (2018) which resonates with the USA Population Reference Bureau World Population Data Sheet (2018), Zimbabwe is a highly indebted low-income economy with a 1850 US\$ GNI per capita that is far below the average global that is at 16927 US\$ GNI per capita. Equally, percent urban is 32 far lower than the global average of 55 percent. This denotes that industrialization is at a staggering lower level with a lot more to be done.

With an incompetent management of the impact of Cyclone Idai, the likelihood of deterioration of the socioeconomic cultural backwardness is most likely. Malawi also a low income highly indebted poor country registered in 2018 a GNI per capita US\$ 1880 almost 8.4 times lower than the global average 16927 US\$. Percent urban for Malawi remains far below at 17 against a global urban percent average of 55, meaning industrialization is very low yet there is a great opportunity of promoting industrialization especially infrastructure development in the disaster hit areas. Mozambique has an even lower 1200 US\$ GNI per capita, almost 16.9 times lower than the global average at 16927 US\$ GNI per capita with an even lower percent urban of 32 matching that of Zimbabwe signifying lower levels of industrialization and even great unawareness of transformative opportunities in development cooperation programs. Finally, the DRC with a population of 84.3 million has one of the lowest GNI per capita level of US\$870, astronomically below the global average by 19.5 times. Urbanization level is 45 percent and lower than the global average at 55, [USA Population Reference Bureau World Population Data Sheet (2018)]. The socioeconomic cultural indicators of the cyclone devastated nations are still way backward and the impact of the tragedy may exacerbate the situation if their multi stakeholder short, medium- and long-term planning is not institutionalized by the governments of the affected nations.

Recovery: Local and international players

The Cyclone Idai recovery phase for Zimbabwe, Mozambique, Malawi and the Democratic Republic of the Congo which encompasses rehabilitation, reconstruction, and development emerged at a very propitious time and could benefit these nations under the multilateral arrangements when the African Development Bank, ranked fourth overall after UK Department for International Development (DFID); and the United Nations Development Program disbursed a record 7.7 billion US\$ for projects across Africa, (*African Business*, July 2018: 74). Considering also the rising momentum in bilateral arrangements in which China has emerged as a leading global donor in recent years where between 2000 and 2014 it committed more than 350 billion US\$ in official aid to over 4300 projects in over 140 nations, while the USA committed slightly more to the tune of 394 US\$ billion, the Cyclone Idai affected nations could subsequently well stand to benefit from these commitments in bilateral arrangements with China, the USA and other countries which avail the facility, (ibid:74). Programs on promotion of industrialization and deepening regional integration could well gain momentum if comprehensive national socioeconomic cultural development programs accessible by multi-stakeholders are proposed in these four Cyclone Idai disaster ravaged countries. An *African Business Supplement*, IC Publication July (2018:74), indicated a potential for growth, that could give momentum to the rehabilitation, reconstruction and development efforts of the Cyclone Idai impact in Zimbabwe, Mozambique, Malawi and the DRC noting that regional initiatives in Africa would grow with the greatest drivers coming from the Program for Infrastructure Development in Africa created in 2012

complemented by the New Partnership for Development (NEPAD) in Africa platform called the Continental Business Network.

The United Nations Sustainable Development Goals, especially Goal 13 stipulates taking advantage of urgent action to combat climate change and its impacts, while on a complementary note the Millennium Development Goals, in Goal 7 set to ensure environmental sustainability as it recognizes upholding of the United Nations Framework Convention on Climate Change as the primary international, intergovernmental forum for negotiating the global response to climate change by states. The position emerged as a resolution or outcome from the sixth session of the Conference of Parties to the Convention serving as the Meeting of the Parties to the Kyoto Protocol, held in Cancun, Mexico, from 29 November to 10 December in 2010. Complementing efforts on combating the impact of climate change by the African Union, *Africa Agenda 2063*, Aspiration 1, pronounces “A prosperous Africa based on inclusive growth and sustainable development” whose Point 17 asserts an Africa that will participate in global efforts for climate change mitigation which support and broaden the policy space for sustainable development on the African continent. Point 17 further states that Africa shall continue to speak with one voice and unity of purpose in advancing its position and interests on climate change. The complementary positions pronounced in the UN Conventions, Millennium Development Goals and the African Union-Aspirations and SADC RISDP make it very propitious for advancement of the Post Cyclone Idai recovery and reconstruction phase on a parameter of industrialization of the affected provinces with new urban centers and modern settlements emerging based on an innovative exploitation of the opportunities availed through development cooperation programs.

New development landscapes, transformation opportunities: rural and urban communities

Even as the Cyclone Idai tragedy struck certain provinces of Zimbabwe, Malawi, Mozambique and the Democratic Republic of the Congo, the programs for the restoration phase should usher both rural and urban communities into a new industrialization and modernization phase driven basically on cross-sector infrastructure development strategies for urban and rural communities. Post Cyclone Idai industrialization recovery programs spanning all sectors but based more on available local resources should potentially lead to new rural-urban development landscapes. Small to medium scale manufacturing enterprises [SMEs] should be the complementary underlying strategy on socioeconomic cultural recovery of the cyclone affected rural and urban zones. The post Cyclone Idai industrialization programs have great windows to exploit in the United Nations Context of Sustainable Development Goals. Especially there are three key goals conveniently exploitable for industrialization driven recovery programs in the affected zones of the Cyclone Idai affected nations of Zimbabwe, Malawi, Mozambique and the DRC. The conveniently exploitable United Nations Sustainable Development Goals are Goals 9, 11 and 17. Goal 9 stipulates “Building resilient infrastructure, promote inclusive and sustainable industrialization and faster innovation”. Medicines San Frances (2019) reported that a city of 500,000 inhabitants was destroyed, while homes collapsed and some with their inhabitants literally

carried away by the fiery floods, having no trace whatsoever of the former location or site as having been inhabited.

With Goal 9 emphasizing on resilient infrastructure, innovation, inclusive and sustainable industrialization, there is certainly need on the recovery phase to migrate from the traditional “Dagga and Pole Technology [DPT]” in rural construction of homes, industrial and business structures to cement–wire and metal pillars reinforced footing and walling; reinforced roofing and animal holding structures guaranteed through rural–urban inspectorates. As the situation stands most DPT constructed structures across rural communities and to a large extent in towns the shanty zones, roofs collapsed, and the structures together with inhabitants were tragically washed away to unknown destinations. Recovery processes in Zimbabwe, Mozambique, Malawi and the DRC would also conveniently benefit from the Goal 11 which stipulates making cities and human settlements inclusive, safe, resilient and sustainable. Under this provision partnership across governments, private sectors, municipalities, industries from regions and nations of the world as a strategy would facilitate industrialization and recovery of the Cyclone Idai affected regions at the same time elevating these nations from their predominantly highly indebted poor economic ranking and low income economy ranking to upper middle and high income advanced economies ranking.

Last but not least UNSDGs, Goal 17 pronounces “Strengthening the means of implementation and revitalization of global partnership for development”. In all circumstances and cases where Cyclone Idai inflicted destruction, a new approach and phase in development planning should be effected and effectively establish Tourism and Recreation Industrial Complexes with pronounced local and international economic specialization; Agro sugar and tea based industrial complexes with again a local, regional and international economic specialization; Holiday resort zoning; Transport/infrastructure complexes; Mining and manufacturing industrial complexes with pronounced local, regional and international economic specialization. Partnership in development driven by industrialization and modernization would be central to recovery programs in these Cyclone Idai devastated zones and nations. Certainly it would be a great loss on the part of Cyclone Idai affected nations not to develop special integral programs and plans on socioeconomic cultural, scientific and technological transformation of the rural and urban communities exploiting the Development Cooperation window even as this is the Fourth Industrial Revolution phase where massive multiple sector advancements are being registered across regions and races of the world.

Conclusion

In concluding this intriguing conversation, it is critical to indicate the constructive and summative essence of an abstract that focuses on conversational highlights signaling on either continued reading or seeking alternative sources on the destructive nature of cyclones on one hand and the inherent development and transformative opportunities it avails to rural and urban communities in a fast changing global space on the other. Comprising an expanded argument of the abstract the introduction to the conversation highlights key issues including the alternative strategies on

recovery programs that are industrialization driven as affected zones need to graduate from the “Dagga and Pole Technology” to wire-metal pillar and cement reinforced; disaster resistant reconstruction programs for domestic/home, industrial and commercial structures. Grounded in the theory of transformation and development the literature review comprises contemporary and relevant work best articulated on a critical descriptive analysis and a corresponding descriptive research design which lead to a cross-sector industrialization driven recovery programs as a logical outcome for the Cyclone Idai affected zones. Losses of human and wild life; properties and economic operations could be averted on the basis of a well-managed preparedness phase in disaster management while recovery and development has to have both a local and global orientation for mobilization of multiple development stakeholders from across the world with wide ranging capabilities, and resources to speed up modernization and industrialization. New landscapes in formerly passive zones and Cyclone Idai affected rural and urban communities should be characterized by combinations of productive industrial enterprises mostly in the small to medium enterprises range. New landscapes in the recovery phase should essentially focus on an overall transformation of the socioeconomic cultural, scientific and technological disposition and livelihoods of the population in the affected regions in particular and in the rest of the affected nations in general. Development cooperation driven industrialization should be the overall recovery strategy in all Cyclone Idai affected regions as efforts have to be essentially focused on shifting these nations to higher ranks of socioeconomic cultural; scientific and technological development in step with the global developments.

References

African Business (2018). The Best-Selling Pan African Business Magazine. Africa’s Blue Economy: An overlooked opportunity. July, Number 454. UK IC Publications. London. p 74.

African Energy (2018). African Business Supplement. Africa’s changing energy market. July. UK IC Publications. London. p 74.

Agenda 2063 (2015). The Africa We Want. Final Edition. April 2015. Popular Version. Africa Union Commission. ISBN: 978-92-95104-23-5.

Alexander D.E. (2016). ‘The game changes: Disaster prevention and management after a quarter of a century’. *Disaster Prevention and Management* 25(1). p 2–10. <https://doi.org/10.1108/DPM-11-2015-0262>

Andrew Heywood (2011). *Global politics*. Palgrave Foundations- Palgrave MacMillan. New York. p 560.

Asghar S., Alahakoon D. & Churilov L. (2006). 'A comprehensive conceptual model for disaster management'. *Journal of Humanitarian Assistance*, viewed 10 February 2017, from <https://sites.tufts.edu/jha/articles/page/8>

Baas S., RamasamyS., DePryck J.D. & Battista F. (2008). *Disaster risk management systems analysis*. A guidebook. FAO. Rome.

Bendito A. & Barrios E. (2016). Convergent agency: Encouraging transdisciplinary approaches for effective climate change adaptation and disaster risk reduction', *International Journal of Disaster Risk Science* 7. p 430–435.

Contreras D. (2016). Fuzzy boundaries between post-disaster phases: The case of L'Aquila, Italy', *International Journal of Disaster Risk Science* 7. p 277–292.

Chikowore G (2017). Transformative essence of Japan Official Development Assistance Policy: Significance for regional economic cooperation and integration in Southern and sub Saharan Africa 1980-2015 and Post 2015 Agenda Phase. University of Zimbabwe Publications. Harare. p 119.

Claire Gillespie (2018). What? Cyclone Definition and Properties; Anticyclone Definition and Properties; Difference between cyclone and hurricane. Updated July 20.

Douglas Sheil, (2018). *Forest Ecosystems*.

Elias Opongo O. eds. 2018. Pope Francis on Good Governance and Accountability in Africa. Paulines Publications Africa. Nairobi. p 295.

Garret Nagle (2010). *Development: Access to geography*. Hodder Education AN Hachette UK Company. London. p 129.

High Level Panel Report. (2015) "A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development. UNSDGs. New York: UN Publications.

Jha K., Miner W. & Geddes S. (2012). Building urban resilience: Principles, tools, and practice. World Bank, Washington, DC.

Kaulemu David (2011). *Ending violence in Zimbabwe*. Konrad Adenauer Stiftung (KAS) and the African Forum for Catholic Social Teachings (AFCAST). Harare. p 142.

Lisa E., Schipper F. (2016). *International Journal of Disaster Resilience in the Built Environment*.

León, J. & March, A. (2014). Urban morphology as a tool for supporting tsunami rapid resilience: A case study of Talcahuano. Chile. *Habitat International* 43. pp 250–262. <https://doi.org/10.1016/j.habitatint.2014.04.006>.

Prophet W Magaya. (2018). Billion Dollar Class Chapter– 2. Yadah TV Yadah Publishing House. Harare. p 98.

Population Reference Bureau (2018). World Population Data Sheet: With special focus on changing age structures. Inform, empower and advance. Washington DC.

Southern Africa Today (2019). SADC Integration. The need for implementation of regional strategies. SADC Today Vol 21 Number 2, February. SARDC. Gaborone. p 15.

Tau M., Niekerk D. & Becker P. 2016. An institutional model for collaborative disaster risk management in the Southern African Development Community (SADC) region'. *International Journal of Disaster Risk Science* 7. p 343–352. <https://doi.org/10.1007/s13753-016-0110-9>.

Southern Africa Today (2018). Realigning infrastructure with industrialization SADC assesses progress. SADC Today Vol 20 Number 4, June. SARDC. Gaborone. p 15.

Van der Waldt G., 2013. Disaster risk management: Disciplinary status and prospects for a unifying theory. *Jambá: Journal of Disaster Risk Studies* 5(2). Art. #76. p 1–11. <https://doi.org/10.4102/jamba.v5i2.76>

Zimmermann M. & Stössel F., 2011. Disaster risk reduction in international cooperation: Switzerland's contribution to the protection of lives and livelihoods. Swiss Agency for Development and Cooperation. Berne. Switzerland.

Reigniting the principle of *Ubuntu/Unhu* in the aftermath of Cyclone Idai in Chimanimani, Zimbabwe in light of the Sustainable Development Goals.

By

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Abstract

In March 2019, Cyclone Idai struck Malawi, Mozambique and Zimbabwe. This paper foregrounds the extraordinary level of national solidarity exhibited by the Zimbabwean people in response to the humanitarian crisis caused by this cyclone. Drawing insights from the African ethic of Ubuntu/unhu, the paper chronicles the roles of various stakeholders who played a role in responding to the impact of Cyclone Idai. Clearly, Zimbabwe has faced natural disasters since the beginning of this millennium, for instance, Cyclone Eline in the year 2000, Cyclone Japhet in the year 2003, the Tokwe-Mukosi floods of 2014 and Cyclone Dineo in 2017. In the aftermath of these disasters, there have not been comprehensive studies exploring the role of humanitarian agents and other stakeholders foregrounding the aspect of solidarity which is an integral factor in helping affected communities to cope with their losses. Hence, this paper seeks to address this gap using the survivors of Cyclone Idai in Chimanimani as a case study to foreground how their resilience and tenacity is anchored upon the bonds of solidarity exhibited by various stakeholders. Drawing lessons from past natural disasters in Zimbabwe, particularly on the experiences of the Chimanimani communities affected by Cyclone Idai, the paper proffers practical insights on how various stakeholders can collaborate to mitigate further loss of lives and devastation of infrastructure if similar natural disasters befall Zimbabwe in future. In line with the four pillars of the sustainable development goals (SDGs) i.e. people, planet, peace and prosperity (the four Ps), this study explores how the interventions by the various stakeholders responding to the plight of the Chimanimani community affected by Cyclone Idai are conforming to the long-term goals of establishing sustainable communities. Insights from the three development frameworks; the Sustainable Livelihoods Framework (SLF), the Asset Based Community Development (ABCD) framework and the People Centred Development (PCD) framework will help to assess the impact of solidarity initiatives put into place by the stakeholders responding to Cyclone Idai and other natural disasters that have befallen the Zimbabwean populace since the year 2000 and come up

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with propositions on how to utilize the locally available resources as a more durable measure in addressing the needs of the affected communities.

Key Words: Cyclone Idai, Chimanimani, Ubuntu/Unhu, Solidarity, Sustainable Development Goals (SDGs)

Introduction

Whilst other parts of Zimbabwe also experienced the impact of Cyclone Idai, this paper focuses mainly on Chimanimani and Chipinge districts which are on record for being severely affected. These two districts endured massive destruction of infrastructure with 339 recorded deaths and 349 people recorded missing. In total, 270 000 people were affected by the cyclone, including 129 600 children who either lost their parents, siblings, friends or their homes. In the absence of the spirit of camaraderie and solidarity that prevailed and continues to be present in the wake of the cyclone, the material losses, trauma and emotional turmoil wrought by Cyclone Idai would have been terrible beyond imagining. Using the lens of the Ubuntu/Unhu philosophy, the paper foregrounds the integral role played by various stakeholders resident in the Chimanimani and Chipinge districts as well as many more who poured in their support from different parts of the Zimbabwean community and from the global community. Whilst acknowledging the invaluable support offered by well-wishers who promptly responded to the plight of the Cyclone Idai survivors, the paper also highlights how some of the logistical challenges experienced during the distribution of the much-needed aid could have been avoided or reduced. The apparent lack of risk and disaster alleviation and management strategies before and after the outbreak of Cyclone Idai are some of the crucial concerns raised in this paper. Drawing insights from the field research conducted in Chimanimani and Chipinge districts in April 2019, the experiences of the numerous survivors of Cyclone Idai affirm the wisdom enshrined in the old adage, “prevention is better than cure.” In conclusion, the paper reiterates the importance of putting in place precautionary measures well before the occurrence of natural disasters rather than waiting for disaster to strike.

Women, Children and the Elderly bearing the brunt of Cyclone Idai

In a disaster of such magnitude, the most affected are women, children and the elderly. One of the female survivors of Cyclone Idai in Ngangu, Chimanimani district narrated the ordeal that befell her family when disaster struck on that fateful night as follows:

When the mudslides and flood waters started surging into the house, my husband went outside to try and find out what was really taking place. Unfortunately, he was unable to return back to the house because of the ferocity of the downpour, the mudslides and the rolling boulders which were blocking the path. I eventually realized that if we had to come out of the house alive, I had to frantically awaken my children and my elderly mother-in-law

whom I had to literally drag out of the house. We held hands as we stumbled in the mudslides whilst scrambling to find a place of sanctuary in the nearby Roman Catholic Church building. Although all my family members were fortunate to make it to safety, we however sustained several body injuries because we were racing against time. We were fumbling in pitch darkness, stepping on stones and sharp metal objects which were being swept off by the raging waters and the mudslides.

The experiences of the cyclone reflected in the above excerpt as retold by one of the study participants helps to explain the available statistics of the Cyclone Idai carnage which indicate that women, children and the elderly comprised the majority of either those who were injured, reported missing or the deceased.

Another major blow suffered especially by the mothers whose children's lives perished during the disaster is the harsh reality of not getting any emotional space to deal with their grief, aggravated by the fact that the traditional burial and mourning rituals were not observed on behalf of their loved ones who died during the cyclone. One of the mothers who lost her three children in the cyclone's trail of destruction tearfully narrated her loss and her predicament as follows:

Whereas in our culture when death occurs, members of the community and family members from far and wide gather around the homestead to mourn and comfort the bereaved, unfortunately, for my three children none of that happened. Since our home had been swept off by the raging floods and mudslides, no one mourned them, no one gathered for them. Their bodies were lying in the church for three days together with several other corpses that had succumbed to the floods and the mudslides. All the surviving people were too numb and utterly shaken such that there was no space for mourning or grieving. Worse still, due to the inaccessibility of the roads and the bridges that had been swept off by the cyclone, it was impossible for the other family members and friends from outside Chimanmani to travel and join us during our time of bereavement.

The above sentiments shared by the grieving mother clearly show the heart wrenching trauma and the deep-seated sense of loss and up rootedness suffered by the surviving communities. Like in most African communities, under normal circumstances, the people of Chimanmani and Chipinge districts meticulously and religiously observe the death and burial rituals to honour and celebrate the lives of their dearly departed relatives (Chitando, 1999). On the other hand, the death and burial rituals are also intended to play a therapeutic role by providing space for the bereaved family members to be enveloped by the emotional and material support which is their source of comfort and solace (Mwandayi, 2011). The night vigil which is usually held before the burial of the deceased will be punctuated with singing, dancing, sermons, prayers and testimonies chronicling all the good deeds of the deceased. This is intended to give the bereaved family a sense of closure (Kamwendo and Manyeruke, 2017). The omission of such funeral procedures for most of those who perished during the Cyclone Idai catastrophe is therefore an added layer of anguish and distress for the bereaved families. It is painful enough for a mother to lose only one child even when the child would have gone through a long period of sickness which might have mentally and

emotionally prepared her for the imminent loss. Unfortunately, as for the study participant quoted above, nothing prepared her for the sudden death of her three children. To add salt to the wound, their homestead was completely destroyed and due to the crisis mode that the whole community was going through, the deceased children did not receive the usual death and burial rituals as per their culture.

Since the cyclone occurred whilst the first school term was in session, inevitably schooling was disrupted. All the schools in the affected Chimanimani and Chipinge districts were abruptly closed until the commencement of the second school term in May. Resuming school at the beginning of the second school term was a traumatic undertaking for both students and their teachers. For instance, at Dzingire primary school in Chimanimani, fifty students, three teachers and the headmaster died when disaster struck. Going back to school under such circumstances, coupled with the destruction of infrastructure such as classrooms, ablution facilities and learning materials has presented a mammoth task. Some of the children who lost their parents, siblings, friends, members of the extended family and their homes are finding it extremely difficult to come to terms with their losses. The encounters with some of the children during the field visit to Chimanimani and Chipinge districts was heart breaking. Patricia¹, an eight-year-old girl disconsolately retold her experience:

I still vividly remember the last time I saw my brother Peter.² He had always been a loving and protective brother. As the waters suddenly rose and threatened to overpower us, he lifted me up until I had found something to hold on to. No sooner had he rescued me out of harm's way he was swept off by the raging waters. Despite having been a really good swimmer, he could not withstand the intensity of the floodwaters. If it was not for him, I would not be here to talk about my near-death experience. What is most painful to me is that in the process of saving my life, my brother lost his own life! As if that is not enough, that same day, I lost two more siblings and a cousin. I do not understand how such a tragedy could befall my family. I feel lost and confused.

The above excerpt as narrated by an emotionally drained, intelligent and very brave eight years old girl reveals the intensity of the trauma and heart wrenching questions lurking in the minds of most children who survived Cyclone Idai. Whilst Patricia suffered such a heavy blow, she is better placed because both her parents also survived, hence, she still has parental support to help her in dealing with the trauma. The plight of numerous children who were orphaned and displaced by the cyclone is nerve-wrecking. An eleven-year-old girl, Evelyn³ shared her nightmarish experience in the following words:

¹ Not real name, all the real names have been replaced with pseudonyms in this paper to safeguard the confidentiality of the study participants

² Not real name

³ Not real name

My younger sister and I had visited our grandparents' place for the weekend before the gushing of the torrential rain. When the heavy rains started falling, we could not go back home because of the floods. Whilst we enjoyed spending time with our grandparents, we were also looking forward to going back home to be reunited with mum and dad. Unfortunately, when we finally made it back home, my whole world was turned upside down upon discovering that both mum and dad as well as our home had all been swept away in the floods.

Whilst Evelyn and her younger sister still have their grandparents to fall back on, the grandparents are however advanced in age and are therefore very limited in terms of their capacity to provide adequate material and emotional care for the orphans. It is also important to note that the same grandparents who are being counted upon as potential caregivers are also going through the process of grieving for their children who perished in the floods. Hence, they equally need emotional support to deal with their loss and grief. The tumultuous experiences wrought by the cyclone on the elderly people who are left to care for orphans can be gleaned from the following statement made by an emotionally drained and hope famished Mbuya (Grandmother) Sithole¹:

Our lives have been shattered. We have lost our loved ones, our crops, and our livelihoods. My children who were my pillar of support all perished in the flood waters. I have now been left behind to take care of my three grandchildren who were orphaned by the cyclone. I do not know how to console them and worse still I do not have the resources to provide for their basic needs. If only God or the ancestral spirits could be negotiated with, I would have asked to swap places with my deceased children. It would have been far better for me to die since I have seen better days rather than for my children to be snatched in the prime of their lives.

Clearly, the narration of Mbuya Sithole's agony and travail as presented in the above excerpt reveals how several elderly people who survived the cyclone are grappling to come to terms with their losses compounded by the added responsibility of orphan care. They also do not have any plausible answers to the burning questions raised by the children left behind as the children are wrestling to come to terms with their parents' brutal and sudden demise. Whilst intervention strategies to alleviate the impact of the cyclone seem to have focused mainly on the women, children and the elderly as the most vulnerable survivors of the cyclone, our field research conducted in Chimanimani and Chipinge districts also revealed that the male folk who survived the carnage seem to be getting the shorter end of the stick when it comes to accessing the humanitarian aid and the emotional support. It is to that aspect that we now turn to below.

The Male Folk Falling through the cracks in the Cyclone Idai Aftermath

A recurring and disturbing feature confronting us in all the temporary shelters housing the displaced communities was the glaring number of people, particularly men who were heavily intoxicated even in the early morning hours. In trying to get to the bottom of the matter, we then

¹ Not real name

discovered that most men including young boys were masking their trauma, futility and ineptness by drowning themselves in alcohol and drugs. It also emerged that due to the Shona people's patriarchal matrix which appraises the dominant masculine perspective, when a crisis such as the Cyclone Idai catastrophe strikes, men are expected to hold the fort and put up a brave face. As such, the counselling sessions and other psychosocial support services offered by humanitarian agencies tended to focus on all other groups except the men. Also, even though the service providers were open to offer men the emotional support, however, because of the dominant masculine script, very few if any men accessed such services. Consequently, they ended up with bottled up emotions and resorted to masking their sorrows through intoxicating themselves.

Another challenge faced by the men who survived the catastrophe was an overarching sense of guilt and self-blame. In light of the fact that the majority of people who perished were women and children, there are high chances that several of the men who survived lost their wives and children or at least some members of the family. These sudden and heavy losses incurred by the men, left them in emotional turmoil. Naturally, men in Shona culture are expected to safeguard their family's and community's safety and security. Hence, they felt defeated and betrayed by the sudden turn of events whereby families and the community at large suffered devastation in their midst. One of the male participants whom we interacted with at a temporary shelter expressed his struggles in the following words:

I lost my wife, three children, my house and everything that is dear to me in a twinkling of an eye. I was employed at the Bridal Veil Falls and I was on night duty when disaster struck. Going back home the following morning, I found a heap of stones covered in mud where my house used to be. We have been digging and searching all over the place and up to now, only my wife's corpse and that of only one of my three children have been found. The other two children are still missing; I doubt that they will ever be found alive. If only I could find their corpses and accord them a decent burial, I would feel much better. I am in so much distress; I can barely fall asleep. I have stopped going to work, I cannot bear the thought of passing through the playground nearby my workplace where I used to take my children for a family outing. I do not have any will power to continue working because the family that I was working to sustain is all gone. I try to find solace in drinking my pain and sorrows away, it is all like a dream, I wish I could wake up one morning to find that this was just but a terrible nightmare!

The above excerpt is testimony to the numerous challenges that male survivors of the cyclone are battling with. With no other outlet in sight, most of them have resorted to excessive consumption of drugs and alcohol which unfortunately is not a viable solution. There is a danger that many of them will end up being alcohol or drug addicts.

Another fairly susceptible and often neglected group are the young men whose livelihood was anchored upon informal employment such as artisanal mining and cash crop farming, most of

which was either destroyed or disrupted due to the flash floods and the mudslides. One of the young men shared his travail as follows:

The common source of livelihood which attracted most of us young men to come here is *chikorokoza* (artisanal mining). However, the down pours of rain have rendered our work practically impossible for now. Since the time when tragedy struck our community, we have been spending most of the time helping families to search for their loved ones by digging and skimming the mud-covered places and turning the boulders scattered all over to search for the remains of missing persons. It is an emotionally and physically draining process. When the truck loads transporting donations in the form of clothing and food items are delivered in our community, it is us the young men who are called to off load the trucks. However, when they distribute the donations, we are never included on the list of beneficiaries because we are not considered as being needy. Priority is often given to those who have either lost their loved ones or the household owners whose homes collapsed. Those of us who were renting in houses that collapsed or those whose source of livelihood was destroyed have been pushed to the periphery. There are also numerous irregularities, favoritism and rampant corruption in the distribution of donations.

The views raised by the young men quoted in the above extract aptly summarize the numerous voices of discontent emerging from the various young men we interacted with during the field visit in Chimanimani and Chipinge. Clearly, these critical concerns needed to be urgently addressed in an appropriate manner because there is the danger that besides reverting to abusing alcohol and drugs, the young men might end up being forced to engage in criminal activities. Writing in the context of the HIV epidemic, Chitando and Chirongoma (2008; 2012) reiterate the fundamental importance for nations, communities and institutions to include men in any prevention, care and support programs. Resonating with Chitando and Chirongoma (2008; 2012), this paper makes a call for the inclusion of men who were equally affected by the Cyclone Idai tragedy. If men are excluded, surely, the well intentioned and effective intervention strategies will be counterproductive and they will remain a mere pipedream. Having articulated the various vulnerability contexts encountered by the different categories among the survivors of Cyclone Idai, below we now turn to an exploration of the Ubuntu/Unhu ethic as an essential resource igniting the responses to the humanitarian crisis situation.

Ubuntu/Unhu Ethic as an essential resource for responding to the Cyclone Idai disaster

In a very unique manner, pain and suffering spur our human hearts into action. Whenever we are confronted with brokenness and vulnerability, we instinctively become sympathetic, tender, warm and protective towards those who are afflicted by life's trials and tribulations. Granted, the Cyclone Idai carnage wrought all sorts of wounds, the survivors were inflicted with physical, psychological and spiritual scars. All these indelibly etched lacerations loudly cry out for healing and restoration. Individuals, organizations, institutions and nations from far and wide

have been and continue to rally behind the survivors of Cyclone Idai. These numerous interventions in response to the humanitarian crisis caused by the cyclone resonate with the ubuntu/unhu ethical principles. Various scholars have expounded on the ubuntu/unhu philosophy. Suffice it to say that the principle of ubuntu/unhu is enshrined in “an understanding of what it means to be human and what is necessary for human beings to grow and find fulfilment” (Shutte, 2001:2). Thus, the ubuntu/unhu ethic moulds human behaviour in such a manner that one “seeks to promote and enhance the well-being of others” (Chirongoma and Manda, 2008:194). Archbishop Desmond Tutu summarizes the essence of ubuntu in the following words:

A person with ubuntu is open and available to others, affirming of others... he or she has a proper self-assurance that comes from knowing that he or she belongs in a greater whole and is diminished when others are humiliated or diminished, when others are tortured or oppressed, or treated as if they were less than who they are (Tutu, 1999:57)

Putting it across differently, Tutu articulates the essence of Ubuntu as follows:

We are wired to be caring for the other and generous to one another. We shrivel when we are not able to interact... We depend on the other in order for us to be fully who we are. (...) The concept of Ubuntu says: A person is a person through other persons (Dalai Lama, Tutu and Abrams, 2016:46).

The above exposition on Ubuntu/Unhu dovetails with the spirit behind the various stakeholders’ responses to the devastation and the humanitarian crisis caused by Cyclone Idai. Moved by the plight of the Cyclone Idai survivors; countless individuals, local community leaders and humanitarian aid agencies such as UNICEF, UKAID, AFRICAID, Christian Aid, the Red Cross Society and the WHO are assisting the affected communities. Intervention strategies such as the provision of makeshift shelter, food, clean water and sanitation facilities for the displaced communities are continuously being implemented. Psycho-social support for those who lost their loved ones, their homes and all their belongings is another crucial component of the intervention measures.

Cognizant of how the destruction of homes and medical facilities has exacerbated vulnerability to communicable diseases such as cholera, malaria, measles, and malnutrition to the Cyclone Idai survivors, the humanitarian aid agencies are making frantic efforts to provide emergency medical kits as well as ensuring that the temporary shelters are insulated from disease outbreaks. UNICEF has already provided more than 60 000 people with critical information to prevent waterborne diseases and is distributing hygiene kits, soap and water purification tablets, they are also rehabilitating water systems. Since most of the medication and medical records were swept off by the floods, another major concern is the high likelihood for the HIV infected to develop resistance to ARVs due to the disruption in uptake of medication. Adherence to ARVs also becomes compromised especially for the displaced population. Over 175 000 people have been displaced

by Cyclone Idai and about three million people are in dire need of assistance. With UNICEF's support, 12 678 children and adolescents living with HIV have been traced to ensure that they have continued access to treatment. Overcrowding also brings its own challenges, such as an increased risk of infections like hepatitis A and typhoid being spread. Mental health issues triggered by the trauma compounded by substance abuse are also commonplace (UNICEF, 2019).

Residents of Chimanimani and Chipinge have not only had to contend with high winds and devastating flooding, the cyclone also brought with it mudslides and rockfalls, wiping away bridges, homes, entire communities and their livelihoods. In Zimbabwe, more than 270 000 people are estimated to have been affected, including 130 000 children. Officials in Zimbabwe estimate that more than 2 250 houses were washed away or damaged, leaving more than 4 000 people displaced. Entire sections of settlements have completely disappeared, with massive rocks where houses had stood. Many families were camping out in schools, churches, and public buildings. Women and children crammed into temporary shelters were at heightened risk of violence and abuse, while children orphaned by the cyclone or separated from their parents were in urgent need of support. The increasing number of unaccompanied, orphaned and other vulnerable children who are either homeless or are living in crowded spaces is another emerging crisis. Flooding has also led to significant numbers of children being separated from their families, and tracing is an urgent priority. According to a child protection officer working with a UNICEF-supported partner organization, in Ndakopa alone, among the almost 240 children estimated to have lost at least one parent; about 70 children lost both parents. In this light, UNICEF has been providing a child friendly space in the affected areas, but the future remains uncertain for most of the affected children. Their major concern right now is that they be assured of a safe home and that continuing their education is guaranteed. With support from partners across the globe, UNICEF is working hard to assist the children and affected families in a bid to alleviate their suffering. UNICEF and partners have supported the deployment of dozens of social workers to bolster social services in cyclone-affected areas in Zimbabwe, so far reaching nearly 3 000 children with protection services. The incoming social workers are focusing on providing psychosocial support to separated children, and UNICEF has also reached thousands of children through child friendly spaces (UNICEF, 2019).

After discussing the various intervention strategies that were implemented in response to the plight of the Cyclone Idai survivors, below we proceed to reflect on some insights that can be drawn from the SDGs and the three development theories (ABCD, PCD and SLF) in an endeavor to alleviate the devastation caused by ecological tragedies such as Cyclone Idai.

SDGs and Development Theories as lenses to reflect on the Cyclone Idai Carnage

The wreckage caused by Cyclone Idai brings to mind the key issues raised in the post-2015 development agenda which set 17 Sustainable Development Goals (SDGs) comprising of 167 targets. Over a period of 15 years, these goals and targets are expected to stimulate action in five

pivotal areas: people, planet, prosperity, peace and partnership [the five P's]. These are conjoined and they seek to balance the three crucial dimensions of sustainable development, i.e. economic, social and environmental. The first SDG emphasizes poverty eradication by the year 2030. Clearly, the debris surrounding Cyclone Idai exposed most if not all the survivors to poverty and destitution. Hence, attaining this SDG should entail finding practical and realistic measures of capacitating and empowering the affected communities to rise from the doldrums of poverty caused by the aftermath of the cyclone. In this light, the principles enshrined in the ABCD approach become instructive. According to Kretzmann and McKnight (1993), the development philosophy behind the ABCD approach is that each and every community, no matter how poor and how vulnerable, is endowed with skills, resources and capabilities. In essence, the ABCD approach perceives each and every individual as an asset and as an agent, hence those assets must be tapped into for the individual's and community's benefit. From this perspective, the cyclone Idai survivors must be capacitated to become self-sufficient rather than relying on aid for their sustenance.

SDG 2 focuses on eradicating world hunger by the year 2030. Granted, Cyclone Idai destroyed people's livelihoods, their crops, fruit trees and their food reserves were swept off by the floods. There is therefore need for establishing means and ways to ensure that those who survived the Cyclone Idai disaster do not perish due to hunger, malnutrition and starvation. SDG 3 envisages provision of health and well-being for all by the year 2030. The destruction of health care facilities, the death of health care practitioners, the injuries and the trauma suffered by those who survived Cyclone Idai impact heavily on the achievement of this goal. As such, there is urgent need for lasting solutions to address the various threats to people's health and well-being in the wake of Cyclone Idai. SDG 4 calls for provision of inclusive and quality education by the year 2030. Unfortunately, the cyclone impacted negatively on the education sector by demolishing the educational infrastructure, teaching and non-teaching staff perished and some of those who survived have sought transfers from the affected districts. All these misfortunes have far-reaching repercussions on the quality of education, hence posing an obstruction in achieving this goal. SDG 5 emphasizes achieving gender equality and the empowerment of all women and girls by the year 2030. As has already been noted above, women and girls who survived the cyclone have been made vulnerable to abuse and exploitation which further disempowers them. The above discussion also noted the various ways in which men have been negatively impacted by the Cyclone Idai catastrophe. Hence, attaining this goal entails intentionally focusing on various ways in which the vulnerabilities of men and women can be effectively addressed.

SDG 6 envisages a world with access to clean water and sanitation by the year 2030. As has been reiterated above, the Cyclone Idai carnage destroyed clean water sources and sanitation facilities were demolished in the trail of destruction. Living in overcrowded temporary shelters compromises the survivors' access to clean water and sanitation facilities. This calls for prompt measures to be put into place to ensure that the affected people have permanent shelter and that

their water sources and sanitation facilities are rehabilitated as a matter of urgency. SDG 7 advocates for the provision of affordable and clean energy by the year 2030. It is important to restate the fact that whilst Cyclone Idai aggravated the problem of power cuts in the affected areas due to the destruction of some equipment, however, Zimbabwe had already been battling with providing its citizens with an uninterrupted supply of electric power. Hence, instead of hiding behind the finger and blaming Cyclone Idai for the power cuts, as the people of Zimbabwe, we need to be more creative and innovative in finding alternative power sources. Investing in solar energy as a country will go a long way in addressing the ecological crisis and the financial constraints caused by an overreliance on electric power. This is interlinked with SDG 11 which calls for sustainable cities and communities and SDG 12 which advocates for responsible consumption and production. According to the information provided by some of the Cyclone Idai survivors whom we interacted with during the process of field research, the other factors that could have precipitated the gravity of the cyclone's impact have to do with the wanton allocation of residential stands along waterways and the rampant artisanal mining activities around Chimanimani and Chipinge districts. Such activities exert pressure on and damage the environment whilst exposing the land to the vulnerability of ecological disasters such as the Cyclone Idai disaster.

The attainment of the above- mentioned goals might become a reality if the government of Zimbabwe, development practitioners, aid agencies and the people of Chimanimani and Chipinge districts take a leaf from both the ABCD and the SLF development approaches. As mentioned above, the ABCD approach hinges around the concept of assets, tapping into the various and often times intangible assets for the betterment of the community. Responding to the Cyclone Idai carnage through the ABCD lens would go a long way in capacitating and empowering communities to use their locally available resources and skills to cope with their vulnerability contexts. The ABCD development approach also shares similar principles with the SLF development approach. According to Chambers and Conway (1992), the SLF development approach emphasizes the need for pursuing livelihoods which are sustainable. It concurs with the ABCD development approach in acknowledging that each and every community no matter its deplorable conditions, possesses invaluable assets which exist in varied forms. As such, it propounds the need to identify these assets and put them to good use by capacitating communities to pursue sustainable livelihoods. In the case of Chimanimani and Chipinge districts, there are vast expanses of land with rich soils and abundance of rainfall making the area conducive for cash crop farming, animal husbandry, plantations and fruit farming. If they are to be equipped with skills and implements, they would be able to be productive and pursue sustainable livelihoods that will release them from the bondage of relying on relief and welfare.

The above discussion leads us to an exploration of the PCD as another crucial development approach that might offer important insights in dealing with the crisis in Chimanimani and Chipinge districts. The think-tank behind the PCD as a development approach is David Korten. In

his seminal work, Korten (1990) articulates the fundamental need for individuals, communities, institutions and development agencies to gradually shift from relief and welfare to people centered development. This entails developing their communities based on the locally available resources and skills. According to Korten (2015), the ideal is to reach a point whereby individuals and communities literally shake off the dependency syndrome and begin to actively work towards pursuing livelihoods which are sustainable and ecologically friendly. Whilst Korten acknowledges the need for partnership with other experts and others who are better equipped, the driving force behind development initiatives should be the resilience and the tenacity of the local community who take ownership for addressing their community needs. In unison with the principles of the PCD framework, our recommendation is that whilst the countries' governments and international aid agencies are coordinating relief efforts in response to the humanitarian crisis confronting the survivors of Cyclone Idai, it is however important that these don't just focus on the short-term effects of the floods and the devastation. Rather, it is crucial to look ahead and try to guard against major health crises, food shortages and the numerous other existential challenges bedeviling the survivors as listed above. There is a pertinent need for capacitating and empowering the affected communities to stand on their feet once again. The sage wisdom on desisting from giving people fish which will feed them for only one day and focusing on teaching them how to fish so that they can feed themselves for a lifetime rings true here. Having explored the nexus between the selected SDGs and the three development frameworks in the wake of the Cyclone Idai catastrophe, the next section of our paper focuses on highlighting the apparent lack of risk and disaster management which heightened the plight of the affected communities.

Cyclone Idai revealed the need for risk and disaster preparedness and management

SDG 13 raises a clarion call for taking urgent action to combat climate change and its impacts. Cognizant of how climate change causes ecological disasters such as drought, earthquakes, tsunamis, floods and tropical cyclones such as Cyclone Idai, the focus of this goal revolves around strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Furthermore, it propounds the need to integrate climate change measures into national policies, strategies and planning. It also emphasizes the importance of improving education, raising awareness as well as enhancing human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

The events surrounding the occurrence of Cyclone Idai in Zimbabwe are a replica of the various cyclones and floods which have struck us totally unprepared. If only the people of Chimanimani and Chipinge had been sensitized about the crucial need for evacuating the areas that would have been identified to be susceptible to the cyclone and if efforts had been made to promptly evacuate them, surely, we would have a different story to tell. Granted, the cyclone could not have been averted, however, the traumatic losses of lives and injuries could have been prevented or drastically

minimized. Furthermore, rather than neglecting the survivors of the cyclone who remained cut off from the rest of the country and the world at large for more than three days, if rescue operations had been arranged ahead of time, the numerous deaths due to untreated injuries, starvation and exposure to the rain and the cold weather could have been mitigated. The fact that the Zimbabwean government declared Cyclone Idai a national disaster and appealed for international support to deal with its impact also shows lack of risk and disaster management and preparedness in national disaster policy and budgeting. With proper planning, using technology to notify people in the affected areas about the looming disaster and timeously evacuating them, the devastating impact of the Cyclone Idai catastrophe would have been mitigated. Some of the resources that were used and continue to be utilized in an endeavor to rehabilitate and bring a sense of normalcy to the communities affected by Cyclone Idai could have been channeled towards risk and disaster preparedness. Rather than waiting for disaster to strike, it would have been far better to alleviate its impact. The next section of the paper draws our discussion to a conclusion.

Conclusion

The foregoing discussion has noted how the survivors of Cyclone Idai in Chimanimani and Chipinge districts suffered heavy material and emotional losses. The discussion also illustrated how the outpouring of solidarity and support offered by various stakeholders in response to the humanitarian crisis is reminiscent and reflective of the Ubuntu/unhu ethic. The paper also acknowledged that in the absence of relief and welfare services provided by several well-wishers, the impact of the cyclone would have been very severe. Whilst acknowledging the fundamental significance of all the seventeen SDGs, the paper focused on discussing specific SDGs which are more directly linked with the occurrence of Cyclone Idai. The interface between these SDGs and the three development approaches in relationship with the Cyclone Idai catastrophe was also foregrounded. The crucial need for Zimbabwe to make intentional efforts to be better equipped and better prepared in terms of risk and disaster management particularly the natural disasters such as Cyclone Idai was restated. This paper is being written six months after the Cyclone Idai carnage hit Zimbabwe, unfortunately, most of the displaced people are still living in overcrowded temporary shelters exposing them to all weather elements. They have endured the biting winter and their future remains uncertain as a new rainy season is setting in. With better national policies and proper planning for disaster mitigation in place, most of the Cyclone Idai survivors would have been settled in permanent homes by now. In conclusion, the lessons learnt from the Cyclone Idai carnage should be illustrative not only for the Zimbabwean people but for all developing countries grappling with the impact of looming ecological crises.

References

- Chambers, Robert and Conway, Gordon (1992), “Sustainable rural livelihoods: practical concepts for the 21st century,” *IDS Discussion Paper*, 296
- Chirongoma, Sophia and Manda, Lucinda, D. (2008) “Ubuntu and women’s health agency in contemporary South Africa” in Steve de Gruchy, Sytse Strijbos and Nico Koopman (eds.) (Amsterdam: Rozenberg Publishers)
- Chitando, Ezra (1999) “Deathly Concern African Christians and cremation in Zimbabwe,” *Missionalia*, 27:1, pp. 10-19
- Chitando, Ezra and Chirongoma, Sophia (2008) “Challenging Masculinities: Religious Studies, Men and HIV in Africa” in *Journal of Constructive Theology: Special Issue on Masculinities and HIV and AIDS in Africa* Volume 14. No.1, pp.55-69
- Chitando, Ezra and Chirongoma, Sophia (2012) *Redemptive Masculinities: Men, HIV, Religion and Culture* (Geneva, Switzerland: World Council of Churches Publications)
- Dalai Lama, Tutu, Desmond and Douglas Carlton Abrams (2016) *The Book of Joy: Lasting Happiness in a Changing World* (Penguin Publishing Group)
- Kamwendo, Lawrence M. and Manyeruke, Charity (2017) “Power Politics During and After Funerals Amidst the Shona of Zimbabwe,” *Africology: The Journal of Pan African Studies*, vol.10, no.2, pp.151-164
- Korten, David (1990) *Getting to the 21st Century: Voluntary Action and the Global Agenda* (Hartford, USA: Kumarian Press)
- Korten, David (2015) *Change the Story, Change the Future: A Living Economy for a Living Earth* (Berrett-Koehler Publishers)
- Kretzmann, John P. and McKnight, John L. (1993) *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets*, Evanston, IL: Institute for Policy Research
- Mwandayi, Canisius (2011) *Death and After-life Rituals in the eyes of the Shona: Dialogue with Shona Customs in the Quest for Authentic Inculturation* (University of Bamberg Press: University of Bamberg)
- Personal Interview, Ngangu Residential area in Chimananini, 28 April, 2019
- Personal Interview, Ngangu Residential area in Chimananini, 28 April, 2019
- Shutte, Augustine (2001) *Ubuntu: An Ethic for a New South Africa* (Pietermaritzburg: Cluster Publications)
- Tutu, Desmond (1999) *No Future Without Forgiveness* (Doubleday: Michigan)
- UNICEF, (2019) “After Cyclone Idai, uncertain futures for children left behind” (26 April 2019) Available Online at <https://www.unicef.org/stories/after-cyclone-idai-uncertain-futures-children-left-behind> (Accessed on 25 June 2019)

UNICEF, (2019) “UNICEF Zimbabwe Cyclone Idai Situation Report #7” (31 May 2019)
Available Online at <https://reliefweb.int/report/zimbabwe/unicef-zimbabwe-cyclone-idai-situation-report-7-31-may-2019> (Accessed on 30 June 2019)

Gendered impacts of Climate Change in Africa: The case of Cyclone Idai, Chimanimani, Zimbabwe, March 2019.

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Abstract

This paper seeks to discuss the nexus between climate change and social relations in Africa using a case study approach of Cyclone Idai in Chimanimani district, Zimbabwe. Disaster induced displacement remains another affirmation of the flawed notion of pre and post-disaster preparedness and human security as a gendered caveat. This paper theoretically and empirically unravels the incessant feminisation of socio-economic insecurity in the contexts of forced displacement post Cyclone Idai. The researcher alludes to the prevalence of epitomising gender dichotomies of victimhood among displaced men and women, yet again framing social relations and human security on masculine-feminine asymmetries. The article empirically espouses feminized intricacies of security from the everyday experiences and narratives of men and women in the case study area as a basis for pragmatic solutions that should inform strategies and policies meant to deconstruct the androcentric anchorages militating against the equitable strategies in post-displacement contexts. Methodologically the paper proceeds through a qualitative research orientation where in-depth interviews and observations constituted the major data collection tools. Chief among the numerous findings of this study was not only that post-displacement scenarios are reminiscent of post-conflict contexts in terms of gendering human security, but, that any effort to emancipate women should pragmatically embrace gender as an essential variable.

Key words: Climate change, displacement, vulnerability, feminism

Introduction

As a primary factor of social organization, gender shapes the social worlds within which natural events occur. Not surprisingly, gender differences are found in studies of emergency preparedness, voluntary action, emergency communication, the division of labour, post-traumatic stress, and coping strategies, among other areas (Fothergill, 1996). Masculinity norms may encourage risky action during the search and rescue period, debris removal, and reconstruction, and deter men from approaching relief agencies or seeking counselling later (Fuller, 1994).

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Natural disasters have affected every continent in the world. Asia has the highest frequency and casualties. This is due mainly to Asia's large and varied landmass with multiple river basins, flood plains, mountains, active seismic and volcanic zones. There are also high population densities in the region. In total, Asia has been hit by 2,778 disasters over the past 20 years, with 3.8 billion people affected in addition to nearly 841,000 deaths. Within Asia, the Southern, Eastern and South-Eastern regions were hit most frequently by natural disasters, recording 2,481 events or 36% of all disasters recorded worldwide between 1994 and 2013 (IPCC, 2014). In 2017, hurricanes Harvey, Irma and Maria caused devastation in the Caribbean and the Southern United States. (Sawada and Takasaki, 2017) The nature, severity and occurrence of tropical storms has increased over the past 35 years globally (Climate Change, 2013). Total occurrence of reported natural disasters increased steadily from 141 events in 1980 to an all-time high of 527 events in 2000. Despite a decline in frequency since then, a continuous increase in the intensity of floods and storms resulted in a total of 377 disasters in 2015, which is 1.2 times higher than the 35-year average (of 314 events per year) (CRED, 2015). Of the total 11,512 natural catastrophes over the 1980-2015 period, 79% took the form of weather-related extreme events, such as storms, floods and droughts. Of the remaining, 12% represented biological events, and 9% fell into the category of geophysical events such as earthquakes, tsunamis and volcanic activities (Cavallo, 2010).

Floods represent the most common type of natural disaster, and overall, about 80% of natural disasters are weather-related (IPCC, 2014). Emerging economies are significantly more exposed than developed countries. The average annual damage from natural disasters over 1980-2015 was 1.5% of GDP in emerging markets versus 0.3% of GDP in developed economies. (Bova, et al, 2016). From 1970 to 2008, over 95% of deaths from natural disasters occurred in developing countries (IPCC 2012). In the decade 2000–2009, a third of global natural disasters and almost 80% of deaths occurred in the 40 countries that received the most humanitarian aid (Kellet and Sparks, 2012). Over the 1980-2015 period, the five countries with the highest annual loss in percent of GDP globally were Mongolia (20.1%), Maldives (18.5%), Belize (9.3%), El Salvador (8.5%) and the Solomon Islands (8.0%) (IPCC, 2014). Due to the lower level of private-sector catastrophe risk insurance in developing economies, the provision of post-disaster relief, reconstruction and rehabilitation remain largely a government responsibility, which often results in significant fiscal burden for the government (Stern & Nichollas, 2007).

Tropical Cyclone IDAI, developed on the 5th of March 2019 initially as a tropical depression near Maganja da Costa in Zambezia Province in Mozambique. It moved up to Niassa Province within Mozambique and turned towards southern Malawi where it caused heavy rain leading to flooding. The Republic of Malawi declared a disaster on the 8th of March 2019, the Republic of Zimbabwe declared a disaster on the 16th March 2019 and the Republic of Mozambique declared a disaster on the 18th March 2019 (UNOCHA, 2019). The tropical depression then returned to the Mozambique Channel, where it gained momentum and became a Tropical Cyclone IDAI. The Tropical Cyclone IDAI curved back to Mozambique's coastline and made landfall near Beira city on the 14th of March 2019. On the 15th March the eye of the Tropical Cyclone was located

approximately 25 km away in the north-west of Beira, with maximum sustained winds of up to 167 km/h. Heavy rainfall, strong winds and storm surges estimated at heights of 2.5 metres were recorded in Beira and sweeping over the coast of the Sofala region. It further, moved westwards towards eastern Zimbabwe on subsequent days, with highly destructive impacts. It has been classified as the worst Tropical Cyclone to hit the SADC region in recent history. A heavy rainfall alert was issued by the SADC Climate Services Centre (CSC) on the 4th of March 2019, which was subsequently followed by advisories on the occurrence of Tropical Cyclone IDAI. The floods caused by the Tropical Cyclone IDAI have affected 3 million people in the Republics of Malawi, Mozambique and Zimbabwe leaving 839 people dead (SADC, 2019). This paper documents the pervasive influence of gender dynamics in coping with disasters, focusing on vulnerability complexities.

Methodology

Methodologically the paper proceeds through a qualitative research orientation where in-depth interviews and observation constituted major data collection tools. Chimanimani District lies in the eastern province of Manicaland in Zimbabwe. It is bordered by Mozambique in the east, Chipinge District in the south, Buhera District to west and Mutare District to the north. The District has an estimated population of 133 810 (ZIMSTAT, 2012). Slightly more than half the population (52%) in the district are females. Chimanimani is the second smallest district out of seven in the province, yet potentially the richest with abundant natural resource reserves that include forests, fertile soils and precious minerals such as gold, diamond, lime and copper. Three areas in Chimanimani 21 wards namely, Charleshood farm, Kopa Growth Point and Chimanimani Urban were purposively selected to participate in the study. Charleshood river burst its banks resulting in the displacement of villagers in Charleshood farm. Whilst Nyahode river at Kopa Business centre also burst its banks. Resulting in flooding of Gata Police Camp and surrounding areas. Whilst Chimanimani Urban was the most affected considering its dense population, coupled by the rampant destruction of infrastructure which left the community vulnerable. From each area, 4 in depth interviews were conducted, thus 16 local residents participated in the study. Key informants from Civil Protection Unit, Environmental Management Agency, District Administrator and Chimanimani Rural District Council were purposively selected.

Literature Review

Disasters and Gender: A Theoretical Analogy

Traditional gender roles that confine women to reproductive tasks, low-yielding agricultural practices and climate vulnerable livelihoods mean their activities are more likely to suffer from climate variabilities (Dankelman, 2010). Gender disparities exert powerful differences within societies worldwide, even in the field of disasters. Women and men are not merely at risk because of their location in time and place (Bankoff, 2018) but because of a complex mix of influential

factors that include “differentiated roles and responsibilities, skills and capabilities, vulnerabilities, social relations, institutional structures, and long-standing traditions and attitudes (Obcarskaite, 2014). These social forces are thought to shape different behavioural tendencies, including those related to the ability to anticipate, prepare for, respond to, and recover from disasters (Wisner, et al 1994). The interest and recognition of different attitudes and behaviours among men and women in the wake of environmental problems have origins in the 1990s (Gutteling & Wiegman, (1993); Greenberg & Schneider, (1995); Riechard & Peterson, (1998)). Increased interest in gender inclusion in the disaster context occurred during the International Decade for Natural Disaster Reduction (1990–1999); however, gender-specific guidelines were missing. In 2000, the special session of the UN General Assembly, “Gender equality, development and peace for the twenty-first century highlighted the inefficiencies and inadequacies of existing approaches in responding to disasters (Gomez, 2006). Thus, the need for explicitly incorporating considerations on gender into disaster prevention, mitigation, and recovery strategies has been increasingly emphasized. Several researchers have reported men’s higher confidence in their proactive behaviours during an emergency, rating their level of self-preparedness as significantly high (Barberi et al, 2008; Armas, 2008). This behaviour may at least in part be driven by the social role that men usually play within the family context.

A gender studies perspective views disaster as a gendered-constructed process. This understanding has carried with it a very important normative message: that to respond to those in need during a disaster, gender needs to be considered as an integral factor. Thus, the conceptualization of disasters in gender studies has been tasked with providing argumentation on the gendered aspects of a disaster. Contributions from feminist perspectives, have pushed for disasters to be understood in terms of the weaknesses and determinants within a society that determine the level of vulnerability. A study in Iran concluded that different aspects of a disaster were manifested through different aspects of gender. In the context of earthquakes in Iran, it was described that a woman is present in society in different ways; namely, as an individual who experiences the disaster, as a member of a family, and as part of a community (Nakhaei et al. 2015). Using these themes, Nakhaei et al. identified key needs of Iranian women affected by the earthquakes. By understanding the status of gender within the Iranian context, an appropriate disaster response could be designed and implemented. This gap in perception and goals for planning needs to be addressed. Often it can lead to an uncomfortable prescription of imposing normative values or realigning gender roles and requirements onto a foundation that is not sustainable. Positive social transformation related to gender is possible in the context of disaster settings. The Nepalese civil war conflict offers a long-standing example. Traditionally Nepalese widows were required to wear a white sari. However, following an armed conflict lasting from 1996 to 2006 and causing over 15,000 deaths, many women became widows. During the post-conflict era, widows challenged the centuries-old entrenched belief system surrounding the status of women and resisted the practice of the ‘white sari’ (Yadav 2016).

Within a gendered framework, vulnerability is a temporal phenomenon. Vulnerability is addressed to identify strategies to counteract the social factors that are structuring the ways that vulnerable groups are susceptible to risk and harm. Following on, vulnerability highlights that there are two elements to consider from a gender studies perspective about disasters; namely that the disaster is gendered and the experience of the individual during the disaster is gendered. A very contemporary aspect of disasters through a gender framework is the systematic recognition of multiple identities. (Enarson et al. 2007, 130). In this sense, the concept of disaster continues to develop in terms of its larger narratives that embody lived experiences and a continuous spectrum of social processes.

Climate Change and Development

The risk and impact of major disasters have been exacerbated by climate change, growth in population and urbanization. These risk multipliers combine with other underlying factors poverty, poor governance, and a degraded infrastructure which further increase the severity of disaster impact on communities and populations. Disasters can be particularly devastating in poorer areas that are not as able to respond, putting a significant strain on humanitarian efforts to meet the needs of affected populations (UN, 2017). Climate change and associated stressors influence human development through their support or destabilization of the livelihood systems of the poorest and most vulnerable people. There is now a broad scientific consensus that climate change is unavoidable (IPCC, 2007). Recent evidence and projections indicate that global climate change is likely to increase the incidence of natural hazards, including the variability of rainfall, temperature and occurrences of climatic shocks (IPCC, 2012). Climate-related issues and farmers' livelihood strategies are different in different parts of the world. For instance, many farmers in Nepal and north east India suffer from droughts, whereas coastal Bangladesh is a "hotspot" of intermittent floods. (Nicholls et al., 2007). As an attempt to overcome some of the climatic and non-climatic challenges, farm households diversify their livelihood sources (Brown, et al 2006). The climatic conditions in wet regions are harsh, there are high temperatures and high precipitation. These harsh climatic conditions have been exacerbated by climate change and they have caused chronic food insecurity and long-term drop in agricultural production (UNDP, 2009). The prevailing and anticipated weather conditions are therefore a threat to livelihoods and food security in Africa, among other parts of the world. Thus, Zimbabwe is getting more vulnerable to climate changes, and the local climatologists predict that there will be increased poverty and diseases are anticipated due to climate related hazards (Siyamachira cited in the Sunday Mail of 10 April 2011).

The Effects of Tropical Cyclones on Infrastructure

Climate change has had a negative bearing on aspects of the urban space that include house prices, insurance premiums, residential mobility and urban spatial arrangements. Mills observes that between 1980-2004 global impacts of property is attributed to weather related disasters of climate change with the highest property loss valued over \$300 billion (Nolon, 2015). The major attribute to climate change is traced to the greenhouse gases emissions emitted by several-carbon intensive gases. However most African building designers and spatial planners are yet to respond to

potentially damaging effect of climate change on real estate development, through improved building design and layout of cities. Increase in human activities particularly the burning of fossil fuels in recent times keeps increasing the concentration of GHG with a resultant increase in the earth's temperature (Manatsa et al 2013). In south Africa, Kruger (2015) observes that, the economic loss due to the impact of climate change on the costal property was estimated to be more than one billion rand. The South African coastal risk assessment has been done in an attempt to establish the impact of a rise in sea level and the associated hazards on the local economy. In their analysis of floods, they used the replacement value of buildings and the content thereof to estimate the economic cost of a rise in sea level. Giglio et al 2015 explores that market data can highlight the appropriate discount rates for valuing investments in the climate change abatement. The tractable pricing model shows that real estate is exposed to both consumption risk and climate risk. As a result, short-run cash flows are more exposed to climate risk than long run cash flows, allowing us to match the observed housing term structure. Commercial property owners are also face increasing insurance costs as a result of two climate change related phenomena; the increasing frequency and severity of extreme weather events, and rising sea levels.

Cyclone Idai dumped torrents of rain over large parts of Mozambique, Malawi, Zimbabwe, and Madagascar, causing extensive flooding, mudslides, and at least one dam collapse. It also featured strong, sustained, and destructive winds, and caused widespread damage to buildings, infrastructure, and crops. The extent and magnitude of climate related Cyclone Idai which has taken a toll on humanity and its built environment provoke one to assess the correlation between climate related stimuli and property development in Africa. In Chipinge Zimbabwe the USAID (2019) observes that the cyclone severely damaged the district's water supply network leaving more than 30 000 people without regular access to safe water. Cyclone Idai's impact was extensive, covering at least 1,200 square miles; it is among the worst natural disasters to hit the region. As of May 9, the Mozambican government had attributed 45 deaths to Cyclone Kenneth hot on the heels of Cyclone Idai. It also reported that school facilities and public clinics had suffered extensive damage, and that 45,000 homes had been damaged or destroyed. Before hitting Mozambique, Cyclone Kenneth battered the Comoros Islands, a country off the Mozambican coast, where extensive property damage and at least seven deaths were reported. According to UNICEF (2019) cyclone Kenneth destroyed almost 80 percent of farms, more than 60 percent of crops, and nearly 40 percent of cash crops" in the island archipelago. Intense cyclone winds caused extensive damage to private housing and public infrastructure notably hospitals, clinics, schools, and electrical, road, and bridge systems.

Impacts of Cyclone Idai

The storm caused high winds and heavy precipitation in Chimanimani and Chipinge districts causing riverine and flash flooding and subsequent deaths, destruction of livelihoods and properties. Based on census data, 48% of those affected were estimated to be children whilst 52% are said to be women. Considerable damage to properties, livelihoods and infrastructure was reported in the districts in the storm's path. (OCHAa, 2019). A respondent highlighted that: *the*

torrential rainfall swept away many people some of the survivors resorted to climbing trees. Understanding gender differences can save lives there is considerable evidence that a lack of physical skills, such as the ability to climb trees or to swim, has been a major contributing factor to disaster fatalities among women. In India, up to three times as many women as men died in the 2004 tsunami, while in Indonesia this figure rose to up to four times the number of male casualties (IPCC, 2007). While not all of this disparity is due to differences in physical skills, the gendered nature of impact cannot be underestimated.

Cyclone Idai left a trail of destruction, a respondent from the Civil Protection Unit noted: that:

The hardest-hit district Chimanimani remained inaccessible two weeks after the storm as heavy rains damaged roads and main access bridges. The trail of destruction was very devastating causing at least 182 deaths and over 300 injured, mainly in Chimanimani, and 330 people were reportedly missing. At least 1623 homes were destroyed in Chimanimani, Mutasa, Mutare, Chipinge, Buhera, Chikomba, Gutu and Bikita districts.

In Chimanimani alone, eight bridges were destroyed. In Buhera, the Marowanyati dam overflowed and many families were displaced. Overall, more than 3,500 households (14,500 to 17,000 people) were estimated to be affected. An estimated 270,000 people were affected by flooding were in need of humanitarian assistance in the seven districts Chipinge, Chimanimani, Buhera, Bikita, Mutare, Gutu, and Chiredzi. The vast majority of people affected were in Chipinge (122,000) and Chimanimani (115,000) districts. (OCHA, 2019)

Preparedness

Strategy 2020 commits the International Federation of the Red Cross (IFRC) to encouraging comprehensive community action to eliminate disaster risks wherever possible, and to reduce the occurrence and impact of disasters when primary prevention is not feasible (IFRC, 200). A respondent at Kopa Business Centre highlighted that:

People were not able to cope with the intensity of the cyclone they lacked vital information on the nature and severity of the cyclone. This greatly affected women who are mainly in charge of production and reproductive chores.

Following the bursting of the banks of Nyahode River the destruction of major livelihood agriculture left the community in absolute poverty. The ever-changing weather and climate patterns affecting south eastern Africa, such as increasing erratic volumes of rainfall and rising global temperatures, may be associated with human-induced climate change and may increase the intensity and potential impacts of cyclones in the region. Other related effects, such as warming sea surface temperatures and rising sea levels, may also potentially contribute to increases in storm intensity and more severe damage from future cyclones (Matt, 2019). The possibility of future storms strong or stronger than Cyclones Idai and Kenneth and a long history of past intense storms may suggest a potential need for the Zimbabwean government to expand its investments in resilience and disaster preparedness efforts in the near future. This will enable communities and

the country, to mitigate, adapt to, and recover from recurrent natural or man-made shocks and stresses. Resilience programs typically focus on strengthening agricultural and food security systems, health care capacity, local economies, and environmental challenges (USAID, 2018). The destruction caused by Idai shows gaps in Zimbabwe's disaster management strategy. In order to build resilient communities, there is need for gender mainstreaming. Male dominance in disaster decisions and ideological constraints can limit women's access to life saving public shelters, as Ikeda found in Bangladesh's devastating 1991 cyclone (Ikeda, 1995, p. 188). For example, in one society women may be expected to focus on the family's domestic needs while men engage in the formal paid workforce, whereas in another, both men and women may be expected to contribute to the family's cash income. Consulting with a socially and economically representative cross-section of affected men and women is essential for effective targeting, as is their participation in decision-making. This is the case even if it is only possible in a limited form in the early days of the emergency. As disasters impact women and men differently because of social, economic, physical and biological differences, having information about their situations is essential when developing responses that better meet their specific needs.

Mitigation

Globally climate variability has become a topical issue. In as much as people cannot prevent disasters from occurring their impact can be reduced through gender sensitive planning. A responded from Chimanimani Rural District Council noted that:

Gender inequality predominantly impacts negatively on women and girls, as men tend to have more decision-making power and control over resources than women. Because of this, efforts to advance gender equality need to focus primarily on improving the situation and status of women and girls in their societies. For example, specific actions may be taken to ensure that women's views and priorities are adequately and directly heard in disaster management committees.

An increase in underage marriages of girls has also occurred elsewhere after natural disasters in which more women than men died (Gomez, 2006). Men on the other hand, sometimes find themselves in the position of having to assume unfamiliar tasks if the women in the household have perished or become severely disabled in a disaster (Wisner et al, 1994). Women frequently lack access to safe obstetric care and birthing arrangements after a disaster. Men, women, boys and girls also face higher risks of sexually transmitted diseases, such as HIV/AIDS. This can be due to an increase in unwanted sex, lack of access to contraceptives, or sexual violence (rape) committed against those living in communal or exposed living conditions, for example, those in shelters, with host families, under tarps, or waiting to rebuild or return to their homes.

Response

The Government-led response was coordinated by the Department of Civil Protection (DCP) through the National, Provincial and District Civil Protection Committees, with support from

humanitarian partners. A sub-national flood command centre was set up to facilitate real-time coordination of the response and Civil Protection Committees conducted rapid needs assessments in the affected areas. In Zimbabwe the Civil Protection Unit fall under the Ministry of Local Government Public works and National Housing, however it operationalised with the Zimbabwe National Army and police services. Thus, the military supported search and rescue operations as well as led the evacuation exercise. However, access and logistics were greatly affected by the weather conditions. (CPU, 2019). Response was also from community, and individual household level since initially the area was not accessible.

A respondent from Chimanimani Urban, Nangu Township noted that: More than 100 houses were destroyed. Most of the survivors moved to higher ground. Chimanimani hotel provided temporary shelter to a lot of villagers whose houses had collapsed the majority being women and children.

Women are quicker to take cover or prepare to evacuate during an emergency, but often have trouble convincing the men in their life to do so, suggests a University of Colorado Boulder study of how gender influences natural disaster response (Kreimer & Munasinghe, 1990)

The cluster system was activated in Zimbabwe to boost humanitarian response to the humanitarian crisis caused by Cyclone Idai. A participatory approach was done in order to identify the most vulnerable individuals. The research noted that traditional gender roles tend to resurface in the aftermath of disasters, with women being relegated to the role of homemaker while men focus on finances and lead community efforts. The following cluster lead agencies reinforced cluster coordination: Education (UNICEF/ Save the Children); Food Security: Food and Agriculture Organisation (FAO), World Food Programme (WFP); Health World Health Organisation (WHO); Nutrition, United Nations International Children's Emergency Fund (UNICEF); Protection, United Nations High Commissioner for Refugees (UNHCR)/United Nations Fund for Population Activities (UNFPA)/(UNICEF); Shelter/International Organisation for Migration(IOM)/International Federation of Red Cross (IFRC); WASH (UNICEF); Logistics WFP. Inter-clusters coordination meetings were held every Wednesday in Harare, the same was replicated at Mutare level every Friday, while in Chipinge the partners meetings took place on daily. An information management working group was been established to support data analysis and information sharing. (OCHA, 2019)

Mass flood awareness campaigns were done by various media platforms and SMS the United Nations Office for the Coordination of Humanitarian Affairs was active in the awareness campaign. Other humanitarian partners provided non-food and food items in all affected provinces. Relief aid including temporary shelters, water and sanitation (WASH) items, Child Protection-related supplies, mama kits and food humpers. There is an ongoing health and nutrition intervention programme in Chimanimani district supported by the Health Development Fund (HDF). Following the destruction of livelihoods WFP actived vulnerable group feeding scheme. (OCHA 2019). Issues of social exclusion were highlighted by a respondent who argued that:

The whole process of distribution of aid was highly politicized. Moreover, there have been many instances of women missing out on relief assistance, particularly since the government through the District Administrator registered households based on their male heads.

Another complexity was that of ascertaining the credibility of those renting and squatters, thus making the process prone to the inclusion of outsiders. This concurs with a study, in Thailand following the Indian Ocean Tsunami, where female household members who become the main breadwinners due to the illness or injury of the male head of the household had difficulties getting recognition by authorities (Asia Pacific Forum on Women, Law and Development, 2006).

The trail of destruction did not spare public institutions; notable was destruction of Charles Luwanga High School. A boarding hostel was destroyed killing 2 pupils. Rehabilitation programmes for affected schools were instituted in all affected districts. In Chimanimani and Chipinge districts 40,000 textbooks were distributed to affected schools. Temporary Learning Spaces were established in the worst affected schools. Temporary latrines were constructed at 80% of all affected schools in Chimanimani and Chipinge. World Bank announced its intention to provide up to \$75M for the cyclone-response with emphasis on early recovery. With all the effort by various stakeholders to help communities. People still remain displaced, most of them stay in host communities, while some are still residing in collective centres and camps. The informal camp settlement in Kopa is a continuing concern (OCHA, 2019).

Recovery

Central to post disaster recovery is the concept of urban resilience. Urban resilience in cities has been used in a number of different contexts ranging from climate change to sustainability and to the role of resilience in reducing the vulnerability of urban areas from natural disasters (Lewis and Mioch, 2005; Chirisa *et al.* 2015). The concept originates from the need to develop cities that have the ability to withstand various shocks. This is so because, by their nature cities are complex systems in which a number of processes unfold and these at times may have negative impacts on the functioning of the cities. A respondent from Civil Protection Unit noted that:

The roles women play in contributing to a household's food security or income, whether as family members or heads of the household, need to be understood, and livelihood recovery activities should be designed that meet their needs, in addition to those of the men in the household.

One of the most important areas of post-disaster recovery programming for both men and women is the restoration of economic opportunities or the development of new livelihood opportunities to replace those that were lost. This can include diversifying household income sources to strengthen resilience to future hazards. These strategies are effective and efficient in reducing households' vulnerability to food insecurity (Chitongo, 2019).

Discussions around post emergency reconstruction of Cyclone Idai in Zimbabwe has started. The World Bank has activated the International Development Association (IDA) Crisis Response

Window (CRW) to provide up to \$545 million in total for the three affected countries of which \$350 million will be provided to Mozambique, \$120 million to Malawi and \$75 million to Zimbabwe. The European Union and European Investment Bank pledged €200 million to Mozambique. In Zimbabwe, the Bank participated and continues to play a role, in the UNOCHA convened early recovery program for the Post Cyclone Idai devastation. (African Development Bank Group, 2019). However, for the sustainability of all these post disaster recovery initiatives there is need for community participation.

Coping strategies

As a result of the Cyclone, some of the members of the community, have had their livelihood strategies compromised. As a livelihood diversification strategy community have started to engage in various coping strategies that include selling fire wood, brewing and selling beer, and gardening. However, since livelihood options are still limited the role of the state has to take centre stage, with assistance from other non-state actors (CARE, 2019). Most water points and systems were destroyed by the cyclone and people are accessing water from rivers and unsafe sources, putting them at risk of cholera and typhoid (UNOCHA, 2019)

Conclusions and policy recommendations

Chief among the numerous findings of this study was not only that post-displacement scenarios are reminiscent of post-conflict contexts in terms of gendering human security, but, that any effort to emancipate women should pragmatically embrace gender as an essential variable as compared to the previous Human Security notion which romanticises it much to the throttling of women's security. It is vital that women and men from all social and economic groupings in disaster affected communities actively participate in the design and location of new housing and communal infrastructure, such as water and sanitation facilities, as well as the repair of existing structures. If gender mainstreaming is not incorporated in planning and disaster management this will lead to unsafe living conditions, because of a lack of understanding of the livelihoods and social needs of the inhabitants. More so resilient communities can only be achieved through local participation this ensures sensitivity to culture, indigenous knowledge systems and human needs. Therefore, the researcher recommends advocacy between all stakeholders in disaster management. So as to come up with a gender inclusive needs assessment for victims of Cyclone Idai in Chimanimani. This will strengthen gender perspectives of risks and vulnerability. The analysis should include diverse groups such as the poor, elderly, disabled and other vulnerable groups. More so disaster risk reduction and preparedness should start from a community level. This will enable all socio-economic and cultural factors to be considered. In order to achieve climate resilient communities' government and local authorities should periodically review local and national disaster management plans.

References

African Development Bank Group (2019). Programme Post Cyclone Idai and Kenneth Emergency Recovery and Resilience Programme for Mozambique, Malawi and Zimbabwe (PCIREP), May 2019 Report

Armas, I. (2008). *Social vulnerability and seismic risk perception. Case study: The historic center of the Bucharest Municipality/Romania*. *Nat. Hazards*, 47, 397–410.

Bankoff, G. *The Tale of the Three Pigs: Taking Another Look at Vulnerability in the Light of the Indian Ocean Tsunami and Hurricane Katrina*. Available online: <http://understandingkatrina.ssrc.org/Bankoff/>(accessed on 16 September 2018).

Barberi, F.; Davis, M.S.; Isaia, R.; Nave, R. & Ricci, T. (2008). *Volcanic risk perception in the Vesuvius population*. *J. Volcanol. Geotherm. Res*, 172, 244–258.

Bova, Elva, Marta Ruiz-Arranz, Frederik Toscani, & H. Elif Ture, (2016). *The Fiscal Costs of Contingent Liabilities: A New Dataset*, IMF Working Paper WP/16/14.

Brown, R., Stephens, C., Ouma, J., Murithi, M., & Barrett, C. (2006). Livelihood strategies in the rural Kenyan highlands. *African Journal of Agriculture Resource Economics*, 1(1), 21–19.

CARE (2019). *Rapid Gender Analysis Tropical Cyclone IDAI Zimbabwe report* April 2019

Cavallo, Eduardo and Ilan. (2010). *The Economics of Natural Disasters: A Survey*, IDB Working Paper Series No. IDB-WP-124, May.

Centre for Research on the Epidemiology of Disasters (CRED) (2015). *The Human Cost of Natural Disasters*.

Chirisa, I., Bandaiko, E., Mazhindu, E., Kwangwana, N.A. & Chikowore, G. (2016). Building resilient infrastructure in the face of climate change in African cities: Scope potentiality and challenges. *Development Southern Africa*, 33(1): 113-127

Chitongo, L. (2019). Rural livelihood resilience strategies in the face of harsh climatic conditions. The case of ward 11 Gwanda, South, Zimbabwe, *Cogent Social Sciences*, 5:1, DOI: [10.1080/23311886.2019.1617090](https://doi.org/10.1080/23311886.2019.1617090)

Climate Change (2013). *The Physical Science Basis, Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*

CRS (2019). *Cyclones Idai and Kenneth in Southeastern Africa: Humanitarian and Recovery Response in Brief*. <https://crsreports.congress.gov> , 10-23.

Dankelman, I. (2010). *Gender and Climate Change. An Introduction*. London: Earthscan.

Desmond Manatsa, Yushi Morioka, Swadhin K. Behera & Toshi Yamagata. (2013). Link between Antarctic ozone depletion and summer warming over southern Africa. *nature geosciences*, 34-42.

- Enarson, E., A. Fothergill, & L. Peek. (2007). Gender and disaster: Foundations and directions. In *Handbook of disaster research*, 130–146. New York, NY: Springer.
- Fothergill, Alice. (1996). “The Neglect of Gender in Disaster Work: An Overview of the Literature”, in *International Journal of Mass Emergencies and Disasters*, 14.
- Fuller, Helene. (1994). “Development of Women’s Policies for Emergencies and Disasters”, in *Australian Journal of Disaster Management*, 9 (2): 24-27.
- Giglio, S, M Maggiori, J Stroebel & A Weber (2015). “Climate change and long-run discount rates: Evidence from real estate”, NBER Working Paper 21767.
- Gomez, S. (2006). Guidelines for Gender Sensitive Disaster Management: Practical Steps to Ensure Women’s Needs Are Met and Women’s Human Rights Are Respected and Protected during Disasters; Chiang, M., Ed.; Asia Pacific Forum on Women Law and Development (APWLD): Chiang Mai, Thailand.
- Greenberg, M.R.& Schneider, D.F. (1995) *Gender differences in risk perception: Effects differ in stressed vs. nonstressed environments*. *Risk Anal.* 1995, 15, 503–511.
- Gutteling, J.M.& Wiegman, O. (1993). *Gender-specific reactions to environmental hazards in The Netherlands. Sex Roles*, 28, 433–447.
- IFRC. (2009). The “Strategy 2020” International Federation of Red Cross and Red Crescent Societies, Geneva, Newsletter No. 21 December 2009.
- Ikeda, Keiko. (1995). “Gender Differences in Human Loss and Vulnerability in Natural Disasters: A Case Study from Bangladesh”, in *Indian Journal of Gender Studies* 2 (2): 171-193
- IPCC. (2007). *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Summary for policy makers*. Cambridge: Cambridge University Press.
- IPCC. (2007). Summary for policymakers. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, & C. E. Hanson (Eds.), *Climate change 2007: Impacts, adaptation and vulnerability. Contribution of working group II to the fourth assessment report of the intergovernmental panel on climate change (Vols. 7–22)*. Cambridge, UK: Cambridge University Press.
- IPCC. (2012). *Managing the risks of extreme events and disasters to advance climate change adaptation*. In C. B. Field, V. Barros, T. F. Stocker, D. Qin, D. J. Dokken, K. L. Ebi, P. M. Midgley (Eds.), *A special report of working groups I and II of the intergovernmental panel on climate change*. Cambridge, UK, and New York, USA: Cambridge University Press.
- Kellet, J., & D. Sparks. (2012). *Disaster Risk Reduction: Spending Where it Should Count*. Wells, Somerset: Global Humanitarian Assistance.

Kreimer A, & Munasinghe M. (1990) *Managing Natural Disasters and the Environment Selected Materials from the Colloquium on the Environment and Natural Disaster Management* Published by the Environmental Policy and Research Division Environment Department, World Bank, Washington, D.C.

Kruger, A. (2015). The influence of climate change on the Market Value of Coastal Residential Property in South Africa. *Department of Finance and Investment Management, University of Johannesburg, South Africa.* , 20-30.

Lewis, D., and J. Mioch. (2005) Urban Vulnerability and Good Governance. *Journal of Contingencies and Crisis Management* 13(2), 50-55.

Matt McGrath (2019). “Cyclone Idai: What’s the Role of Climate Change?” BBC News, March 20, 2019

Nakhaei, M., H.R. Khankeh, G.R. Masoumi, M.A. Hosseini, Z. Parsa-Yekta, L. Kurland, & M. Castren. (2015). Impact of disaster on women in Iran and implication for emergency nurses volunteering to provide urgent humanitarian aid relief: A qualitative study. *Australasian Emergency Nursing Journal* 18 (3): 165–172.

Nicholls, R. J., Wong, P. P., Burkett, V. R., Codignotto, J. O., Hay, J. E., McLean, R. F., & Woodroffe, C. D. (2007). Coastal systems and low-lying areas. *climate change 2007: Impacts, adaptation and vulnerability*. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, & C. E. Hanson (Eds.), *Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 315–356). Cambridge, UK: Cambridge University Press.

Nolon, J. R. (2015). Land Use and Climate Change Bubbles: Resilience, Retreat, and Due Diligence. *Elisabeth Haub School of Law at Pace University, jnolon@law.pace.edu* 66-87.

Obcarskaite, E. (2014). Women in Civil Protection: Gender Equality and Gender Mainstreaming Towards Prosperity in the Baltic Sea Region. In *Handbook on: Gender in Civil Protection*; Obcarskaite, E., Olsson, A.J., Eds.; KOPA Publishing: Karm’elavos sen, Lithuania; ISBN 978-91-981257-8-8.

OCHA (2019a) Zimbabwe: Floods Flash Update No. 1. 17 March 2019

OCHA (2019b) Zimbabwe: Floods Situation report No. 1. 27 March 2019

OCHA (2019c) Zimbabwe: Cyclone and floods Situation report No. 4. 24 April 2019

OCHA (2019d) Zimbabwe: Emergency Situation report No. 7. 14 May 2019

Riechard, D.E. & Peterson, S.J. (1998). Perception of Environmental Risk Related to Gender, Community Socioeconomic Setting, Age, and Locus of Control. *J. Environ. Educ*, 30, 11–19.

SADC. (2009). Regional Humanitarian Floods Appeal in Response to Tropical Cyclone IDAI 11 April 2019 report

Sawada Y. and Takasaki Y. (2017) Natural disaster, poverty, and development: An introduction. *World Development*, 94:2–15.

Siamachira, J. (2011). Regional food security under threat. Cited in the Sunday Mail Of, 10(April), 2011.

Stern, Nicholas, (2007). *The Economics of Climate Change: The Stern Review*, Cambridge and New York: Cambridge University Press.

The Intergovernmental Panel on Climate Change (IPCC). (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]*. IPCC, Geneva, Switzerland.

UNDP. (2009). *Climate change in the African drylands: Options and opportunities for adaptation and mitigation*. Nairobi: Author.

UNICEF. (2019). World Bank, “Statement on High-Level Meeting on Humanitarian and Recovery Efforts Following Cyclone Idai,” April 11, 2019.

United Nations Office for Disaster Risk Reduction (UNISDR). <http://www.unisdr.org>

UNOCHA, February 2019, FLASH appeal, January – June 2019

USAID, Fact Sheet #7, April 12, 2019, op cit. and prior USAID Cyclone Idai fact sheets cited above. (n.d.).

USAID. (2018). *Resilience Evidence Forum Report*.

Wisner, B.; Blaikie, P.; Cannon, T. & Davis, I. (1994). *At Risk: Natural Hazards, People’s Vulnerability and Disasters*; Routledge: London, UK, p. 134. ISBN 978-0-203-44423-8.

Yadav, P. (2016). White sari—Transforming widowhood in Nepal. *Gender Technology and Development* 20 (1): 1–24.

ZIMSTAT. (2012). *Poverty and Poverty Datum Line Analysis in Zimbabwe 2011/12*. Harare: ZIMSTAT.

Resilient entrepreneurial poor in urban housing by the homeless people in Chimanimani post-Cyclone Idai disaster in Zimbabwe.

By Chazovachii Bernard¹, Leonard Chitongo², Jacob Tagarirofa³ and Cassiano Rukomwe⁴.

Abstract

Despite the homelessness escalated by Cyclone Idai in Chimanimani town in Manicaland province, in Zimbabwe, entrepreneurial poor continued with their resilience in accessing affordable housing in urban areas. In spite of these efforts, little has been theorized on the homeless entrepreneurial poor strategies in accessing low cost urban housing in urban areas. Therefore, it is against this backdrop that the paper seeks to explore the resilience theory and how it informs entrepreneurial poor in accessing housing, institutional resilience and household transformation in post disaster situations, the national housing policy and how it accommodated the entrepreneurial poor in Zimbabwe and lastly how assets and transforming structures and processes contributed to the transformation of the entrepreneurial homeless households into a secure, vulnerability free and more secure Chimanimani town.

Key words: entrepreneurial, poverty, homelessness, Cyclone Idai, resilience, institutional sustainability

Introduction

Establishing the extent to which local communities understand climate change and related health hazards, and their responses, is profoundly important for effective disaster management strategies. ‘While the economically stronger sections of the society have more resilience in bouncing back to near normalcy from a disaster as a community, it is the economically weak and vulnerable (elderly people, women, children, and the differently abled) sections that are hit the most during and even many years after a disaster occurs. Care should be taken to see that the weaker sections are able to recover fast from disasters’ (Thattai, Sathyanathan, Dinesh and Kumar, 2017:7). While the stronger and the weakest have been explored with regards to restoration of order after a disaster, no consideration has been made on the entrepreneurial poor and their potential to access urban

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housing in post-disaster situations. People left homeless by natural disasters have fewer resources than any other type of homeless person. There is no park to camp out in, no alley to sleep in, and no bridge to sleep under. Natural disasters and homelessness are two urban pathogens witnessed in most large cities. People's struggles and bottom-up strategies to cope with adverse conditions remain little noticed and studied. This approach opens a discussion on what role those people vulnerable to natural hazards should play in forming disaster policies and discourses. The combined knowledge of a society about the risks it faces and the means to prepare for and respond to the distress often produced in the aftermath of a disaster are fundamental to understanding how resilient a group may be (Paidakaki, 2012). The reconstruction stage is an excellent opportunity to test resilience-building among those affected and to consider the creation of new institutions for disaster risk reduction through socially innovative interventions in the housing domain. There is a broad consensus on the fact that housing is of key significance in one's quality of life. Besides having wide economic, social, cultural and personal importance, housing construction techniques and location can also influence environmental sustainability and natural disaster prevention (Paidakaki, 2012). For homeless people, who constitute the poorest of the poor in an urban environment, not only are their lives in constant threat during a storm or flood, but they are also at risk of losing any possessions they may have accumulated (Korber & Mcnaughton, 2017). After a disaster, they are even less likely to find a place to settle and the numbers of those who are homeless can be expected to increase (National Coalition for the Homeless, 2009). The problem of these top-down approaches is that they emphasise what they can do for the victims, and not what needs to be done by them (Satterthwaite et al., 2010, Paidakaki, 2012). Access to permanent housing is a shield both against natural risks and a vicious circle of poverty. Therefore, housing-led approaches could be considered the starting point for a circle of resilience in which different elements of development support augment each other through improvement in the quality of life of the homeless community (McFarlane, 2012). "Safe shelter is critical for survival. In the high-fatality 1991 Bangladesh cyclone, deaths were negligible among those who reached official shelters. Forty percent of family members were killed in an area without shelter access, in contrast to 3.4 percent in an area with available shelters" (James, Shultz, Russell, and Zelde Espinel, 2005:131). This explain the call for post disaster response on housing for the depressed community, a self-help approach. It is against this backdrop that the paper seeks to assess how resilient are the entrepreneurial poor in urban housing acquisition post cyclone *idai* disaster in Chimanimani.

Resilience theory

Resilience is the capability to regain original shape or position after bending, stretching, compression, or other deformation (Korber et al, 2017). Entrepreneurial resilience is augmented by enhanced networks and formation of professional networks of mentors, accepting that change is a part of life, and avoiding seeing crises as insurmountable (Van Breda, 2018). It is the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being and their capacity individually and collectively to negotiate for

resources to be provided and experienced in culturally meaningful ways (Masten, 2012). The extent of entrepreneurial resilience is not only dependent on internal or personal characteristics, but on structural and external factors. It is adaptive resilience which involves a process of continuous transformation and learning in the aftermath of disruptions.

Resilience is a process that leads to an outcome, and the central focus of resilience research is on the mediating processes. Thus, one could say that a person or social system is 'resilient' because it evidences good outcomes in the face of adversity. Resilience should, incorporate all the three components; adversity, mediating processes and positive outcomes as shown in Figure 2. It should be understood as a multilevel process that the systems engage in to obtain better-than-expected outcomes in the face or wake of adversity. 'Multilevel' means that the resilience processes occur across multiple domains or levels of the social ecology or person-in-environment, rather than only in the individual. Patterns of adversity can be roughly divided into two categories: chronic and acute (Van Breda, 2018). These are levels of vulnerability context which can be in form of shocks, stress, trends and seasonality. Hence in this context, the adversity is the cyclone *idai* disaster and mediating processes are the entrepreneurs, assets and transforming structures and processes in redressing housing challenges after disaster. The better outcomes are the housing accessibility for the entrepreneurial poor.



Figure 1: Resilience theory: process and outcomes (Van Breda, 2018)

Entrepreneurial poor and the poverty pyramid

The poor here are categorised as the vulnerable, labouring, self-employed and entrepreneurial poor (Remenyi,1994). However, among these classes, entrepreneurial poor are the centre of attention

in this paper. These are the poor who are dynamic, innovative and resilient. Little has been diagnosed about them in the context of adversity. Thought few as shown by the pyramid in Figure 2, have the power and influence to transform their depressed communities, though little has been theorised about their potential. Their capacity in working with mediating processes which are transforming structures and processes has not been explored. Resilience as an outcome among those poor who are enterprising is understudied.



Figure 2: The Poverty Pyramid

Entrepreneurial poor and institutional resilience

In this case, resilience among entrepreneurial poor is reviewed based on capacity of individual, organization and system levels. The entrepreneurial poor operate at organisational and system level. In relation to urban housing acquisition, zooming into Figure 3 entails that the success of an entrepreneurial poor starts with the individual. His or her competence and level of alignment with their constitution would lead to an organisational strategy, management and culture that are efficient and effective (Oslo, 2000). Institutions as rules of the game are the pillars of the systems of resilience in terms of their linkages, priorities and performance, as well as how they relate to the national and international community. As shown in Figure 3, communication should be two

way. The level of participation by the poor should be high in order for the organisation and systems of housing in post- disaster situations to succeed. If accountability, ownership and responsibility start with the entrepreneurial poor as actors, the organisations and systems succeed. By contrast, ignoring the poor's potential contribution might lead to limited success. This implies that the individual level builds the organisation while its organisational level determines the level of success within its system. Systems level without the individual and the organisational level would be like a foundation-less pyramid. An entrepreneurial poor adversely affected as an individual need to be equipped with organisational strategy, organisational management of his/her resources, financial resources and economic independence, technical resources, performance to meet short-term targets, owning the resource, and participating in decision making. At organisational level, a resourced entrepreneurial poor in the affected area should be affiliated to certain organisations that provide support and assist them in times of need, be it financially, socially or technically. These organisations are institutions that support the system, which is in turn composed of various organisations connected and assisting the entrepreneurial poor's interest in developing resilience. Therefore, resilience of entrepreneurial poor activities is influenced by the levels of the institutional development function. Players within an organization, start with an individual then a team of players would give an organisation arms to facilitate the operation of the affected entrepreneurial poor community and the system level brings in the rules and regulations assisting the operation of the supra-system (Chazovachii,2016). Under zooming out, the system would be placing the organization at strategic position for networking, backward and forward linkages for the success and continuity of the plan of action. In post-disaster scenarios, entrepreneurial resilience should be characterised by networking, formations of professional linkages, mentorship and the avoidance of viewing adversity as something that cannot be resolved. It is the intuiting instinct within the innovative poor that distinguishes them from the labouring and vulnerable poor.

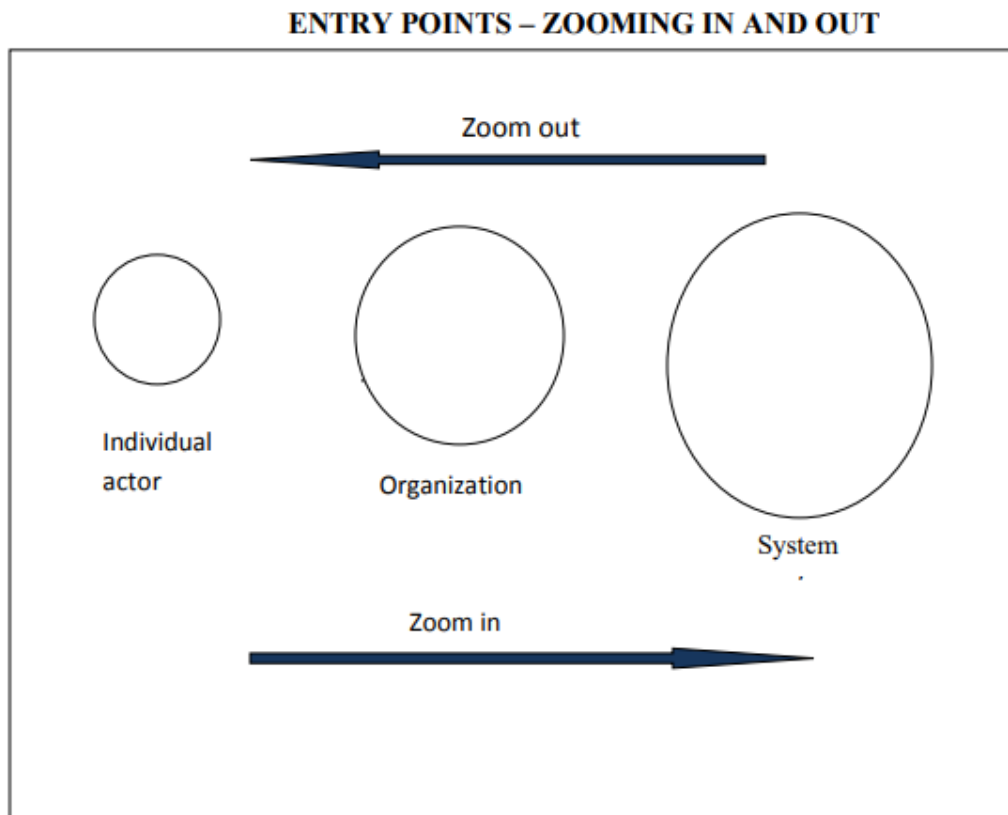


Figure 3: Entrepreneurial Poor (Individual Actor) and Institutional Resilience

Resilience is measured based on whether the entrepreneurial poor are aware of the mission and vision of the institution, i.e. whether the entrepreneurial poor scheme has realistic objectives and or are in line with state obligations, clear to the community and flexible. Regarding organisational management, focus is on the capability of entrepreneurial poor, competent people providing overall direction, ability to face challenges, making feasible decisions. The schemes' planning systems should be operative, a system with an effective administration in place. The body has adequate mechanisms in place to control internal affairs, monitoring and evaluating activities. The internal structures of the organization should conform to administrative principles that have to do with the span of control, well spelt out authority and clear roles and responsibilities and existing structures running new projects. The major thrust of networks, is on alliance and connections, relations to donors and competitors and rivals. Donors assist in growth and development of institutions. The legal and political framework is mandated to look at whether the entrepreneurial poor scheme is legal and free to do what so ever it deems necessary. Entrepreneur schemes should be linked to official policy, political support maintained and stability in local and national stakeholders for resilience to be realised. The thrust of participation and legitimacy is on local ownership and participation, trust and legitimacy in community (Oslo,2000). The legal status of

entrepreneurial poor scheme would be a helpful enhancement in governance, as it would allow it to engage in a full range of financial and market transactions on behalf of their members. Therefore, the capacity of the entrepreneurial poor who are custodians of the housing scheme to follow the constitution, norms and values of the local community would enhance resilience but failure by scheme leaders to follow formal and informal rules and regulations would result in the abandonment of the project.

Resilience is influenced by accountability. Apart from attribution and assumptions, of most importance among the three is accountability. Upward, downwards and multiple accountability is critical for organisational resilience. Failure to account to any of the above-mentioned offices would affect the sustainability of the entrepreneurial poor housing scheme. This would affect future funding by the donor and other support agencies.

The level of social cohesion or dissonance is important in any project environment. Social cohesion is one of the elements influencing resilience of development processes. Social networks, reciprocity, integration amongst groups can influence project success. Cohesiveness is considered to be an important element in processes that determine functioning in small groups. Social cohesion is influenced by organisational institutions. Individuals in a project have the right to make their own choices about whether to pursue Social Utility (SU) or Individual Utility (IU) (Mukwada, 2012). When individuals felt equality is not possible amongst themselves, individuals put their interests before group interests when confronted with crises. Social utility enhances cooperation while individual utility promotes competition. Social utility thrives on social capital and promote cooperative behaviour amongst group members. If people are benefiting from entrepreneurial poor housing schemes as a community, there will be high level of social utility but if benefits are for the few, individualism thrives. However, there is a threshold of willingness among entrepreneurial poor members to cooperate and participate in common pool resources management and this occurs at the stage where social utility is equal to IU. Beyond this threshold, collective capacity becomes insignificant, rendering common pool resources management impossible hence compromising the resilience of the housing scheme. Therefore, SU enhances resilience amongst the entrepreneurial poor housing schemes while IU renders resilience impossible. This implies that in the management of entrepreneurial poor schemes, understanding one another as local custodians of the scheme would contribute to the successful acquisition of housing. The opposite is true when social dissonance prevails. When IU exceeds SU collective effort is diminished, compromising resilience, while the opposite is true where SU exceeds IU. Competition amongst the entrepreneurial poor in schemes and lack of cooperation among them leads to a tragedy, which compromises progress and disrupts linkages between stakeholders, hence affecting the resilience of the project negatively.

Zimbabwe's policy on housing and the entrepreneurial poor

Zimbabwe is a signatory to the Habitat Agenda and subscribes to the principle of improving the standards of human settlement to its populace. Housing is recognised, as a basic human right as enshrined in the Zimbabwe national Constitution. The country is seized with a housing backlog of 1.25 million housing units, which has been worsened by cyclone disaster as more houses were destroyed (GoZ, 2015). Reducing such a backlog requires concerted efforts from all stakeholders in the human settlement development agenda. The Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET) strategy aimed to deliver 313, 368 housing units by December 2018. This was going to be achieved through the active participation of all the critical stakeholders such as local authorities, financial institutions, private land developers, Community Based Organisations, investors (both local and international), civic society organisations employers and more critically, the end beneficiaries. The policy incorporated the entrepreneurial poor who are the Community Based Organisations. Beneficiary involvement in the whole matrix is tailor-made to instil a sense of ownership of the whole delivery system (GoZ, 2015). However, there has been little consideration of the entrepreneurial poor schemes or activists in the co-production of urban entrepreneurialism (McFarlane, 2012). Little has been theorised on the strategies that have been put in place by the homeless entrepreneurial poor in accessing low cost urban housing in the disaster affected communities of Chimanimani.

Diversified resilient strategy utilization among the entrepreneurial poor

The entrepreneurial poor who are categorized as homeless people, established a network of community-based saving schemes constituted by members from urban and peri-urban settlements of Chimanimani. The saving schemes save on a regular basis for housing and other poverty issues. These Rotating Savings and Credit Associated schemes have rituals which they practice for self-reliance and sustainability. They practice community-based savings, community-based exchanges, innovation, community participation and women – led development. Due to shocks and levels of homelessness by the communities affected by cyclone *idai* in Chimanimani, the entrepreneurial poor developed various forms of resilience in the form of; human, social, financial and natural capital. The framework on Figure 3, entails that one should take advantage of the entrepreneurial poor's dynamism and innovativeness to influence policies, laws and civic organisations to establish programmes and projects that would bring household stability and end to the adverse impact of cyclone *idai*.

Human capital

Entrepreneurial poor in Chimanimani are aware of the mission and vision of Rotating Savings and Credit Associations (ROSCAS) which is flexible and clear to their community. Capacity and capability of the entrepreneurial poor is providing overall direction and ability to face challenges

and make feasible decisions. The thrust of participation and legitimacy is on local ownership and participation, trust and legitimacy in the community. The level of alignment of the entrepreneurial poor with their housing scheme constitution, norms and values is influencing the resilience of the programme. Manpower for other services is at their disposal as beneficiaries offer their labour to fulfill the required regulations and standards. Among the beneficiaries, are builders, bookkeepers, carpenters, blacksmiths, general labourers, just to mention but a few. They have their own bricks, windows, doors and labour for water and sewer projects. This is human capital which is perceived as ‘the knowledge, skills, competencies and other attributes embodied in entrepreneurs or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances’ (Pettinger, 2017). What determines human capital are the skills and qualifications, education level, work experience, social skills – communication, intelligence, emotional intelligence, judgement, personality – hard work, harmony in an office, creativity, habits and personality traits. The ability to innovate new working practices/products and brand images of an individual also determine human capital. Harnessing all this potential has made for reduced vulnerability among the entrepreneurs and enhanced security and household wellbeing in the disaster-prone town of Chimanimani. The dynamism, innovation and propulsive nature of the entrepreneurial poor through partnerships with civic groups (such as Dialogue on Shelter), as a registered institution under local government, has attracted the attention of the Chimanimani local authority to transform their initiatives beneficially.

Social capital

The Chimanimani entrepreneurial poor operate with Zimbabwe Homeless People’s Federation and Dialogue on Shelter. These civil groups are private actors in housing provision in urban areas. They act as mediating structures and facilitate access to affordable residential stands. These structures established relationships on behalf of the entrepreneurial poor which made incremental development accepted by the council, a concession to provide shared toilets as well as deferment of road construction and an agreement that families could move onto site as soon as water connections are done. They facilitated in lowering the ladder for the entrepreneurial poor to have their own housing in urban areas. The resilience among the entrepreneurial poor is on accountability. They have upward, downward and multiple accountability. Their level of transparency has attracted donors’. The entrepreneurial poor had more social cohesion than dissonance. This has influenced networks of reciprocity and integration amongst members in the scheme. The entrepreneurial poor scheme in Chimanimani have pursued social rather than individual utility which have enhanced a cooperative spirit among the groups. The community-based savings, exchanges, innovation and participation have influenced the local authorities in Chimanimani to revisit their policies and laws by lowering the ladder to accommodate the entrepreneurial poor affected by cyclone idai. Lowering the ladder is an approach on urban housing developed outside officially sanctioned processes. With the background that developing nations, such as Zimbabwe in particular had inherited or imported their planning regulations, standards and administrative procedures from outside, need is there to consider the vulnerability backdrop of the

Chimanimani entrepreneurial poor in post-disaster situations (Payne, 2001). The planning regulations, standards and administrative procedures were made to suit the cyclone affected entrepreneur and are established to enhance household stability, security and wellbeing. The councilors are allowing the deprived entrepreneurs to pay rate and services in line with their earnings. Others would pay using conditions which conforms to the taste and preferences of the locals.

The use of Dialogue on Shelter to access stands for the entrepreneurial poor was under the ZIMASSET agenda, as beneficiary involvement in the home ownership matrix would instill a sense of ownership to housing delivery systems. The policy was pro poor as for every stand allocated, a certain percentage of stands would be set aside for the entrepreneurial poor.

Financial capital

Entrepreneur poor in Chimanimani are involved in Rotating Savings and Credit Associations (ROSCAs). These are community-based savings. The entrepreneurial poor communities are into informal trading for self-sustenance. They are into cross border trading, sale of *magogoya*, sugarcane just to mention but a few. They work hand in glove with civil partners complementing them with financial support and mediation processes on services required by urban council. They deposit their monthly savings into a common account which is used for the costs associated with the stand and other services. This has made them financially resilient as they had a starting point when it comes to financial support.

Utilization of transforming structures and processes

The transforming of structures and processes as shown in Figure 3 are in the level of government, private sectors through policies, laws, values and institutions in housing delivery. So, the structures are the Zimbabwe national housing policy of 2012 and the ZIMASSET 2015 which allowed private and civil sectors participation to facilitate expression of entrepreneurial poor's potentials in redressing the cyclone *idai* shocks, trends and homelessness challenges. The existence of the entrepreneurial poor has made the establishment of resilient strategies by transforming structures and processes to bring household stability which entails reduced vulnerability, security and household wellbeing of cyclone affected families. Dialogue on shelter is acting as a technical support organisation at the same time 'putting the last first' by ensuring that the voice the entrepreneurial poor and their identity are at the fore in interactions with Chimanimani council officials. The communal titling of the land is a test of a new mechanism to ensure security of individual families while protecting a communal asset. The forms of capital among the entrepreneurial are acting as building blocks to prevent shock stress and seasonality associated with post disaster scenarios. The transforming structures and processes are institutions that protect and safeguard the homeless entrepreneurial poor. Both the assets and structures and processes enable programmes by innovators to be resilient to support resilience in the post-cyclone *idai* natural disaster.

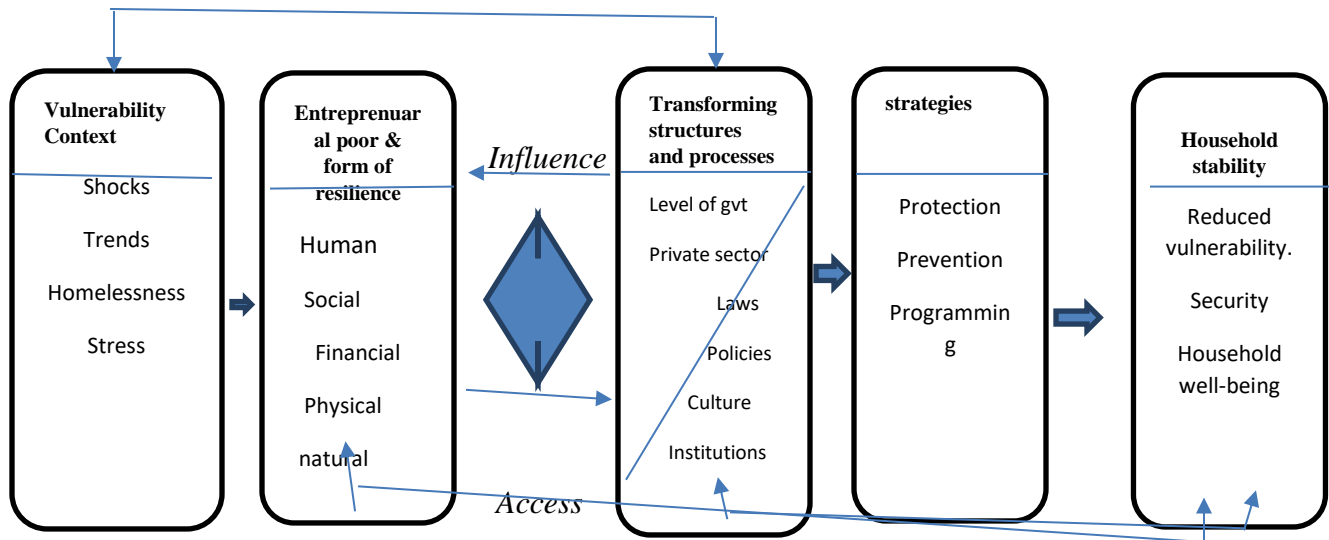


Figure 4: Entrepreneurial poor resilience framework

Conclusions

Forms of capital have managed to reinforce resilience to avert the vulnerability of the survivors of cyclone *idai*. Capital for the entrepreneurial poor has made survivors access the possibility of transforming structures and processes. The transforming of structures and processes has improved for the better, human capital by coming up with programs to protect and prevent vulnerability to achieve a positive outcome for the affected households. However, the success of this framework is determined by, the level of social utility of the vulnerable entrepreneurial household.

References

Chazovachii, B. (2016). *Conditions Characterizing the Sustainability of Smallholder Irrigation Schemes: The Case of Bikita District Zimbabwe*. A dissertation submitted in fulfilment of the requirements for a Philosophiae Doctor in Geography in the Faculty of Natural and Agricultural Sciences at the University of the Free State publications, Qwaqwa.

Goz (2015) National Report for Habitat Iii: Zimbabwe Agenda for Sustainable Socio-Economic Transformation, October 2013-December.

Hedner, T., Adli Abouzeedan & Klofsten, M (2011) Entrepreneurial resilience, *Annals of Innovation & Entrepreneurship*, 2:1, 7986, DOI: 10.3402/aie.v2i1.6002.

Korber, S., Rod B. McNaughton, (2017) "Resilience and entrepreneurship: a systematic literature review", *International Journal of Entrepreneurial Behavior & Research*, Vol. 41 Iss 6 pp. 519-539.

McFarlane, C (2012). The Entrepreneurial Slum: Civil Society, Mobility and the Co-Production of Urban Development, *Urban Studies Journal* 49(13) 2795–2816.

Mukwada, G and Manatsa, D (2012). Assessment of Community Based Natural Resource Management in The Savannah Using the Capacity Continuum –Multiple Drivers Model. *Journal of Human Ecology* 40(1):69-84.

Natural Disasters and Homelessness. National Coalition for the Homeless, September 2009.

Oslo. J (2000). Handbook in Assessment of Institutional Sustainability. Institutional Development in Norwegian Mission Council for Development Cooperation.

Paidakaki, A. (2012). Addressing Homelessness through Disaster Discourses: The Role of Social Capital and Innovation in Building Urban Resilience and Addressing Homelessness. *European Journal of Homelessness* _ Volume 6, No. 2, December 2012. pp127-148.

Payne, G (2001) Lowering the ladder: Regulatory frameworks for sustainable Development. *Development in Practice Volume 11, Numbers 2 & 3, pp 308-318.*

Pettinger, T. (2017). Human capital definition and importance, Economics, Retrieved 07-05-18. www.economicshelp.org.

Remenyi, J V. (1994). *Where credit is Due. A study of credit-based income generation programmes for the poor in developing countries*, London: IT publications.

Shultz, J.M., Russell, J., and Zelde E (2005), Epidemiology of Tropical Cyclones: *The Dynamics of Disaster, Disease, and Development Epidemiologic Reviews*. Vol 27 pp21-35.

Thattai, D. V., R Sathyanathan, R. Dinesh and Kumar, L. H (2017). Department of Civil Engineering, SRM University, Chennai - 603203. India. Natural disaster management in India with focus on floods and cyclones, IOP Conference Series: *Earth and Environmental Science* vol 80 pp1-8.

Van Breda. A.D (2018). A Critical Review of Resilience Theory and Its Relevance. *Social Work* Vol.54 N.1 Pp 541-611.

Tsholotsho Flood Survivors: Three years on after the disaster caused by Cyclone Dineo,

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Abstract

Rapid and slow onset disasters have periodically affected Zimbabwe over time. In the 2016-2017 agricultural season flooding as a result of cyclone Dineo affected Tsholotsho resulting in the displacement of people, loss of life for both people and animals and a reconfiguring of livelihoods. A qualitative research employing a phenomenological design examined the state and lives of the Tsholotsho disaster survivors two years after the flood with a view to understanding the needs of the people and establishing how the community has moved over time to restore, rebuild and diversify their livelihoods. Key informant interviews with the Provincial and District Administrators; Focus group discussions with the District and Ward Level Civil Protection Committees; Secondary analysis of sectoral reports, A Transect walk of the camp; Household and Community FGDs, and in-depth household interviews were conducted to gather data from the flood survivors. The study established that Tsholotsho flood disaster survivors faced a myriad of challenges, chief among them the reconstruction of livelihoods, food insecurity, poor educational opportunities for the children post the emergency and broken family systems owing to the maintenance of dual homes as well as gender-based violence.

Introduction

Floods are the most common hazard leading to morbidity and mortality throughout the world (Fitzgerald & Hou 2014). Armah (2010) acknowledges that Sub-Saharan Africa is considered to be a vulnerable region to climate variability including flooding and droughts. Flash floods are a threat to most deeply impoverished areas that do not receive enough precipitation for agricultural purposes. Zimbabwe has been prone to disasters, both of rapid and slow onset nature. Flooding is already one of the most widespread of hydro meteorological hazards. The Intergovernmental Panel on Climate Change (IPCC) predicts that climate change is likely to cause an increase in flood hazards in many areas of the world (McCarthy *et al.*, 2001). Tsholotsho, which lies in Matabeleland North to the west of Zimbabwe, is prone not only to droughts but to flash flooding as well. Sub-Saharan Africa, that includes Malawi, Zimbabwe, South Africa, Zambia and Mozambique, is considered to be most vulnerable to climate variability and natural disasters that include drought and flooding. Flooding is a recurrent problem in Tsholotsho. The area was also affected in the 2013-2014 agricultural season leading to heavy losses in human and livestock life.

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The need for comprehensive research around disaster response is paramount (Brown 2015). All floods are unique in that the regions affected have different social, demographic, economic, and population health characteristics (Du et al 2010). It is critical therefore to examine the different experiences of individuals. Ismail, Bahari & Mutang (2017) maintain that each survivor's experience is unique in the sense that disasters affect men and women and children differently. This is because of the different roles they occupy and the different responsibilities given to them in life as well as the differences in their capacities, needs and vulnerabilities especially the needs of children and those living with disabilities.

The Literature

Disasters can be grouped into human induced and natural. Put together, these include floods, droughts, cyclones, landslides, earth quakes, armed conflicts, fires, volcanic eruptions and epidemics. Yang, Dietza, Yangc, Zhangd & Liua (2018) however, maintain that natural disasters are not entirely “natural. This therefore implies that there is an element of causation in every disaster that affects humanity. Ferris (2010) observes that disasters whether triggered by natural hazards or human behaviour or by the interaction between the two, affect millions of people for long periods of time. Ismail, Bahari & Mutang (2017) concur that in post flood disasters management, besides assessing the psychological impact for the survivors, strengthening family and community resilience from traumatic loss is important for optimal recovery. Flooding is often a perennial problem for constantly hit areas such as Tsholotsho and this should give the government the opportunity to adequately prepare for such disasters. Murape (2009) acknowledges that in Tsholotsho flooding is not a recent hazardous event; it has happened before and tends to recur. Because it is a recurring problem, the call is on the people to be prepared for disasters. DaBreo, McLean & Thomas (undated) maintain that community-based preparedness and planning allow us to manage the potential hazards following a disaster event. Individually, we can prepare our homes and families to get through those critical times.

Research design and ethical considerations

This study employed a phenomenological design which is qualitative in nature. Both primary and secondary data was gathered with a view to understanding the state of the flood survivors and their recovery process two years after the disaster. Structured interviews and questionnaires coupled with direct observations (through transact walks) were employed for collecting primary data. Because choosing a methodology hinges on the research problem, interviews and observations were found to have specific relevance to understanding the state of affairs in Tsholotsho as they provide an opportunity to understand and explain complex phenomena through the eyes and lens of the respondents. Drawing on Jupp (2006)'s impression, purposive sampling was employed to select the key informant interviewees from Tsholotsho. Purposive sampling allowed researchers

to identify knowledgeable informants who gave rich and relevant insights into the state of affairs two years after the flood. Random sampling was employed to select households to complete the questionnaire.

This research draws broadly from the research area of gender-based violence which is highly sensitive, with distinct ethical challenges, and requires careful preparation, attention to legal issues and thoughtful dissemination of the research findings (WHO, 2007). Resultantly this research drew from WHO (2007)'s guidelines for ethical and safety recommendations on the collection of information on sexual violence in emergencies which include:

1. The benefits to respondents or communities of documenting sexual violence must be greater than the risks to respondents and communities.
2. Information gathering and documentation must be done in a manner that presents the least risk to respondents, is methodologically sound, and builds on current experience and good practice.
3. Basic care and support for survivors/victims must be available locally before commencing any activity that may involve individuals disclosing information about their experiences of sexual violence.
4. The safety and security of all those involved in information gathering about sexual violence is of paramount concern and in emergency settings in particular should be continuously monitored.
5. The confidentiality of individuals who provide information about sexual violence must be protected at all times.
6. Anyone providing information about sexual violence must give informed consent before participating in the data gathering activity.
7. All members of the data collection team must be carefully selected and receive relevant and sufficient specialized training and on-going support.
8. Additional safeguards must be put into place if children (i.e. those under 18 years) are to be the subject of information gathering.

Ethical approval to conduct the study was obtained from the Research and Ethics Committee of the Bindura University of Science Education. The research was reviewed and approved by Bindura University of Science Education Institutional Review Board and is consistent with the above cited WHO guidelines on research on sexual violence in emergencies. Approval from government authorities in Matabeleland North was secured from the Office of the Resident Minister prior to conducting the study, as well as the Ministry of Women Affairs.

Findings

Eight hundred and sixty-nine people (869) comprising women and men were directly affected by the floods. More women than men were affected by the floods. The above finding is in line with

the assertion by WHO (2015) who highlight that in most emergency settings, women and children account for the greatest numbers of displaced people.

Housing in the aftermath of floods

Reconstruction of houses and livelihoods after the flood was key to ensuring a quick return to normalcy. In most cases helping the citizens to reconstruct and rebuild their asset base is largely the prerogative of national governments aided by development partners. Tuwilika (2016) contends that the primary responsibility for citizens affected by disasters rests with the national government. The respondents highlighted that government through the Ministry of Public Works led post reconstruction efforts by constructing decent houses for the affected families. At the time of this research, three hundred (300) houses out of a target number of three hundred and sixty-nine (369) had been constructed and were now habitable. A transact walk through the resettlement area revealed that the outstanding sixty-nine houses were at various stages of completion ranging from foundation stage to lintel stage. From the focus discussions with the various respondents it was discovered that the allocation of houses to beneficiaries was not sensitive to the different vulnerable groups as more widows and single parents appeared not to have been prioritized in the early allocation as they led the research team to their stands/ houses that were still incomplete and at various stages of development. Furthermore, the respondents noted that they were removed from their livelihoods as the new settlement area could not accommodate their livestock and there were no fields to till. Respondents maintained that as a result of the above development they were forced to trek back to their old homes for animals and fields thereby maintaining a dual home ownership scheme. Running two homes has associated problems that are not good for the well-being of the family and this according to respondents included increased incidences of gender-based violence as partners lived apart. Yang et al (2018) also discovered that post-disaster reconstruction led by the government generated unintended effects on human well-being in China. This finding in some way gives credence to the view by Bilau et al (2018) that many stakeholders have identified permanent housing reconstruction as one of the least successful humanitarian interventions as many housing interventions fail to achieve their intended outcomes.

Restoration of Livelihoods after the floods

Rehabilitation of livelihoods after a disaster is key to recovery. Longley (2006) maintains that rehabilitation is often regarded as the process that links relief and development of which the implicit aim is to return to former, supposedly stable and desirable states of affairs. Most of the respondents (98%) highlighted that their livelihoods were affected by the natural disaster. They further noted that no emergency relief fund to recapitalize and re-energize the livelihoods was launched. Respondents also noted that long-term post disaster options and rehabilitation for survivors were not only limited but lacking. One respondent had this to say:

“Akulanto abayiyenzayo. Thina siyahawula lapha emzini” (They have not done anything [to restore our livelihoods]. We are suffering [wallowing in poverty] here, (respondent 5)

Respondents further highlighted that for optimal recovery from the floods to be realistic, a recovery programme in Tsholotsho that directly supports food security, including support for women and men to establish livelihoods and rebuild assets would have helped tame poverty in the area. However, the respondents appeared very doubtful about the ability of the government and the development partners to quickly support any recovery initiatives given the failing economy. Wiest, Mocellin & Motsisi (1994) maintain that where physical and emotional losses are severe and traumatic, stress levels interfere with recovery. The failure by government and development partners to initiate the rebuilding of people’s livelihoods was a cause for concern and a huge disregard of the Nansen Principles of 2011 that stipulated that close attention to economic vulnerability must be paid attention to in resettlement actions, to ensure that livelihoods of resettled residents are maintained, or ideally enhanced, by the resettlement process.

Politics and power dynamics

Respondents highlighted that the resettlement and allocation of houses to survivors was not done following the old power dynamics where a headman and his subjects would be settled in one area. Respondents noted that in the new settlement, the allocation of houses was not tied to headmanship. Respondents further noted that this system had some inherent challenges of exercising authority and compliance issues where the headman’s power is diluted. In some instances, individuals would not take instructions from the headman close by as he was ‘not’ their headman. Furthermore, the mixed settlement approach destroyed social webs of support. This departure from the norm caused many problems to those resettled. Wiest, Mocellin & Motsisi (1994) observed that most of the world’s societies are still organized principally in terms of kinship, at least at the local level. They further maintain that people in all societies turn to family and close kin in times of special need.

Livestock and livelihoods

The importance of livestock among the Zimbabwean people cannot be overemphasized. Livestock are of utmost importance for status, income and livelihoods. Tuwilika (2016) acknowledges that livestock are of utmost importance for status, income, livelihoods, as well as survival of populations and cultures. Most of the sampled households (90%) indicated that on average they lost seven beasts each while less than 3 of the sampled households noted that they lost all their cattle and goats. One of the respondents had this to say:

Ngendaba yemanzi, khatesi ngingumuntu nje mtanami. Zonke inkomo zami zafa, angila lutho (Because of the floods now I am just poor, I lost all my cattle I don’t have anything).

Respondents further highlighted that, post-flooding, the remaining livestock succumbed to diseases leaving them very poor. The above point is buttressed by Navarre (2006) who notes that

various diseases can be contracted by livestock in post-flood events such as: Blackleg which affects cattle, sheep and goats. This is more so in areas where grass is short and animals graze very close to the ground. Lost livestock affected the respondents leaving them uneasy and uncertain about their future as cattle are highly valued in Ndebele society. Steinfeld et al., (2006) note that livestock systems are a significant global asset with a value of at least US\$1.4 trillion, employing 1.3 billion people and directly supporting the livelihoods of 600 million poor smallholder farmers in the developing world.

Emotional Instability in the aftermath of floods

Following the floods, some respondents exhibited anger, helplessness, depression, anxiety, and withdrawal symptoms as the floods had wreaked havoc not only on their assets but also on their social standing in society. Respondents reported relational conflict as very common. One of the respondents had this to say:

“I have lost literally everything. I don’t know why I should still live. What do I live for? Coming to terms with the death of my son, my only bread winner is very difficult.” (male respondent, 52 years). For the majority of the respondents, getting closure to the difficulties inflicted on them by the floods is very difficult. The psychological impact of the loss was reportedly too immense to swallow. Ismail, Bahari & Mutang (2017) summarized the pain that individuals go through when they encounter disasters by noting that it’s a cascade of sorrows.

Most of the sampled households were subsistence farmers who grew mainly maize and small grain crops for the staple diet of *isitshwala*, sadza or thick mealie meal porridge. Respondents noted that the floods affected their farming in a very serious way. Following the flood, food was highlighted as an acute problem in the affected areas. Most of the sampled households (94%) highlighted that their crop was destroyed by the floods. They also indicated that in most instances households are food secure for just between 2 to 4 months at most as they battled recovery. Poor nutrition was highlighted by respondents following the destruction of food supplies and livelihoods. The disruption of livelihoods was reported to have impacted on household incomes and the respondents’ capacity to purchase food. Lack of disposable income was highlighted as one of the after effects of the flood disaster. Respondents noted that preparation for farming seasons has largely been poor owing to the after effects of the flood disaster. Respondents were asked about programmes that had been introduced after the floods to build community resilience and recovery. Ismail et al (2017) acknowledge that strengthening family and community resilience from traumatic loss after such catastrophic events is important for optimal recovery. The respondents noted that to date no programmes had been initiated to strengthen family and community resilience. Ideally the destruction of crops by the floods would have made it imperative for community members to diversify their agricultural livelihoods. This however, has not been the case for the Tsholotsho community as most of them instead streamed back to their old homes and livelihoods. In the aftermath of the floods, many respondents highlighted that they did not have

the financial resources or insurance coverage to compensate for the loss of property and damage to their homes and livelihoods.

Education in the aftermath of the floods

Education is increasingly viewed as the “fourth pillar”, or a “central pillar”, of humanitarian responses, alongside the pillars of nourishment, shelter and health services (Norwegian Refugee Council et. al.,1999: 26; Midttun, 2000a: 3–4; ICWAC, 2000: 9). Children are vulnerable and dependent, and they are developing, not only physically but mentally and emotionally. “The sudden and violent onset of emergencies, the disruption of families and community structures ... deeply affect the physical and psychological wellbeing of refugee children” (UNHCR, 1994: 5–6). Uprooted adolescents are at risk of sexually transmitted diseases, unwanted pregnancies, mental health problems, violence and substance abuse ... social stigmatization [and] ... recruitment into armed forces or groups. (United Nations, 2000a: 11) Education is likewise a forward-looking activity that can lessen the incidence of alcohol and drug abuse, teenage pregnancies, prostitution and so on. Schools represent a mechanism to get “survival messages” to the community and to identify and protect children at risk.

All sampled households indicated that they had school going children at both primary and secondary level. All the households indicated that their children were greatly affected by the floods and the effects were still being felt at the time of the interviews. Respondents maintained that two primary schools and a secondary school had been permanently closed and the children were moved to Tshino Primary School which was over enrolled. Respondents highlighted that no immediate psychosocial needs of children were being addressed and supported by the respective departments mandated by the responsible Government Ministry. At the school level, respondents highlighted that during the early stages of relocation, students that had survived the floods were being taunted and being referred to as *abamanzi* meaning those ‘from the waters.’ The practice is said to have been discontinued following the intervention by the school authorities. Despite an attempt at co-existence within the school, respondents highlighted that resources were over stretched. The tents that were pitched as temporary classrooms had visibly given in to the effects of the weather. Most were torn. Respondents further highlighted that because the floods occurred during the academic term, pupils lost many contact hours. Resultantly the pass rate for the school plummeted.

Water and Sanitation

There has been a protracted debate on the issue of the right to water and sanitation. The debate dates back to the Mar del Plata Conference of 1997) which declared that “all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs”. Access to water and

sanitation is key in an emergency. The Global Wash Cluster (2009) maintains that access to safe drinking water and sanitation is fundamental for survival. The state of water and sanitation during and after the emergency was explored. Respondents highlighted that generally safe water was unavailable to most of the households following the floods in Tsholotsho. Unavailability of safe water was cited as a major problem in the resettled areas. A key informant indicated that women found it difficult to manage hygiene issues in the home owing to limited water for domestic use. Respondents noted that the piped water scheme that was introduced in the area was not effective as the water pump was down most of the time leaving households exposed to the dangers of unsafe water. Furthermore, most households had constructed latrines thereby posing a serious challenge to people's health and hygiene. UNICEF (2011) contends that when there are no latrines, governments and relief agencies should help by providing temporary places to go to the toilet, such as defecation fields, trench latrines (dedicated hand-dug and screened pits) and soak away pits for urine (hand-dug, stone-filled holes for boys and trenches for girls).

Marital discord

Respondents reported that following the floods and out migration, there had been marital discord in many of the families resulting in separation, desertion and divorce. Respondents highlighted that owing to out migration in the aftermath of the floods, a number of men out migrated to Botswana and South Africa looking for employment. Many of these men according to the respondents had not only stopped supporting their families but had deserted them exposing them to further emotional turmoil. Some of the respondents reported relying on their children for support. Deserted women were often very bitter as they had to contend with raising and providing for the families by themselves. Wiest, Mocellin & Motsisi (1994) acknowledge that in societies with strong patriarchal ideologies, a woman abandoned is a woman scorned. Most of the respondents noted that they were left with very little resources, but with the added burden of raising dependent children. They had not recovered from the shock of the floods. The father role in traditional Ndebele society is critical in raising up a child. Lesejane (2006) cited by Richter et al in United Nations (2011) acknowledges that while having a child might represent evidence of masculinity for men, in most parts of the world a man becomes a father, and is treated with the respect attached to the role, when he takes responsibility for his family and becomes a model of appropriate behaviour for young children.

Coping and recovery strategies in the aftermath of floods

Respondents highlighted that while they were still counting their immense losses; they had developed community-based coping and recovery strategies, which included out migration into Botswana and South Africa offering seasonal labour and informal credits.

Out migration was highlighted as a coping strategy for households affected by floods. Respondents highlighted that following the floods there was increased out migration into Botswana and South Africa as people sought to eke a living. Migration is generally considered an important livelihood strategy. As Hussein & Nelson (1999) argue, migration forms a central component of rural people's risk mitigation strategies. Respondents pointed out that throughout migration, their bread winners would send remittances back home to rebuild and help households recover from the shocks of disaster.

Gerald and Dorothy maintain that remittances are important for supporting developing countries and households, and recently have taken a more visible role in disaster mitigation and recovery. Frankenberger (1992) cited in Kamal (2013) notes that households take three sequential series of activities as stress becomes more prolonged: first, reduce their food consumption at minimal level; second, employ divestment or the gradual disposal of assets and finally, embark upon migration.

Respondents' perception of personal risk to floods was explored. Most of the respondents (75%) who trekked back to their old homes appeared resigned to fate and said they had no alternative other than going back. One of the respondents said;

Asilanto esingayenza khonapha. We are in a fix. There is no better way to die.

Contrary to the view by Penning-Rowsell, (2003) that people are short of memory and that after some time their worries decrease, many victims of the Tsholotsho floods appeared to have surrendered themselves to fate by returning to their old livelihoods.

Conclusions

This research examined the experiences of flood survivors two years after the floods. It sought to highlight how floods impacted on the people and how they had coped in the aftermath of the disaster. The results suggest that in the aftermath of disaster, the government had constructed houses for the survivors although these were not sufficient to meet the needs of all of them. This research further proved that allocation of the constructed houses did not take into account the vulnerability status of individuals as single and widowed women comprised the majority whose houses were incomplete. This research also established that water and sanitation issues after the disaster had not been adequately addressed. Portable water was still scarce and toilets had not been fully built at the time of this research. Portable water did not meet the Sphere standards of at least 20 litres of water per day per individual. Brown et al (2012) observe that evidence suggests that providing safe water, safe excreta disposal, and basic hygiene measures such as hand washing are effective interventions both within emergency settings as well as in longer-term development. The Global Wash Cluster (2009) notes that lack of access to basic services such as water and sanitation is increasingly considered as a denial/ violation of human rights. This poses a huge risk to the health of the people two years after the disaster. This calls for the urgent need to provide sustainable sanitation solutions in the resettlement area.

Respondents demonstrated that people had not been generally prepared for the floods. That people have lived with the floods over time appears not to spur the individuals into action. SuSanA (2012) notes that natural hazards such as extreme rainfall (leading to floods) and earthquakes do not necessarily result in disasters. They only turn into disasters when human society is unprepared for them, where infrastructure and planning has not been designed to withstand or buffer against them and if society cannot respond or learn adequately. This therefore calls for investment in disaster risk reduction. This study established that owing to failure by government to provide alternative livelihood options for the affected people, the people streamed back to their old homes to till the fields giving rise to the ownership of dual homes. Given the reluctance by the people to abandon their old livelihood options it is critical to take to heart a warning by SuSan A (2012) who observes that disasters like this must thus act like a “wake up” call to trigger more investment in risk reduction, which also decreases cost and scale of response in future.

References

Armah, F. A., Yawson D.O, Yengoh G T, Justice O, Odoi J O & Afrifa E K A (2010) Impact of Floods on Livelihoods and Vulnerability of Natural Resource Dependent Communities in Northern Ghana, *Water* 2010, 2, 120-139; doi:10.3390/w2020120

Bilau, A. A, Witta, E., Malalgodab, C., Lilla, I., Amaratunga, D., (2018) Integrated measures for managing permanent housing reconstruction, *Procedia Engineering* 212 (2018) 403–410

Brown, J., Jeandron, A., Cavill, S., Cumming, O., (2012) Evidence review and research priorities: Water, sanitation, and hygiene for emergency response, London School of Hygiene and Tropical Medicine, UK Department for International Development

Du W, FitzGerald, G. J., Clark, M., Hou, X. Y., Health impacts of floods. *Prehosp Disaster Med* 2010; 25(3):265–272.

Frankenberger, T. R., (1992) *International Fund for Agricultural Development*, New York: UNICEF; Rome, Italy.

Hussein & Nelson (1999) Livelihood diversification in Uganda: patterns and determinants of change across two rural districts.

Ismail, Bahari & Mutang (2017) Recycling motivations and barriers in Kota Kinabalu, Malaysia.

Kamal (2013) *Reproduction Update*, Volume 20,

Lesejane D (2006) Fatherhood from an African cultural perspective, in Richter L, Morrell R, editors. *Baba: Men and fatherhood in South Africa*. HSRC Press; Cape Town.

Navarre, C. B., (2006) *Potential livestock disease problems following disasters*. Louisiana: Louisiana State University Agricultural Centre, Department of Veterinary Science.

Penning-Rowsell, E. (2003). Implementing flood mitigation and protection: constraints, limitations, power and ‘reality’, in M. Marchand, K.V. Heynert, H. van der Most and W.E. Penning (eds.), *Dealing with Flood Risk. Proceedings of an interdisciplinary seminar on the regional implications of modern flood management*. Delft Hydraulics Select Series 1/2003. Delft University Press.

Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, De Haan C (2006). *Livestock's long shadow: Environmental issues and options*. Rome: Food and Agriculture Organization.

SuSan, A., (2012), *The Global Wash Cluster* (2009).

Tuwilika S V (2016) Impact of flooding on rural livelihoods of the Cuvelai Basin in Northern Namibia, *Journal of Geography and Regional Planning* Vol. 9(6), pp. 104-121, DOI 10.5897/JGRP2015.0536, June, 2016.

Wiest R E, Mocellin S P & Motsisi D T (1994) *The Needs of Women in disasters and Emergencies*, Winnipeg, Manitoba.

WHO Report (2007),

WHO Report (2015)

UNICEF Report (2011)

Acknowledgements

The researchers would like to acknowledge ELRHA for financially supporting this research.



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ISSN:2520-4536X