

BOOK OF ABSTRACTS

MASTERS IN DISASTER MANAGEMENT

DiMTEC 10 year celebration, 2005 - 2015



Disaster Management Training and Education Centre for Africa
University of the Free State

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The views and opinions expressed in this book are those of the authors and do not necessarily reflect the official policy or position of UFS – DiMTEC. The abstracts were published in this book just as they were received from the authors without further editing.

ABOUT THE BOOK

This book has a collection of some of the Masters in Disaster Management research abstracts from 2003 to 2014. The abstracts are from research that was carried out by top students from all over Africa working in non – governmental organisations, private sectors and government organisation in partial fulfilment of their research in disaster management studies with the University of the Free State. The book was also one of the many initiatives created in celebration of Disaster Management Training and Education Centre for Africa’s 10 year celebration. A celebration of the centres research achievements, with most of these research papers published in accredited journals and presented at prestigious global conferences such as the World Conference in Disaster Management, Canada and Southern Africa Society for Disaster Reduction, held in Namibia. The book is instrumental to current student’s pursuing research in the field of disaster risk reduction and management. The Book of Abstracts is also a marketing tool for prospective students considering to venture into humanitarian studies. Practitioners in the humanitarian field can also make use of this book as a guide for identifying research outcomes useful to the communities they serve and help aid, with proven results current projects they are involved in. Organisations interested in the full theses as well as the researchers contact details can make contact with the UFS - DiMTEC office. This book also serves as an acknowledgement and commendation to all UFS - DiMTEC’s alumni who contributed fruitfully to the growth of this the academic institution. Disaster management being a continuous and integrated multi-sectoral and multi-disciplinary process; this book entails abstracts with topics investigating issues of risk reduction and disaster management of hazards such as floods, fires, landslides, drought, best practices and statutes est. This book is a rich database of information and networking tool for all the stakeholders interested.

ACKNOWLEDGEMENTS

Many thanks to the lecturers who have taught the students the theoretical basis of disaster risk reduction and management and the supervisors who dedicated their time and knowledge into UFS - DiMTEC's students research. Gratitude goes to bursary funders who paid tuition fees in order to enable our student's success in accomplishing their studies with the biggest funder being the South African National Disaster Management Centre. UFS - DiMTEC is grateful to the conferences that accepted the student's papers, special thanks goes to Disaster Management Institute of Southern Africa (DMISA) and Southern Africa Society for Disaster Reduction (SASDiR). Special thanks goes to the journals that published the students articles, putting UFS - DiMTEC research on a level of excellence. UFS - DiMTEC will endeavour to produce research that will be published in accredited journals and presented at world class conferences in support of and contribution to a global positive humanitarian change.

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FOREWORD

As part of our tenth anniversary, University of the Free State – Disaster Management Training and Education Centre for Africa (UFS-DiMTEC), would like to honour our graduates with the publication of this book of abstracts. Our graduates contribute towards global resilience at different spheres of society in different parts of the world. UFS – DiMTEC through its training, education and research program, has joined in the fight against natural and man-made risks and disasters all over the world.

This publication gives an overview of our Masters students' research, and illustrates the multi-disciplinary nature of disaster management with a variety of titles covered. After countless hours of studying, for most, the reward was not the Master's degree, but the confidence in knowing that they can actively build resilience in their sphere of influence by applying the knowledge they gained. The abstracts included in this publication, are not all of the abstracts from the research completed by our Master students.

I need to mention the DiMTEC staff who supported our students tirelessly and who were responsible for all our achievements. I have to mention the visionary insight of those who initiated the disaster management post-graduate program in 2002 within the Department of Agricultural Economics. My current staff must get the credit for building our program to the largest post-graduate program in Africa. Here I have to mention the names of Alice Ncube, Olivia Kunguma (this book of abstracts was her initiative), Johannes Belle, Annelene van Straaten and Germie van Copenhagen.



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INVESTIGATING DISASTER MANAGEMENT IMPORTANCE IN HIGH SCHOOLS CURRICULUM: A CASE STUDY OF AMAJUBA DISTRICT, SOUTH AFRICA

ABSTRACT

Having knowledge of disaster risk management is of paramount importance as it helps people in coping with hazards and even more so for learners to have a deeper understanding of the various fundamentals of disaster risk management. Thus, the main objective of the study was to assess the effectiveness of the inclusion of disaster management principles and practices in high school curricula. More emphasis was put on assessing the learners' behavioural and attitudinal changes after they had learnt about disaster management, and to what extent they applied the knowledge in their schools and communities. The study centred on four high schools in Amajuba District, Masakhane ward with learners in the FET phase being the key respondents. The study was carried out using both qualitative and quantitative methodologies with the use of questionnaires, focus group discussions and individual interviews. The key findings of the study were that the schools were not doing enough to ensure that the principles and practices of disaster management were disseminated to the learners. This study found that although the government notice stipulates that schools should do emergency and fire drills, these activities were not being carried out in three of the four schools. Thus, the learners' behaviour and attitude strongly indicated that there were gaps within the system that required urgent attention to improve the learners' level of preparedness.

KEYWORDS

Disaster risk management; Hazards; High school; Curriculum; Learners; Learning principles; Practices; Behaviour; Attitudes.

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PREDICTORS OF TYPHOID FEVER OUTBREAK IN MABVUKU
TOWNSHIP OF HARARE

ABSTRACT

Since the turn of the millennium, Africa remains the poorest, technologically underdeveloped, debt ridden and economically marginalised continent compared the rest of the world. Poor governance, civil conflicts and diseases have exacerbated the situation. In fact, disease outbreaks have become the order of the day in many households in both urban and rural settings in developing countries, and Zimbabwe is no exception. This study sought to establish the factors that caused typhoid fever outbreaks in the Mabvuku Suburb of Harare, Zimbabwe. During the period 2010-2012 many lost their lives due to the typhoid fever outbreak. The loss of lives and the suffering that many families went through during these years was enough motivation to make the researcher determined to establish the causative factors for this outbreak in order to suggest the coping strategies that can be in put in place to avert such suffering in future. The findings from the research show that the absence of safe, clean and treated water significantly compromised the health and living standards of the community members. These living standards were low due to the poor economic performance of the country. The continual rapid population growth at the time, as well as the aging sanitation infrastructure which could not be upgraded and maintained to meet the demand of the increasing population, were also factors that contributed to the typhoid outbreak. The sewage system collapsed in many parts of the Mabvuku Suburb and flush toilets were no longer functional and this led many residents to defecate in the open spaces. Faecal contamination and uncollected garbage and alternative contaminated and infected water sources acted as the breeding and sources of typhoid fever. The absence and erratic supply of untreated and contaminated water contributed to deterioration of hygienic standards of many families and individuals. Proper food handling and hand washing before food consumption could not be done anymore due to scarcity and this made it much easier for the *Salmonella typhi*, a bacterium that causes typhoid fever disease to be transmitted easily from one place to the other. This study recommends that in the immediate future there is a need to allocate resources to ensure that water and sewage infrastructure is upgraded, refurbished and fully functional. Consultation needs to be done with the locals to establish their areas of priority and create a sense of ownership of any of the projects that may be implemented. Health education has to be in place at grassroots level with the assistance of Non-Governmental Organisations and humanitarian agencies in the area in order to fight typhoid fever and other communicable diseases. Most importantly, the local authorities have to spearhead Water and Sanitation Health (WASH) programmes and support focus groups in the Mabvuku Suburb.

KEYWORDS

Water and sanitation; Health; Communicable diseases; Typhoid

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GENDER AND ACCESS TO FRESH WATER: EXPERIENCES AND COPING STRATEGIES OF RURAL WOMEN IN ZIMBABWE

ABSTRACT

Water scarcity is a slow-onset disaster that does not usually elicit rapid humanitarian intervention. In the event of water scarcity, women are the most affected. The article explores aspects of water scarcity affecting rural women and their coping strategies in the face of water scarcity. The purpose of this article is to offer a valuable contribution to the growing body of research on gender and access to resources. Water scarcity is an ongoing and threatening environmental issue for many southern African countries. Women, particularly in rural areas, seem to be disproportionately affected by water scarcity. The study relies on four techniques of data collection, namely a literature study, ethnographic research design, questionnaires and focus group discussion. The research findings suggest that water scarcity is a frightening hazard and in urgent need of humanitarian intervention, for it taps into many facets of human security. Water scarcity impacts severely on women and leaves their families more and more vulnerable to the effects thereof. The challenge of risk reduction and progress to security is difficult due to poor economies and a lack of technical and human resources.

KEYWORDS

Coping strategies, water scarcity, rural women

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AN ANALYSIS OF THE CONTINGENCY PLANNING SYSTEMS FOR DISASTER MANAGEMENT AUTHORITIES IN SOUTHERN AFRICA

ABSTRACT

This study sought to analyse and determine the status of Contingency Planning Systems among Disaster Management Authorities in Southern Africa. This study provides a learning point for public authorities, humanitarians and other scholars on the importance of contingency planning in the field of Disaster Risk Management. This is facilitated through the distribution of this study as a soft or hard copy. The quantitative descriptive survey research design was found to be the most suitable design for this study capable of investigating a wider geographical area in a short period of time, capturing the respondents' views on common hazards, the status of contingency planning, the frequency of reviewing the plans, as well as their capacity to engage into contingency planning. In this study a structured questionnaire was used to reach out to all the 14 countries that are member states to the Southern Africa Development Community (SADC) and a 50% response rate was achieved, giving this study a strong platform for generalising the results. To facilitate triangulation document analysis, face-to-face interviews in Zimbabwe and telephone interviews in other countries were used to follow-up on responses provided by the respondents. One of the challenges faced was on following up on the respondents considering that the study was covering all the fourteen SADC countries. The researcher had to make follow-up using electronic mailing, phoning, faxing reminders as well as making use of a network of friends in various countries to follow-up on the researcher's behalf. Data was tabulated, coded and analysed through spread-sheets leading to the development of frequency tables, tables, graphs and pie charts that revealed trends, patterns and other salient features. The major findings revealed that Disaster Management Authorities in Southern Africa have a clear understanding of the hazards that frequently affect their countries. On the other hand, the study revealed that 71% contingency planning capacity gap existed pointing to a fragile contingency planning status. The study reveals that 29% of the respondents did not have Disaster Management Acts. Droughts, floods and epidemics were identified as the most frequently occurring, severe and common hazards in Southern Africa which have been recurring, however besides their recurrence the study reveals that only 29% had tangible inter-agency contingency plans developed in line with the compound contingency planning format from IASC (2001:12), UNHCR (2003) and IFRC (2006) which 71% of the respondents showed willingness to adopt. Major recommendation of this study includes building the contingency planning capacity for Disaster Management Authorities by promoting a culture of preparedness. In view of the study findings and conclusions further in-depth research on the effects of insufficient contingency planning at country or regional level is recommended.

KEYWORDS

Contingency Planning; Contingency Planning Systems; Disaster Management; Disaster Management Authorities; Disaster Preparedness; Southern Africa Development Community (SADC)

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INVESTIGATING THE DISASTER RISK REDUCTION EFFORTS IN
NAIROBI SLUMS: A FOCUS ON ENVIRONMENTAL HEALTH RISKS

ABSTRACT

This research attempted to investigate efforts exercised by Mathare slums community in furthering Disaster Risk Reduction (DRR) on their own and with minimal external influence. The focus was on environmental aspects that included water, sanitation and hygiene. Unlike rapid on-set disasters like fires, violent conflicts and floods, environmentally initiated risks lead to slow but wide reaching disasters. Rapid on-set disasters usually receive wide media coverage and are therefore more noticed and donors will come in their droves. It is for this reason that environmental issues that are preventable have been the core subject in this study. The main objective was to look into sustainability of community-driven DRR approaches against the above mentioned environmental risks. Ensuing research looked at potential hazards, common disasters, linkage between education levels and DRR application. Through household surveys it was clear that very few respondents had attained a tertiary level education and this explains why whooping 58% residents were unemployed while those in gainful employment earned very low salaries. Over 27% defecated in the open while those with latrines drained the liquid waste into Nairobi River that transects through Mathare slums. Risk reduction efforts were generally poor at 78% and 22% good. This research publication ends with conclusions and recommendations. Upon reviewing all the elements under study, the Mathare community is unprepared for disasters and somehow reluctant to initiate meaningful disaster preparedness and mitigation measures. Since the houses they live in are rented and landlords are responsible for maintaining them and accompanying infrastructure, residents do not feel obliged to step in and improve their environment.

KEYWORDS

Water and Sanitation; Disaster risk reduction; Informal settlements

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THE IMPACT OF FLOODS ON OSHANA REGION, NAMIBIA: CASE STUDY OF CUVELAI RIVER BASIN

ABSTRACT

Flooding has become one of the most frequent and widespread of all environmental hazards. Floods of various types and magnitude occur globally, causing huge annual losses in terms of damage and disruption to economic livelihoods, businesses, infrastructure, services and public health. Long-term data on natural disasters suggest that floods have been by far the most common cause of natural disasters worldwide over the past century (Few *et al*, 2004). There is a mounting need to address vulnerabilities to flooding through adaptation efforts, complementing mitigation efforts aimed at reducing the magnitude of flooding disasters. At present, this development has taken place in parallel with the increasing shift from disaster management to disaster risk management. This study focuses on the impact of flood risk on the villages and urban poor, living in the highly vulnerable informal settlements in the Oshana region. It explores the underlying vulnerabilities of the region and the challenging problem of how to deal effectively with early warning systems (EWS) and response to the risk of natural disasters with a special focus on floods. The study exploits primary and secondary data. The outcome of the study shows marked differences in the vulnerability factors and the management of flood-related disasters in the study area. Furthermore, it is apparent that the indigenous coping mechanisms engaged by the poor, may become less effective as gradually more fragile livelihood systems struggle to withstand disaster shocks. Strategies to reduce vulnerability should be rooted in vulnerability analysis and greater understanding of both household-level and macro-response options that are available to decrease the poor's exposure to flood risk.

KEYWORDS

Flood; Environmental hazard; Informal settlements; Livelihood

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THE CHURCH AND DISASTER MANAGEMENT: THE ASSEMBLY OF GOD CHURCH (AOG) AND HIV/AIDS IN LUSAKA, ZAMBIA

ABSTRACT

We live in an era of unprecedented disasters, both in severity and frequency. With the increasing unpredictability of disasters and their impacts on vulnerable populations, the consequences of disaster put many lives and livelihoods at stake. The emergence of HIV/AIDS pandemic has brought multi-faceted challenges among the Zambian population especially in the capital city, Lusaka. Churches have attracted controversy for how they have dealt with AIDS: they have been criticized for moral stigmatism, yet lauded for their charitable works. HIV/AIDS poses a challenge to every person, community and organization to such an extent, that nearly every organization, Churches included, should have some policies and programmes to deal with the pandemic. The Church is one institution that because of its proximity to communities, as well as its ubiquity within many contexts, is able to respond compassionately and quickly to those infected and affected by the HIV/AIDS disaster. Indeed, for decades the Church has been helping communities mitigate, prepare for, and recover from disaster. In view of the fact that the Zambian government in Lusaka cannot deal with the increasing complex impact of the HIV/AIDS pandemic, the Circle of Hope Family Clinic (CoH) a project under (AOG) Church and other organizations within Lusaka came on board, and augmented government efforts to try and alleviate the human suffering due to the pandemic. In this study, my purpose was to examine what the (AOG) through (CoH) is doing at the grass-roots level in Lusaka to deal with the impact of HIV/AIDS. The study reveals that to achieve this enormous task, the Church must be transformed in the face of the HIV/AIDS crisis, in order to become a force for transformation-bringing healing, hope and accomplishment to all infected and affected by HIV/AIDS. The Church is and should be an agent of God's change by contributing to the communities in which she is located.

KEYWORDS

HIV/AIDS; Church; Clinics; Stigma; Risk reduction; Recovery;

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THE IMPACT OF EARLY WARNING SYSTEM ON FOOD SECURITY
AT RED SEA STATE – EASTERN SUDAN

ABSTRACT

Since the major famine of 1984/85 the Red Sea State lacked a proper early warning and well defined functioning monitoring system for food security. In response to the current food crisis, the Red Sea State government and International non – Governmental Organizations (NGOs), sought to create a system of early warning based on assessment of certain indicators of vulnerability. The food security situation in the Red Sea State remains precarious. The region experienced eight major famines during the 20th century. This chiefly stemmed from its geo-political context. The main priority for effective response to food crises remained the strengthening of national institutions for food security monitoring. This study assessed the impact of the early warning system on food security at the Red Sea state with emphasis on the welfare of the vulnerable groups in Red Sea State. With more focus on understanding the modalities of the early warning system in the Red Sea State; highlighting the coping strategies by local community to food shortage; verifying indicators which were strongly related to the impact of food security in the RSS and draw recommendations that can be utilized for sustainability of early warning system for food security. Primary data collection involved both quantitative and qualitative data generated from different localities of RSS which represented its agro ecological zones. Samples of households were taken from villages and localities at State levels. Three questionnaires were designed to collect information on basic household demographic information, questions about early warning system. The questionnaire and interviews were carried out in Port Sudan town, Rural Port Sudan, Tokar north and south and Halaib Localities. The main results of this study show that the early warning system based on community interview; the food security impact was limited they felt that measures taken by government, donating institutions and other partners did not alleviate the food crisis situation. Also based on the key informants' response, the food security impacts were complex. The lack of continuous funding and the low commitment of the political and economic environment together with poor governance were noted as key factors relating to negative impact of early warning system on food security. The EWS team perspective on food security impact was also low because as the whole system use to depend on central government reserve and mobilization of food aid during the crisis. The most important recommendations of this study were that the government agrees and supports that EWS for Food security is necessary in the RSS and that the information provided by the EWS will be reliable enough to help in government planning and action. Concerted efforts by the government should be persuaded to activate the role of local communities in food production, food accessibility, storage, market behaviour and the decision making process during food security crisis. Linkage of key informants with the role of EWS team for the purpose of enhancement of dialogue and the decision making process with community creates and enabling environment for quick response during food crises.

KEYWORDS

Early warning; Food security, Impact assessments; Key informants; Community; Livelihood

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PUBLIC AWARENESS CAMPAIGNS AS EFFECTIVE MEANS TO REDUCE DISASTER RISK: A CASE STUDY OF THE FIRE AND FLOOD CAMPAIGN IN THE WESTERN CAPE

ABSTRACT

Public awareness has long been regarded as one of the tools to achieve disaster risk reduction through increased hazard knowledge, risk perception, and the fostering of risk avoidance behaviour; but measuring the effectiveness of such campaigns proves to be a difficult task. A case study of the Fire and Flood Awareness Campaign in the Western Cape Province served as an attempt to assess such a campaign using the international best practice Logic Model framework. As disaster risk has historically been a culmination of vulnerability, hazards such as fires or floods and ability to cope with the impacts thereof, it stands to reason that by reducing vulnerability, increasing ability to recover or prevent a disaster and being out of harm's way would lessen the hardships disaster situations are accompanied by. The legislative mandate and obligation awarded to the provincial government of the Western Cape's Disaster Management Centre saw the implementation of the Fire and Flood Awareness Campaign. Flood and fire risks have long plagued the Western Cape Province, and have subsequently been prioritized as high priority risks in the region. The awareness campaign aims to reach those most vulnerable to the impacts of such hazards, and thus focuses on residents in informal settlements and primary school learners in the respective informal settlement areas. In the name of good governance, continual improvement and accountability, a need for an assessment of the effectiveness of the Campaign is identified. The Logic Framework is used to guide the assessment through the identification of the Campaign's inputs, activities, outputs, outcomes and envisioned impact as well as the achievement of these elements. Both qualitative and quantitative data is collected through field observations, poetry and art competition entries, pre-and post-intervention questions and questionnaires respectively. The results indicate that the 2010 Fire and Flood Awareness Campaign increased hazard knowledge, the audience's risk perception, encouraged communication of this knowledge to others and the fostering of a safety culture. It can therefore be suggested that from these four outcomes the Campaign may be said to have achieved its envisioned long term impact of reducing flood and fire risk. It is however recommended that an assessment of this kind be guided by the proposed Logic Framework that was developed for the specific campaign. In addition, it is suggested that future evaluations be longitudinal studies as this would reflect a more solid argument for the risk reduction impact of a campaign and lastly that a longer time period allowed to plan an evaluation as this would markedly distinguish and strengthen a quantitative assessment.

KEYWORDS

Risk reduction; Public awareness campaign; Flood; Fire; Logic model framework

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A CASE STUDY OF THE PERCEIVED SOCIO ENVIRONMENTAL PROBLEMS CAUSED BY ILLEGAL GOLD MINING IN GWANDA DISTRICT, ZIMBABWE

ABSTRACT

This study assessed the perceived impact of illegal gold mining on the environment and the people of Gwanda District, Zimbabwe. The research applied qualitative and quantitative methods using face-to-face interviews, questionnaires, and observations. Purposive sampling techniques were used and 94 respondents were interviewed. The respondents were drawn from informal gold miners, non-gold miners, and stakeholders comprising local government officials, environmental management authorities, and officials from local mining organisations. Non-gold miners included those people living with informal gold miners along the riverbanks and neighbouring communal settlers. The study established that informal gold mining activities were poverty driven and contributed to environmental problems such as deforestation, river siltation, soil erosion, and water pollution due to disposing waste materials and the use of chemicals such as mercury and cyanide. The study recommended that a coordinated approach should provide informal gold miners with basic training in environmental management and disaster risk reduction management skills. This will assist in reducing the environmental problems and other related disasters emanating from illegal gold mining.

KEYWORDS

Socio-Environment; illegal; gold; panning; mercury; cyanide

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ASSESSMENT OF HOUSEHOLD FOOD INSECURITY AND THE STRATEGIES DEVELOPED TO ADDRESS FOOD SHORTAGES IN THE SOUTHERN LOWLANDS OF LESOTHO

ABSTRACT

Food insecurity is defined as insufficient access by all people at all times to adequate and nutritious food. The aim of the study was to assess the level of household food insecurity and the effectiveness of the Poverty Reduction Strategy 2004/05-2006/07 (PRS) and 2005 Lesotho Food Security Policy (LFSP) developed and implemented by the government of Lesotho to address food shortage in the southern lowlands of Lesotho. The study revealed that food insecurity continues to be a problem in Lesotho particularly in the rural areas. This is caused by a number of factors such as; poverty, unemployment, erratic climatic conditions, HIV/AIDS and poor land tenure systems. All these factors increase vulnerability of households to food insecurity. In many households, agriculture is the primary source of food and income, however, it has decreased drastically and the families that depend on it are facing serious food and income deficits. In addition, the country is forced to import 70% of its food requirements because of poor productivity. Moreover, insecurity causes undesirable effects on people's lives as it promotes theft and human trafficking including malnutrition. The study also revealed that there is lack of or limited livelihood assets in the southern lowlands of Lesotho, particularly financial, human and physical assets. Therefore, this thwarts most of the households to diversify their livelihood opportunities and to convert their assets into positive outcomes. To cope with the existing situation of food insecurity, the households adopted the following mechanisms: reducing number of meals per day; reducing portion size of food; buying less preferred food (cheaper); casual labouring; receiving gifts from relatives, neighbours and friends; selling households assets; borrowing; collecting wild food; receiving food aid and skipping days without eating. Lack of awareness and knowledge about the PRS and the LFSP resulted in poor or ineffective implementation of these strategies and policies. As a result, the PRS and LFSP did not improve the livelihoods and food security in the southern lowland of Lesotho. The research hypothesis, which states that ineffective strategy and policy implementation resulted in persistent food insecurity in Lesotho, remains valid.

KEYWORDS

Food shortages; Food insecurity; Household food insecurity; Poverty; Land; HIV/AIDS

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A STUDY INTO THE ESTABLISHMENT AND USE OF FLOOD LINES IN URBAN AND RURAL ENVIRONMENT

ABSTRACT

Integrated and coordinated disaster risk management focuses on preventing or reducing the risk of flood disasters, mitigating their severity and ensuring effective response. Flood risk assessment, flood hazard ratings and hazard zoning play an important role in improved and enhanced flood risk planning for both urban and rural settings. The study aimed at assessing and determining the negative impacts of the floods that took place in March, 2001 in Tsholotsho district of Matabeleland North Province of Zimbabwe. The researcher therefore made use of the Tsholotsho case study in order to determine the physical (tangible), intangible, livelihood means, and socio-economic damages that were caused by the flood in Tsholotsho. The research also aimed to establish flood coping strategies that the affected community utilized in order to mitigate the impact of the flood, and to put forward policy recommendations on what could be done to build community resilience and mitigate negative impacts of floods to vulnerable communities. The researcher employed mixed methods that was based, by and large, on the principles of Participatory Action Research (PAR)

The major findings of the research were;

- in terms of tangible and intangible damages suffered by the affected community; there was severe arable land damages, loss of crops and harvest, loss of livestock , loss of human life and disruption of community social networks;
- socio-economically, the research established that, those groups of the community that were in the low socio-economic group, were more affected by inundation and suffered more losses
- the research established that the livelihoods profile of the affected community was weak as household economy and food security index were all very low and were defined by total reliance on rain-fed subsistence farming
- the study further established that the flood risk governance in Zimbabwe was weak in that it was largely informed by the Civil Protection Act, Act 10:06 of 1996 which promoted disaster response as opposed to flood risk prevention and mitigation

KEYWORDS

Vulnerability; Resilience; Tangible and intangible; Food security index; Livelihoods

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I NVESTIGATION OF CHALLENGES IN COORDINATING
FLOOD RESPONSE ACTIVITIES IN OSHAKATI TOWN
COUNCIL: NAMIBIA

ABSTRACT

The study aim was to investigate Oshakati Town Council disaster management strategies so as to recommend possible improvements in coordinating flood disaster response. The study targeted the Oshakati town council employees and flood victims affected from 2008 to 2011. Data was collected through in-depth interviews using unstructured interview guides and all interviews were conducted face-to-face. Furthermore, desk research was used to pin down the historic mechanisms of addressing flood phenomenon. The study found out that Oshakati town council has some coordination strategies in place for flood response activities since 2008. These include both structural and non-structural strategies. The Structure strategies consists of Modification of Cuvelai Basin; Floodplain restoration; Reopening culverts; Drainage Systems: Sewers and drains, while Non-Structural strategies include Flood awareness program; Communication Channels; Land planning and Preparedness. With regard to the identification of challenges of coordinating flood response activities in Oshakati town, the study found out that the council is faced by a magnitude of challenges. The study revealed some aspects that the council has to look at to improve effective response services during flooding without delay. These challenging aspects were Lack of Disaster Funding for equipments and training; Increasing vulnerability to flood risks; Increase of informal settlement and rapid urbanization where people settle in unserviced land and limit appropriate coordination of flood response; Poor drainage system that uses combined drainage systems which becomes a challenging element in coordinating flood response activities because combined sewer overflows using pipe; Lack of flood preparedness which hinders a timely warning systems and stakeholder involvement; lack of local capacity; Poor quality of historic record; Lack of community involvement; Lack of application of building codes where infrastructure is illegal and not flood proofed; Flood insurance does not exist; Poor land planning and Community based approach were also identified as challenges in coordinating flood response activities. Therefore, the outcomes of the study provided evidence that there are gaps in flood coordination and response in Oshakati town council. Those gaps indentified are ranging from structural and non-structural responsive mechanisms. To this effect; the study recommended that the town council (local government), regional and national government as well as all key stockholders follow the community based approach as the best practical means where various community groups, national, international organizations and government departments working together at a community level can create awareness, share information and build resilience.

KEYWORDS

Flood response; Flood preparedness; Community based approach; Informal settlements; Vulnerability; Policy

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ANALYSING THE VULNERABILITIES AND CAPACITIES OF RURAL WOMEN TO DROUGHT IN MAZVIHWA, ZVSHAVANE DISTRICT, ZIMBABWE

ABSTRACT

The current unpredictable rainfall patterns and projections on climate change have raised concern that drought might become a frequent and severe threat to the majority of Zimbabweans (i.e.70%) whose livelihoods are based on rain fed agriculture. The study analyses the vulnerabilities and capacities of rural women to drought in Mazvihwa. The objectives of the study were to identify and analyse factors that expose or exacerbate the vulnerability of rural women to drought, to identify and analyse the sustainability of their coping strategies and to analyse the role of institutions in mitigating drought impacts on their lives. The study combined qualitative and quantitative research designs that entailed, field observations, questionnaires, the review of literature and historical records facilitated the success of this study. The study revealed that various factors expose and exacerbate the vulnerability of rural women to the impacts of drought. Low and erratic rainfall, infertile soils, lack of alternative livelihood options hamper the capacity of rural woman in mitigating the effects of drought. Apart from over-reliance on rain-fed agriculture, lack of land and valuable property ownership, looking after many dependants, low levels of education, unreliable sources of water and the lack of decision making power were identified to be some of the factors contributing to the vulnerability of rural women in Mazvihwa to drought. Despite the vulnerabilities surrounding them, women in this area are not passive victims of drought. They have developed and adopted drought coping strategies such as purchasing food stuffs from neighbouring communities and stocking it for consumption in dry periods; selling or barter trading their small livestock for grain; influencing the cultivation of drought resistant crop varieties, skipping meals and reducing meal portions so as to stretch their food stocks and initiating small gardens to supplement their harvests. These strategies have been put in place to enhance their capacities against drought. It was discovered that various institutions are at play in improving the livelihoods of rural women in Mazvihwa. These institutions include NGOs, the government, religious organisations, stokvels and AGRITEX officers. Key among the recommendations that were proposed to improve the livelihoods of women against drought were; water supply interventions for boosting irrigation activities, the inclusion of women in programme implementation and drought mitigation planning; encouraging diversified livelihoods, the establishment and promotion of drought buffers and social networks. Further recommendations were to improve women's awareness on their land rights and to improve funding of the Civil Protection Unit and other important agencies is also essential in mitigating drought impacts on rural women.

KEYWORDS

Drought; Mitigation; Vulnerability; Coping Strategies

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IMPACT OF POVERTY ON HIV/AIDS INFECTED AND AFFECTED PEOPLE IN MADIPELESA VILLAGE, NORTH WEST

ABSTRACT

According to the National Disaster Management Framework of 2005, “Sections 15 and 20(2), highlights the encouragement of a broad-based culture of risk avoidance, the promotion of education and training throughout the Republic, and the promotion of research into all aspects of disaster risk management”. Although government and NGOs have embarked on projects to eradicate poverty, the battle is far from over, as people in disadvantaged communities continue to live below the poverty line, while issues of HIV/AIDS intensify the situation in poorer households. As such, this study sought to determine the impact of poverty on HIV/AIDS-infected and -affected people in Madipelesa village, through the pursuit of objectives set to determine and investigate the number of households affected by poverty; household income level; number of people with access to medical services; number of child-headed households; level of awareness about HIV/AIDS and other illness from which the community is suffering from. An environment characterised by poverty and gender inequality has led to lack of access to health information and services, low education and skills, gender-based violence, and the migration of people from rural communities to cities in search of economic opportunities. As a result, the community is suffering the consequences of risky sexual behaviours emerging from this toxic environment, which may have an adverse impact on overall health and in turn perpetuate the cycle of poverty. The study also unpacked the Sustainable Livelihood Framework, which demonstrates how people function in the context of vulnerability. Moreover, the impact of poverty on those infected and affected by HIV/AIDS is felt most intensely by those who are less advantaged, as they are pushed further into the cycle of poverty, with the associated breaking down of family structures, food pressures within households, lack of education, and the phenomenon of orphaned children being forced to drop out of school to care for their younger siblings. While the study does acknowledge the progress being made in terms of addressing poverty in Madipelesa, there is still much work to be done in the effort to secure a better life for all inhabitants. The implementation of the recommendations emanating from this study will assist in integrating disaster risk reduction into projects, mobilising vulnerable communities, and empowering women to be more resilient to the impact of poverty and the associated pressures.

KEYWORDS

HIV/AIDS; Poverty; Sustainable livelihoods; Food security; Women; Resilient; Disaster risk reduction

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ZAMBEZI RIVER -SEA ROUTE FOR THE SADC REGION: A STUDY ON HOW TO EXTEND NAVIGATION ON THE ZAMBEZI RIVER

ABSTRACT

The study investigated the possibility of expanding commercial navigation by fact and by statute on the Zambezi River. The Zambezi is navigable from the sea to Cabora Bassa. Continuous navigation is not possible beyond Cabora Bassa to Kariba; and beyond Kariba to Victoria Falls due to existence of geomorphic obstructions and poor accountability, regulation and control of the use of surplus basin water balance. This research defined technological means of overcoming these physical obstacles and explained how the water levels necessary for improving its navigability rating can be maintained throughout the year by implementation of a water resource management strategy which ensures effective regulation and control of the surplus basin water which is currently the cause of downstream flooding. The focus was on tracing the route followed by the river from Kazungula to the sea byway of satellite images and counting the different types of obstructive geomorphic feature sand manmade impoundments along it in order to establish whether methods of civil engineering and marine technology could not be used to improve the channel platform of the river. The study recognized the theoretical framework for the determination of basin water balance that is hereby stated as:- the difference between the sum of long term mean annual rainfall , local run off, ground water and inflow minus evapo-transpiration, groundwater, coastal and Zambezi outflows. Satellite picture were used in presenting geomorphic features and manmade impoundments and the method of geographical interpretation of aerial photographs was used in the analysis. The major findings and recommendation of the study was a call for the development of additional hydro infrastructure to facilitate commercial navigation and development of an effective water management strategy that balances technological issues with the requirements of environmental sustainability by a process of dialogue amongst all the major parties involved i.e. the private sector, civil society, governments, affected communities, scientists and international financial institutions. The study was conducted over a four year period between 2009 and 2013.

KEYWORDS

Channels, platforms, dykes, gates, groynes, dykes, locks, jetties

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**COPING CAPACITY AT THABA-TSEKA MOUNTAIN COMMUNITY
DURING SNOWFALL**

ABSTRACT

Lesotho also known as the ‘mountain kingdom’ has a high altitude meaning that the Kingdom experiences some of the lowest temperatures in southern Africa, particularly along the mountain ridges and plateaus. This places the Thaba-Tseka community in a high-risk area regarding snow as a hazard. Most of the people in this part of the country experience the highest levels of poverty. There is high reliance on farming activities as the main source of income. The fact that most people depend mainly on the natural resource base make them more vulnerable to snow. Snow falls almost annually in Thaba-Tseka and it causes impacts on crops and kills livestock; at the same time it is associated with human discomfort and health issues. Data was collected through semi-structured interviews of the key informants, household questionnaires, observation and literature review. Most people in the Thaba-Tseka district have developed risk-coping strategies which are based on their indigenous knowledge, including covering themselves with a traditional blanket (*khobo*). Men put on woollen hats that cover their faces, only exposing the eyes and the mouth, the use of paraffin heaters for those who can afford the cost of paraffin and the migration of men and the productive age group to lowlands and neighbouring countries. Recommendations proposed, are the designing of sustainable interventions for a snow-prone area, especially those that boost household coping capacity, such as institutional capacity in sustainable building and resilience and the support these offer to the chosen community so as to mitigate the impact of the hazard. It also assesses the capacity of the local institutions in dealing with the hazard.

KEYWORDS

Vulnerability; Coping capacity; Disaster risk reduction; Snow; Resilience; Livelihood assets

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COPING STRATEGIES TO THE IMPACTS OF CHOLERA EPIDEMIC IN ZIMBABWE FROM 2008 TO 2009: THE CASE OF BUDIRO HIGH DENSITY SUBURB, CITY OF HARARE

ABSTRACT

This study sought to determine the coping strategies to the impacts of cholera epidemic in Zimbabwe from 2008 to 2009, focusing mainly on the Budiro community, which is located in the city of Harare. The cholera epidemic under study affected the whole country of Zimbabwe and it took one year to be controlled. Although concerted efforts were made to mobilize support from various international and notational partners, a total of 98592 people were infected and 4288 died. This resulted in a national Case Fatality Rate (CFR) of 1.7% but for Budiro, it was 2.3%. A total of 206 people died in Budiro alone and this motivated the researcher to find out how the residents managed to cope with the negative impacts of such a devastating nationwide epidemic. The findings from the study were that by the time of the cholera outbreak in Budiro, safe clean water was no longer available to the residents. Cholera came at a time when Zimbabwe was on its knees socio-economically and politically. Similarly, Harare City Council was facing several challenges that compromised its capacity to maintain and replace water and sanitation infrastructure. Sewerage systems had collapsed in most parts of the suburb and toilets were no longer functional, forcing most of the residents to defecate in open spaces. Faecal contamination of the alternative water sources contributed to the high death rate in Budiro. The study made several recommendations, which were categorized into immediate, short term and long term in order to guide prioritization and implementation. More resources should be allocated to ensuring that sewerage and water infrastructure is fully functional. Council could start with smaller but critical tasks such as clearing of drainage systems before the onset of the rain season. More importantly, cholera health education should be amplified with the assistance of humanitarian agencies that have the means for such programmes. Above all, active participation of citizens in civic issues should be mainstreamed into programmes spearheaded by Council and other stakeholders in the water and sanitation sector. In the long term, Zimbabwe should sort out its socio-economic and political mess so that dysfunctional public and social services are restored to the benefit of the entire population.

KEYWORDS

Water and Sanitation; Cholera; Coping strategies; Recovery; Response; Resilience

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A FRAMEWORK FOR DISASTER MANAGEMENT PLANS FOR INCLUSION IN THE INTEGRATED DEVELOPMENT PLAN OF MUNICIPALITIES IN SOUTH AFRICA

ABSTRACT

Disaster Management studies in South Africa has gone through significant changes over the past fifteen years. A tour to Europe, during 1990, by the Disaster Management Institute of Southern Africa (formerly the Civil Defence Association of South Africa) resulted in the disaster management modules of the United Nations Disaster Relief Organisation (UNDRO) being made available to practitioners in South Africa. The introduction of the UNDRO disaster management modules, after the tour to Europe has resulted in an emphasis change in Disaster Management legislation (formerly called Civil Defence) from pre-disaster preparedness and post-disaster reaction to a focus on mitigation and sustainable development. The United Nations publications, *Living with Risk: A global review of disaster reduction initiatives* and *Reducing Disaster Risk: A challenge for development*, has since their publication in 2002 and 2004 respectively, influenced disaster management practitioners to concentrate on reducing disaster risks, in order to create a safe environment to live in for South Africans. Disaster risk reduction, addressed by the two United Nations publications mentioned above, considers the impact of current development decisions on future generations while addressing disaster risks faced by communities. The United Nations, established the International Strategy for Disaster Reduction (ISDR) at the beginning of the 2000 calendar year. This was preceded by the International Decade for Natural Disaster Reduction (IDNDR) and followed by various summits including the World Summit on Sustainable Development held in Johannesburg during 2002. The end of the IDNDR led to the International Strategy for Disaster Reduction (ISDR) as a focus for disaster management risk reduction. Together with the international trends in disaster management, the South African Government passed legislation ensuring that all communities and stakeholders were able to share in developing a disaster free environment. The Municipal Systems Act, 32 of 2000, provides a framework for participation by the stakeholders of a municipality in the sustainable development of that municipality through the development of an integrated development plan. The Municipal Systems Act, 32 of 2000 stipulates the inclusion of disaster management plans as a core component of an integrated development plan, but provides no guidelines for the development of disaster management plans. The research aim is to develop a standard manner of presenting the municipal disaster management plans to stakeholders. The disaster management plans should be readable because of the South African illiterate and semi-literate levels. A complete set of disaster management plans is a record of all policies and actions to be taken to mitigate, prepare for or respond to a disaster or impending disaster. Disaster management plans, that are included in an integrated development plan of a municipality, should provide sufficient detail for discussion and adoption by stakeholders, who participate in the approval process of that integrated development plan. The contribution of the study is to provide a framework that can be utilised to report municipal disaster management plans to its stakeholders.

KEYWORDS

Disaster risk reduction and management curriculum; platforms; statutes and publications; South African municipalities

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CHILDREN'S PARTICIPATION IN NON-GOVERNMENTAL ORGANIZATIONS (NGOs) OVC MITIGATION PROGRAMMES IN WARD 18, MAGWEGWE DISTRICT, BULAWAYO METROPOLITAN, ZIMBABWE

ABSTRACT

The study was an investigation into children's participation in Non-governmental Organizations (NGOs) Orphans and Vulnerable Children (OVC), programmes in ward 18 of Magwegwe District. According to the Zimbabwe National Action Plan (NAP) for OVC, children have the right to participate in all matters that affect them including national policies. The problem was investigated qualitatively using the methodologies of document analysis, focus group discussion and interviews for triangulation purposes. The findings and results confirmed the hypothesis adopted in the study that in spite of the guidelines and policy frameworks about involving children in all levels of programme planning, NGOs still compromise child participation in programmes meant to enhance their welfare and wellbeing. The study revealed the levels of understanding of child participation from the NGOs, the community leadership and the children themselves which can be used to further help and guide implementation of the NAP for OVC in a way that will enhance children's programme ownership and subsequently benefit. Recommendations to address the situation were suggested for the consideration of the government for policy changes and enforcement, NGOs for guided programming and adherence to national policies, the community leadership and the children. Government should empower child protection committees, NGOs to improve on community leadership and children consultations and communities to be trained on children's rights.

KEYWORDS

Children; Non-governmental organisations; Mitigation; Participation; Protection; Rights

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AN INVESTIGATION INTO THE DISASTER RISK REDUCTION (DRR) EFFORTS IN GUTU DISTRICT (ZIMBABWE): A FOCUS ON DROUGHT EARLY WARNING SYSTEMS

ABSTRACT

The dynamic nature of vulnerability coupled with increasing volatility of climatic and environmental conditions, characterised by more frequent and extreme hazards, disaster management practitioners, decision makers and communities, especially those at risk, need to take action to protect vulnerable people and environments (UN/ISDR, 2002; 2006a; 2006b). In recent years, poor communities have had to bear the brunt of the hazards. Gutu District in Masvingo Province of Zimbabwe, which is the study area of this thesis, has in recent times experienced more frequent droughts and floods. This research aimed to determine the Disaster Risk Reduction activities, particularly Early Warning, existing and being implemented in Gutu District. From the findings, the research then ascertained if the utilisation of more and varied EW can improve DRR efforts in Gutu. The research focused on a rural and inherently drought-prone district. In addition to review of existing literature, the research also collected primary data. This involved use of Participatory Rural Appraisal techniques such as Focus Group Discussions, In-depth interviews and simple observations. These techniques enabled the researcher to get insightful explanations into the prevailing situation, trends, processes and decisions that occur within the context of the study. The various data collection methods and multiple respondents enabled triangulation of the findings. Merging the literature review and field research with the thesis proposition that more DRR efforts, especially EW, can significantly reduce disaster risk and impacts, it was found that there are DRR and EW established and ongoing activities in Gutu. However, these are not adequate and more DRR initiatives, including EWs are, needed to significantly reduce the vulnerability of the communities to hazards. The study established that the drought hazard remains the biggest hazard threatening the lives and livelihoods of the Gutu community. Other notable hazards include the HIV and AIDS pandemic, flooding which sometimes alternate with drought, diarrhoeal and water-borne diseases, crop and livestock diseases and environmental degradation. There are also marked challenges in the quest to reduce community vulnerability. These need to be addressed while, at the same time, DRR efforts can be scaled up. EWs are one of the key DRR strategies the community felt could be effectively and efficiently utilised in the district. In line with this, the study offers recommendations for DRR and Early Warnings for policy and practice as well as future research.

KEYWORDS

Hazard; Risk; Vulnerability; Disaster; Disaster Preparedness; Disaster Risk Reduction; Drought; Drought Early Warning Systems

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VULNERABILITY ASSESSMENT OF AGRICULTURAL DROUGHT HAZARD: A CASE OF KOTI-SE-PHOLA COMMUNITY COUNCIL, THABANA MORENA, MAFETENG DISTRICT IN LESOTHO

ABSTRACT

Over 80% of Lesotho populations' livelihood is dependent on rain-fed agriculture, and during dry periods communities suffer most from the drought impacts. This study's main focus was to assess vulnerability to agricultural drought at Koti-Se-Phola Community Council (CC) in order to determine the conditions of vulnerability and who and what is exposed to drought, to examine coping mechanisms used against drought and to provide relevant decision makers with information on drought for effective interventions. The study followed both quantitative and qualitative methodology where 5 villages were sampled in the study. The selected sample comprised of both working and non-working respondents. The total sample size considered in this study was 102. Questionnaires were distributed to household heads. An interview was held with agriculture official at Agriculture Project at Ha Bofihla for an expert opinion and to validate responses from household members. Data was entered in Microsoft Excel for analysis and SPSSV16 for reliability testing, the Cronbach alpha coefficient was found to be 0.764. From the selected drought indicators, a composite vulnerability index was established. Main findings of this study were that this community council was found to be vulnerable to drought with emerging issues such as high unemployment, elderly residents whose alternative income is old-age pension at M450 a month. Government responses to drought were found to be inadequate. Very few animals especially cows were used for draught power in ploughing. However, many have devised means to cope with drought, through stockpiling of maize stalks, feeding of *lekhale* and *torofeiye* as well as chicken droppings to cows during droughts. Socially, some members have been sent away for job seeking and others picked up piece jobs as shepherds to reduce food consumption and pressures in the families. The general Agricultural Vulnerability Index was 0.4874. Suggestions were made by the respondents that employment-generating and poverty alleviation projects be put in place such as, the installation of irrigation systems at Makhalleng River and agricultural conservation projects to harness soil erosion. Given the current drought vulnerability situation, the researcher strongly recommends diversified livelihoods such as increased agricultural conservation where unskilled community members would earn a living in dry spells.

KEYWORDS

Agricultural drought; Vulnerability; Disaster; Coping capacity

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AN INVESTIGATION INTO THE IMPACT OF PROLONGED FOOD AID PROGRAMMES ON VULNERABLE POPULATIONS IN ZIMBABWE. A CASE STUDY OF FOOD AID PROGRAMMING IN WARDS 9 AND 10 OF MATOBO DISTRICT IN SOUTH WESTERN

ZIMBABWE

ABSTRACT

The study was an investigation into the impact of prolonged food aid interventions on households in the Matobo community. The problem was investigated qualitatively using the methodologies of document analysis, focus group discussion, and interviews for triangulation. The findings and results confirmed the theoretical thesis adopted in the study that the persistent vulnerability, poverty and dependency in the Matobo community are a direct result of protracted food aid programming. The study discovered deep seated and strained political, economic, social, technological, legal and environmental conditions that have become a threat to achieving improved food security status in the district. In other words, the excessive food aid has tended to paralyse the productive capacities of the communities trapping them in increasing vulnerability, prolonged dependency and ultimately, poverty and outmigration. Consequently, the district is inundated with donors in competition against each other for both the food aid and the 'hungry'. While the programmes are meant to provide temporary insulation against hunger and starvation, their prolonged implementation has modelled a new mindset wholly dependent on food aid, to the extent that food aid is now a way of life to be proud of and commonly, the communities would fight to be included on food aid registers even if they do not qualify, as well as defend it against other alternatives. Given the wholesale entrenchment and contextualization of food aid, the people now firmly believe that they are vulnerable, poor, fragile, exposed and incapacitated. Little by little the food aid programmes rolled out year after year continue the exposure to poverty and dependency. Recommendations to improve the situation embraced mainstream agricultural activities mostly restocking and irrigation, and to a less extent mining and tourism. There is no doubt that more effective, lasting initiatives are called for if the communal community in Zimbabwe, and the Matobo district in particular, is to escape the food aid trap.

KEYWORDS

Food aid; Vulnerability; Poverty; Dependency syndrome; Food security

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THE IMPACT OF SHACK FIRES ON THE PEOPLE OF J.B
MAFORA INFORMAL SETTLEMENT, BLOEMFONTEIN, SOUTH
AFRICA

ABSTRACT

This study examined the issue of informal settlement fires in J.B. Mafora informal settlement of Bloemfontein in the Free State, a province of South Africa. The study aims to identify, address and understand the issues and the unique dynamics involved in this type of fires at the study area. The study also illuminates the main contextual factors that contribute to the perpetuation of J.B Mafora informal settlement fires that relates to the risk and vulnerability of the people of J.B Mafora. A qualitative research approach is followed and a triangulation of data collection methods is used, combined with a relatively broad literature study to capture the complexity of the related issues. The contextual focus includes the macro-economic factors that contribute to the environment in which informal settlement fires occur; developmental, economic, political and social aspects and the related experience of poverty, urbanization and unemployment. Furthermore, the study attempts to show that a relationship exists between disaster management and poorer communities. Key findings suggest that local government in the demarcated study area has great influence on how the problem of informal settlement fires is addressed from national to local municipality level. This further relates to the view taken in the thesis that informal settlement fires are a social issue and not only an operational issue. Therefore the broad social, economic and political context and history are included; it also shows that the problem of informal settlement fires is part of a greater developmental context and related processes. A variety of vulnerability theories were chosen as a useful framework for analysis in this study and to approach issues of risk and vulnerability on a community level.

KEYWORDS

Informal settlements, Fire, Risk, Vulnerability and Public awareness

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HIV/AIDS VULNERABILITY OF STUDENTS AT THE AT THE
NATIONAL UNIVERSITY OF LESOTHO

ABSTRACT

The increasing number of young people around the world, between the ages of 15 and 49 with a high HIV/AIDS prevalence and incidence rate, has warranted attention from the research arena around the world. However, HIV/AIDS is a serious problem in Lesotho with an adult HIV prevalence rate of 23.2%. In 2005, the number of students at the National University of Lesotho was 5,197 students with 29% infection rate. This dissertation estimates the HIV/AIDS vulnerability of students using the Pressure and Release (PAR) model and Vulnerability Pathway model to determine the progression of vulnerability approach. In order to assess the vulnerability of the students, a literature study was undertaken to identify factors that contribute to HIV/AIDS vulnerability. This was later supplemented by an observation method, questionnaires and interviews to establish the factors that lead to the HIV/AIDS vulnerability of the students at the National University of Lesotho. Through this, it is clear level of students' vulnerability to HIV/AIDS before and after infection is high within NUL. It is ascribed to the deep inherent culture surrounding sexual intercourse in Lesotho, which influences students' behaviour and sexual decisions. Although, the behaviour of the students is important in determining susceptibility of students, the university and government commitments determine their coping capacity of the students and subsequently their vulnerability. The partnership of Lesotho government and the university should be established and intensify training of educators, social workers, and establish community based organisations which should address cultural aspects that leads to negative attitude towards HIV/AIDS. Lesotho is ranked the third highest affected country in the world, with a population decrease from approximately 2.2 million to approximately 1.8 million people from 2003 to 2006 due to HIV/AIDS. Young people in the age cohort 18 – 24 years are most affected and therefore warranting a study at the most significant University in Lesotho.

KEYWORDS

HIV/AIDS; Higher education; Vulnerability; Student behaviour

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IMPACT OF LIGHTNING ON THE PERI-URBAN AND RURAL COMMUNITIES OF KWAZULU-NATAL – A CASE STUDY

ABSTRACT

In KZN lightning kills many people annually and it is questioned as to what the exact circumstances are surrounding these incidents. Hence a case study was conducted in KwaZulu-Natal on fatalities that resulted from lightning strikes, for the period January 2012 to March 2013. A qualitative approach was followed, informed and guided by the post-modernist paradigm with an underlying principle to bring about change in the human beings involved. This study was focusing on peri-urban and rural people in KwaZulu-Natal affected by lightning strikes with emphasis on the fatal cases recorded. The research was achieved broadly spoken by a field survey to confirm the information gathered *via* the media and institutional entities, where after it was captured and analyzed. Some 34 cases were considered but only 22 were confirmed through the survey. The survey confirmed that the poor rural communities were most at risk because of their involvement in agriculture and their unsafe housing structures. Although the incidents were spread equally between indoor and outdoor locations, more fatalities (80.7%) occurred indoors and in close proximity to the home. This resulted in more females (70%) being killed. More fatal incidents were group-related and it was mostly young people that were killed; with 60% of those killed being less than twenty years of age. However more male fatalities occurred out of doors than indoors. All these incidents by and large took place in the period December to February (88.36%), mostly over weekends and Mondays that totalled (68.18%), in the afternoon (63.63%) between 14:00 and 18:00 hours South African Standard Time. The researcher concluded that the victims had knowledge of the risks involved with lightning. For the reason that, although only a small number of them indicated that they had noticed warning signs, they endeavoured to reach the safety of their homes. This is reflected by the fact that 80.7% of the victims were killed within a hundred metres of their homes. It is thus believed that the people will benefit from training on how to improve their safety through risk reduction efforts, like awareness programmes of how to behave during a thunderstorm, the instillation of lightning conductors, and the provision of safety structures, such as shipping containers placed strategically.

KEYWORDS

Lightning; Risk; Agriculture

SUPERVISOR

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FIRE RISK ASSESSMENT IN THE ROBURNIA COMMERCIAL FORESTRY PLANTATION, MPUMALANGA PROVINCE, SOUTH AFRICA

ABSTRACT

The aim of this study was to assess the fire risk at Roburnia Plantation in order to determine factors that contribute to the high risk levels and the extent of fire damage. Both epistemological and scientific research designs were used in order to assess the level of fire risk at Roburnia Plantation. The quantitative approach was used to collect data on the factors that influence the occurrence of fire risk, while the qualitative approach was used to collect data on perceptions of the fire risk level and prevention measures. A questionnaire was used to collect the primary data, while the secondary data was collected from online databases and through literature reviews. Climatic and fire danger index (FDI) data sets were gathered from the study area, which were downloaded from the Vital Weather System. Data on the number of hectares burnt, number of fires, and fire extinguishing costs were downloaded from the Disaster Management System (DMS) at the Roburnia Plantation. A purposive sampling method was followed in order to collect data and information from experienced people. Data on fire risk assessment and perceptions of fire prevention measures were collected through interviewing foresters (5) and fire fighter managers (3) at Roburnia Plantation. Officials dealing with commercial forest management were interviewed at the Department of Agriculture, Fisheries and Forestry (7), Working on Fire in Mpumalanga and Limpopo (1), and NCT Forestry Cooperation Limited (2). A transect line (1km) was followed in order to collect fuel load data per square meter, measured every 100m along the transect line. The amount of fuel load was measured using an electronic kitchen measuring scale. The collected data sets were captured in the Ms Excel 2007, and then analysed using descriptive and inferential statistics. Regression analysis, analysis of variance (anova: single factor) and a t-test were applied. The LvFDI model and risk equations were employed in order to analyse the extent of fire risk at Roburnia Plantation. Results of this study show that rainfall and relative humidity have an overriding influence on the rate of the FDI. This is due to the fact that high moisture content in the fuel has the potential to stop a fire, whilst low moisture content in the fuel influence efficient burning. The FDI values are low during summer, mainly due to a high amount of moisture in the fuel, but become high during winter, mainly due to low moisture content in the fuel. This study found a positive regression between the availability of rainfall and the rate of FDI at Roburnia Plantation ($R^2 = 0.1$). The average daily FDI was high when the average daily amount of rainfall was at 0mm, but decreased when the amount of rainfall increased above that level. There was a positive regression between the availability of humidity and the rate of FDI at Roburnia Plantation ($R^2 = 0.7$). The FDI was high (above 45) when the relative humidity was low (less than 30%), but decreased when the relative humidity increased to more than 30%. Analysis of this study found a weak regression between temperature and the rate of FDI at Roburnia Plantation ($R^2 = 0.000$). This suggested that increase in temperature had an insignificant effect on the rate of FDI. This was due to the fact that very dangerous FDI values were predicted even when the temperature was less than one degree Celsius. This study also found a weak regression between the velocity of wind and rate of FDI at Roburnia Plantation ($R^2 = 0.005$), because very dangerous FDI values were predicted even when the wind velocity was low, at 0 km/h. The application of Wisner and

UNISDR risk equations shows that the Roburnia Plantation is highly exposed to fire risks, followed by harsh weather conditions and least of all by tree diseases, pests and pathogens. This study found that more than 70% of fires at Roburnia Plantation were caused by arson. Species mostly affected by fires were the gum trees and pines. The mean (\pm s.d.) number of fires, hectares burnt and costs for extinguishing fires at Roburnia Plantation between 2007 and 2011 were 165.40 ± 56.19 , 126.45 ± 110.81 and $R471\ 903.01 \pm R256\ 330.32$ respectively. The findings of this study therefore implies that management at Roburnia Plantation needs to implement fire prevention plans effectively in order to reduce the number of fires, hectares burnt and costs incurred due to extinguishing fires.

KEYWORDS

Plantation forests, disaster risk, fire, livelihoods, climate, Roburnia Plantation

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AN INVESTIGATION INTO THE SOCIO-ECONOMIC IMPACTS OF THE CHOLERA OUTBREAK OF 2008–2009 IN ZIMBABWE: A CASE STUDY OF RIMUKA HIGH DENSITY SUBURB, KADOMA DISTRICT

ABSTRACT

The aim of the study was to investigate the socio-economic impacts of the cholera outbreak of 2008–2009 in Kadoma District (specifically Rimuka high-density suburb). The key objectives of this research were to examine the social and economic impacts of the cholera outbreak in order to make recommendations for improving the health and the socio-economic well-being of the affected families, to showcase strategies that strengthen the community's coping mechanisms and enable the affected and other at risk populations to increase their resilience to future cholera outbreaks. The methodology for the study was both qualitative and quantitative as it included the use of questionnaires, Focus Group Discussions (FGDs) and Key Informant Interviews (KII). It will be useful for the general populace of Zimbabwe, Kadoma community members, Civil Society, Non-Governmental Organizations (NGOs), Faith Based Organizations (FBOs), Community Based Organizations (CBOs), Governments and others players responsible for community development programmes because it showcases measures that can be taken to prevent a cholera outbreak of such a magnitude. Key areas that will be presented in this study are appropriate cholera planning, preparedness, mitigation and response interventions that reduce the socio-economic burden on the affected populations. The study established that the outbreak affected the community members of Kadoma, and specifically Rimuka, in negative and positive manners, although the negative impacts far outweighed the positive. The clear link from relief to development was seen, as there were improved health, water, sanitation and hygiene service delivery levels after the outbreak, a situation that has ensured the non-resurgence of the outbreak four years after its eradication. Main factors that promoted the spread of the disease were poor water and sanitation infrastructure, a non performing economy and a poor health delivery system. In order to prevent a huge socio-economic impact on the at risk population, the study realized that there was a need to plan in accordance with the disaster management cycle focusing on key activities such as awareness raising during the prevention phase, contingency planning during the preparedness phase, establishment of cholera treatment centres during the mitigation phase, and an established treatment system during the response phase among a host of other interventions.

KEYWORDS

Cholera, Socio-economic, Resilience

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AN ANALYSIS OF THE POSSIBLE ROOT CAUSES OF HOUSING SHORTAGES IN TSHOVANI HIGH DENSITY SUBURB, CHIREDDI, ZIMBABWE

ABSTRACT

“After HIV and Aids, the biggest threat to sustainable development in Africa is rapid and chaotic urbanisation, because it is a recipe for disaster for increased tension and pressure”, United Nation’s head of housing agency – Anna Tibaijuka on February 2010 speaking in a conference on the future cities of London (MacLellan, 2010: 17). It is a sad story that urbanisation that for centuries represented better living standards and economic growth is now perceived as a threat and likened to an incurable disease, HIV/AIDS. When people migrate to urban cities in search of greener pastures, they deserve to find better and affordable housing, compounding factors such as poverty and poor sources of income have accelerated the issue of housing to be a major concern in towns and cities and this is what justifies this research. This paper sought to determine the possible root causes of housing shortages in Tshovani high density residential suburb in Chiredzi Town, in order to establish the extent to which responsible authorities, stakeholders and interested groups will help to alleviate the crisis. A conceptual framework (the PAR model); literature review; complemented by interviews with the Director of Housing and the Environmental Health Officer and lastly five hundred questionnaires distributed to respondents in Tshovani high density suburb was conducted as part of the quantitative and qualitative research methods. The findings in this research showed that overpopulation and compounding factors of poverty have been determinants to causing housing shortages and has eventually led to the creation of undesirable living conditions. The study also showed that with the adaptation of good housing policies by the Council integrating and collaborating with the government and the private sector can assist in alleviating the housing problems in Tshovani high density suburb.

KEYWORDS

Urbanisation, Migration, Diseases and Root causes

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THE IMPACT OF POVERTY REDUCTION PROGRAMMES IN REDUCING AND PREVENTING DISASTER RISK THE CASE OF MANGWE DISTRICT, ZIMBABWE

ABSTRACT

This study sought to assess and evaluate the impact of poverty reduction programmes in reducing and preventing disaster risk of Mangwe communities in Zimbabwe. The main objectives of the study were to; determine through individual questionnaires the development projects that have been implemented and evaluate their impact on disaster risk reduction initiatives and to determine the impact that the development programmes had on resilience and the social-economic lives of individuals and the community at large. Survey and participatory interviewing methods involving 150 participants were employed to gain insights from the implemented development projects. The following conclusions emerging from the study contribute to the emerging disaster risk reduction, disaster reliance body of knowledge. Firstly, females formed the highest number of direct or indirect project beneficiaries, most of whom have been empowered through participating in development programmes. Secondly, most households in the district still remained entrenched in the cycle of poverty and badly exposed to all forms of hazards despite scores of developmental projects having been implemented in the area. Thirdly, the education levels in the district were still very low and they greatly influence individual, household income levels, thus forcing them to live by one dollar per day. Fourthly, community participation in project identification and designing is yet to be achieved, hence the limited success of such projects. The study recommends that; small and upcoming traders should be granted access to basic education and entrepreneurial training to increase their capacity; there is need to establish banking facilities at community level which will encourage community members to receive money from their relatives through formal channels while at the same time encouraging saving and also a need to diversify development projects, such as education, governance, human rights, water, sanitation, health and infrastructure development rather than pool resources to agricultural related projects that focus on food security. Projects need to be evenly spread in all wards so as to avoid over subscribing the same wards; at the same time encouraging communities to design schemes that seek to preserve and improve their economic, social conditions and cultural mechanisms. Programmes should not be prescribed for them.

KEYWORDS

Finance; Food security; Poverty reduction; Development projects; Capacity building; Early warning

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AN INVESTIGATION INTO THE PREVALENT TYPES OF CONFLICTS, CONFLICT INDICATORS, THE ROLE PLAYED BY THESE INDICATORS AND HOW CONFLICT UNDERMINES THE MANAGEMENT OF DISASTERS IN AFRICA

ABSTRACT

This study sort to identify the prevalent types of conflict and causes, conflict indicators, the role played by these indicators and how conflict undermines Disaster Management activities in Africa. The historical method of data collection was used. Data collected was secondary. Collection involved the researcher visiting various web sites on the internet and various published works, which had information on conflicts in Africa. The study population comprised of 52 African countries. The period covered by the research was January 2007 to April 2009. The results show an identification of the following six types of conflict, armed conflict (divided into major, intermediate and minor), border disputes, food riots, political violence, targeted attacks and inter-communal strife. Nigeria, Sudan, Ethiopia, Somalia, the Democratic Republic of Congo and Kenya were quantitatively identified as high conflict areas in the continent. Armed conflict came out as the high priority conflict type that needed urgent attention. Various types of conflict indicators were identified and their role was explained as that of providing early warning to conflict. Conflict was seen as undermining disaster management activities through retarding, stopping and stalling many developmental processes. The study recommended various ways to deal with conflicts, all directed towards the search for peace and security that requires the mobilization, coordination and cooperation of all states, Non-Governmental Organisations, civil society, community leaders, the community and others to participate in efforts of promoting peace, security and stability in Africa.

KEYWORDS

Conflict; indicators; disaster

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DISASTER RISK MANAGEMENT PERSPECTIVES ON
SEDENTARIZATION OF PASTORALISTS IN GODE ZONE,
ETHIOPIA

ABSTRACT

For centuries pastoralists have survived on livestock and used mobility, as a strategy to navigate the intriguing vagaries of climate variability and arid environments where sedentary life became untenable. Gode Zone (province) of the Somali Regional State of Ethiopia, otherwise known as the Somali Region, hosts a significant population of pastoralists in what is one of the most arid parts of the country. Today the pastoralists in Gode Zone, like elsewhere in the Horn of Africa region face increasing risks of hazards such as drought, disease outbreaks and fires. They also suffer restrictions on their mobility and markets largely because of the geopolitical dynamics of the world today. Governments do not seem to see the impact of restrictions their policies are creating for pastoralists. Instead, they seem to see pastoralism as a development problem that needs to be addressed. The most tempting solution to that development problem among most governments is to settle the pastoralists and turn them into crop farmers or agro-pastoralists – otherwise known as sedentarization of pastoralists. The Government of Ethiopia has pursued this policy for years in Gode Zone and many other parts of the country. This research interrogates the disaster risk management perspectives and implications associated with the sedentarization of pastoralists in Gode Zone. The research ultimately finds out that sedentarization could be worth pursuing as a mitigation measure but not necessarily as a replacement for pastoralism.

KEYWORDS

Disaster risk management; Pastoralism; Sedentarization

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THE IMPACT OF ANTIRETROVIRAL TREATMENT (ART) ON RURAL LIVELIHOODS. THE CASE OF NYANGA RURAL DISTRICT IN ZIMBABWE

ABSTRACT

Agriculture is the backbone and driver of economy for many African countries such as Zimbabwe. In the past decades, the sector was severely hit by the debilitating effects of HIV/AIDS causing alarming levels of food and income insecurity, especially in rural areas. As household food production declined families were forced to adopt harmful coping mechanisms such as reduction in the number of meals, quality and quantity consumed per day, and this impacted negatively on the ability of the sick to participate in income and food production activities. The impact was felt as soon as a member of the household fell ill and his or her ability to work decreased, while living costs increased, such as medical, education and funeral expenses. In other instances people living with HIV/AIDS (PLWHA) lost social networks as the disease took its toll. The government of Zimbabwe established a National AIDS Council to coordinate all HIV/AIDS related activities in the country and above all to lead in the national roll out of free distribution antiretroviral drugs in both urban and rural areas. This had indeed brought hope and relief to thousands of people living with HIV and AIDS as this new intervention greatly reduced mortality and morbidity (World Health Organisation /United Nations Joint AIDS Programme 2010). Much emphasis on the current ART programmes in Zimbabwe was placed on improving accessibility to ART drugs in both urban and rural areas, but little if nothing on the impact of ART on rural livelihoods. This is a huge area that needs to be examined and analysed as it plays a critical role in key issues such as sustainability of free ART programmes and replication of such models countrywide. Given the fact that the ART treatment programme was launched in Nyanga Rural District in 2004, and several hundreds of patients were reached with ART services every month, the research would investigate the impact of ART on livelihoods of rural patients in Nyanga District. Essential issues covered by this research was to examine whether access to ART enabled rural people to engage in productive food and income generation activities sufficient to meet day to day requirements of their families. Ensuring participation of people living with HIV in productive activities such as food and income generation would ultimately lead to more people being able to procure essential medication and drugs on their own rather than waiting for donor funded or limited government programmes. That would ensure access to prevention, treatment, care, and support to everyone who needed it in the long term. This research is expected to contribute to the body of knowledge and inform development workers and government policy makers of the need to adopt holistic and empowering ART interventions in rural areas.

KEYWORDS

HIV/AIDS; Antiretroviral treatment; Agriculture; Sustainable Livelihoods

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DROUGHT COPING STRATEGIES AT MUTASA DISTRICT IN ZIMBABWE

ABSTRACT

Recurring droughts are an endemic feature for agriculture in Zimbabwe, a country whose majority of the population (70%) depends on agricultural based activities as their livelihoods resource. Concern is growing that drought might become more frequent in the region as a result of global warming. If this occurs it will exacerbate problems for vulnerable households, communities and economies. The study reviews coping strategies of the community towards drought, and assesses the capacity of local institutions in dealing with drought. The objectives of the study was to identify and examine coping mechanisms in place by individual households and the community, to identify local institutions involved in drought mitigation, to assess how local institutions have responded to disaster risk reduction and appraise the capacity of local institutions involved in risk reduction. Participatory, consultative and deductive research methods including household surveys, focused group discussions, key informants interviews, observations and review of literature allowed for the collection of empirical, descriptive, and spatial data to provide for the appraisal. The study revealed that households in the district have developed sophisticated (ex-ante) risk-management and (ex-post) risk-coping strategies to cope with food shortages or drought such as reduction of meal portions, sale of labour and use of available resources such as savings. As the situation intensified, recourse was sought in broader social and economic interactions such as sending some members of the family to other relatives, cross border trading, sale of small stock; barter exchange and even begging were established. Finally, sale of productive assets such as large stock, implements and non-productive, but difficult to replace assets, such as valuable roofing material in the form of asbestos sheets occur. The study established that various institutions were involved in drought management in the district, such as government departments, CBOs/NGOs/INGOs, local leadership and the community, social networks that include friends and relatives and some religious organisations. However, not much support had been coming from government institutions as compared to NGOs. Challenges common to both NGOs and Government departments included political interference in day-to-day activities that sometimes derailed implementation of drought risk reduction activities. The existing economic environment had also led to high staff turn-over in most government departments and shortages of inputs and materials required for drought risk reduction. The current global economic crisis exacerbated the situation affecting funding inflows for some NGOs. Key recommendations were to design sustainable interventions for a drought prone area, local and participatory agro ecosystem appraisal is necessary and enhance household coping strategies. A user friendly satellite remote sensing must be designed and vulnerability maps in the early warning systems. Establish civil protection committees at grassroots level is of paramount importance.

KEYWORDS

Drought; Coping capacity; Vulnerability; Livelihoods

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FACTORS INFLUENCING FLOODPLAIN SETTLEMENTS IN FLOOD HAZARD AREAS OF AZALEA IN KWAZULU-NATAL

ABSTRACT

This study examined the factors influencing floodplain settlement in the flood hazards area of Azalea in KwaZulu Natal, South Africa. The study established why people continue to stay in this flood devastated area and what their attitude towards resettlement is. Flood disasters have been claiming many lives and damaging a lot of property in many areas of South Africa, especially in KwaZulu-Natal for quite a long time. For instance, according to the records at the Msunduzi Local Disaster Management Centre, a total of 478 people lost their lives, personal property and community infrastructure (schools, bridges, clinics and shops) worth millions of Rands were damaged in the 1987, 1995 and 2011 floods that inundated Azalea and the Greater Edendale area. The problem is not that rainfall has been increasing in these areas, but the problem lies in the development of floodplains for settlement. It was these alarming figures of lost lives, property damage and people living at risk in floodplains that prompted the undertaking of this study to investigate why people continue to stay in these high flood risk areas such as Azalea? The study took a phenomenological approach to research and employed both quantitative and qualitative research methods. Data was collected using a questionnaire, focus group interviews and key informant interviews. The study established that while some people are compelled by socio-economic and political pressures to continue to stay in floodplains, the majority of floodplain dwellers choose to continue staying there due to perceived benefits such as security of tenure, social and political security, source of livelihood opportunities and economic dependence on the area. Due to these reasons, very few people (9% of the study sample) are interested in resettling to a safer place. It is recommended that besides resettlement, people empowerment and people participation in disaster risk reduction and development issues is of vital importance for the reduction of vulnerability of the people of Azalea. Community members must actively participate in the development planning process of the local municipality.

KEYWORDS

Floodplain settlements, Flood, Disaster risk reduction and Development

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ANALYSING SHORELINE OIL SPILL RESPONSE IN SOUTH AFRICA: THE CASE STUDY OF “MV KIANI SATU”, KNYSNA, 2013

ABSTRACT

The National Department of Environmental Affairs (DEA) is assigned the responsibility to combat oil spill from shipping as mandated by the South African Maritime Safety Act. The level of efficiency in which the DEA is able to protect the environment from the adverse effects of the hydrocarbons (oil) in the marine environment depends on various aspects, such as contingency planning, funding and legislative arrangement. The South Africans’ legal framework for oil spill response aid for complicated relations among responding agencies and loss of response time and extended environmental damage. The study was aimed at establishing the country’s ability to respond to oil spill hazards through identification of the current challenges and enabling capabilities presented in different governmental entities with regards to shoreline oil spill response. The methodology applied in this study focused on using the descriptive survey on a case study of Kiani Satu oil spill incident which occurred in 2013 at Goukamma Marine Protected Area. The case study combined a systematic evaluation of the current local oil spill contingency plan with various main stream interactive processes that influence an efficient shoreline oil spill response. Strategies and actions that successfully enhance oil spill response were identified from the literature. These include notification procedures, the roles and responsibilities of response agencies, claim and compensation techniques. The main findings highlight a poor understanding of oil spill response by South African municipalities; in addition to incompetent shoreline oil spill response agents and agencies, where 70% of the agencies lack proper contingency plans. The oil spill response capability in South Africa is worsened by the lack of emergency oil spill funding and wildlife response plans in a majority of organizations. The proactive actions that could be adopted to improve the South African shoreline oil spill response proficiency are; shoreline oil spill response training, simulation exercises, Memorandum of Agreements (MOAs) between the DEA and other environmental agencies and establishing an oil spill equipment stores and emergency fund.

KEYWORDS

Oil spill; Response; Marine disasters; Contingency plan; Shoreline; Wildlife; Environment

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SURVIVAL MITIGATION STRATEGIES - CHALLENGES AND OPPORTUNITIES WOMEN IN STOKVELS IN BOTSHABELO, MOTHEO DISTRICT, FREE STATE PROVINCE

ABSTRACT

The study explored how a marginalised black community in one of South Africa’s locations maintain financial savings organisations called stokvels on a local level. Researches found that individuals participate in stokvels for various reasons; to purchase durable or perishables goods, and also for the daily upkeep of kith and kin. The study discovered that people also become involved in stokvels because it creates a sense of belonging, security and satisfaction in the community. Such institutions have been in existence for a long time and continue to grow in numbers. Stokvels have played a vital role in complementing efforts of government in social developmental activities in communities. Astonishingly the HIV and AIDS pandemic and its ravaging effects are being mitigated by stokvels institutions around the country reducing its impact on the communities. This is done through activities such as burial societies and voluntary home- based care groups that help alleviate the suffering from the effects of HIV and AIDS. Stokvels are among the oldest and most prevalent savings institutions the world over. They play a vital role in savings mobilisation in many developing economies. Research conducted in 70 stokvels in western Kenya showed how the stokvel concept consolidated individual self-commitment, self-discipline and self-control. This is especially true when a member has to wait for harvest time either at the end of the year or any other time so stipulated by the stokvel group. The inconsistent moving of the pot from member to member demands patience. One of the most outstanding features of the stokvel is its predominance world-wide. It may be a fact that stokvels are common in communities where formal credit markets are few or non – existent. Stokvels, however, have manifested in communities where individuals have access to formal banking institutions, and have been witnessed among teachers, nurses, administrators and other white collar jobs.. Women who participated in the study concurred that it is necessary for government involvement in the stokvel enterprise as Stokvels are used as a resilience tool in the community. Though the principles developed by the Grameen Bank in Bangladesh manifested themselves in the study, the stokvel institutions still show signs of being threatened and there are weaknesses in their operations. However, Stokvels provide definite windows of opportunity for the members who grow in strength. The National Stokvels Association of South Africa (NASASA) is still unknown in the community and in other communities around South Africa despite having been in existence for longer than two decades. More work still needs to be done in order to bring the stokvel institution into the mainstream of the economy.

KEYWORDS

Mitigation, Stockvel, Finances, Women, Social development and community security

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ASSESSING DISASTER PREPAREDNESS OF LEARNERS AND EDUCATORS IN SOSHANGUVE NORTH SCHOOLS

ABSTRACT

The purpose of the study was to determine the extent to which disaster preparedness was achieved by learners and educators in schools located in Soshanguve North by sourcing data from principals, educators, learners and school safety committees. The research methodology used in this study to solicit views of school principals, teachers, learners and school safety representatives was a mixed research approach where data was obtained through questionnaires and interviews. The sample of research population comprised of ten schools, five primary schools and five secondary schools around Soshanguve North, Tshwane District. Fifty participants filled out questionnaires, and ten participants responded to interviews. Data collected was computed by means of excel spreadsheet and results were presented in the form of pie and bar graphs with narrative explanations. The study found that possible threats to schools around Soshanguve North included floods, fires and storms. It also emerged that learning areas such as Social Sciences directly cover the teaching of disaster education while Life Orientation and Natural Sciences indirectly cover disaster risk management concepts and principles. Other findings that emerged from the study showed that educators were not trained in disaster management. The surprising finding of the study was that learners tended to be the ones who were aware of disaster preparedness in this study when their knowledge about hazards and disasters acquired at school was assessed. The limitation of the study was that data was only collected from educators and learners through questionnaires completed by educators currently teaching Natural Sciences, Social Sciences and Life Orientation and learners from grade 5-9 only. Interviews were conducted with school principals, educators, and school safety committee representatives only. The contribution of this study to the body of knowledge is to provide a baseline data of what is the current status of disaster preparedness in public schools and encourage more research on the concept of disaster risk reduction in schools by elucidating the gaps that exist. This study therefore raises a further research question of how learners acquired knowledge of disaster preparedness even though their educators had not attended disaster preparedness training.

KEYWORDS

Disaster preparedness; Teachers; Learners; Floods; Fires; Storms; Primary school; High school; Curriculum

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AN ASSESSMENT OF VULNERABILITY TO NATURAL HAZARDS IN THE OVERSTRAND MUNICIPALITY, WESTERN CAPE, SOUTH AFRICA

ABSTRACT

While hazards are inevitable, and the elimination of all risks are impossible, there are many technical measures, traditional practices and public experience that can reduce the extent or severity of economic and social disasters. Hazards and emergency requirements are a part of living with nature, but human behaviour can be changed' (United Nations Office for Disaster Risk Reduction s.a.) The intention of this research is to assist Overstrand Municipality in understanding the relationship between development and risk (natural and human) as well as in developing strategies to prevent or mitigate the impacts of natural hazards like fires and floods. Vulnerability varies significantly within a community and over time. There are many aspects of vulnerability, arising from various physical, social, economic and environmental factors. Assessing community vulnerability and community capacity gives Overstrand Municipality an opportunity to collect relevant information about impending risks before an event occurs. Physical, economic, social and political factors determine people's level of vulnerability and the extent of their capacity to resist, cope with and recover from hazards. This research aims to provide Overstrand Municipality insight and knowledge to set up programmes to mitigate potential loss of life and property, as well as to improve the organisational systems, information flows and decision-making necessary to plan for both risk reduction and disaster response programmes. It should also be considered as a step in the process of showing how vulnerability assessments can help local municipalities to improve their understanding of vulnerability and the needs of people at greatest risk of natural and man-made disasters – thus preparing more appropriate actions to assist themselves and communities in coping with and recovering from these hazards.

KEYWORDS

Fire; Flood; Vulnerability; Assessment; Mitigation; Emergency response

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INVESTIGATING DROUGHT SURVIVAL STRATEGIES OF RURAL PEOPLE OF NEGARI AREA, MWENEZI DISTRICT, ZIMBABWE

ABSTRACT

The weather conditions in southern Africa particularly those of Zimbabwe vary spatially and temporally. Tyson (1987) cited in Dube (2008) noted that long term rainfall records has indicated an 18 year cyclical pattern of wet spells that alternate with dry conditions. Because of these prevailing weather conditions drought is a permanent feature of Sub-Sahara Africa. This study investigates the survival strategies of rural communities of Negari area, which is one of the areas that is mostly affected by drought in Masvingo province of Zimbabwe. The objectives of the study were to investigate the socio-economic needs of rural people living in the Negari area, identify formal and non-formal survival strategies that people use to meet these needs as well as assessing the effectiveness of these strategies. A qualitative method was used which involved content analysis and interviews. Focus group discussions were conducted with communities in the area of study at ward and village level. Semi – structured interviews were conducted with government and local leaders at local level. The study established that rural people of Negari area employ a number of strategies to survive during years of drought and these strategies vary from formal strategies such as assistance that the people get from government and non-governmental organisations such as free food handouts, school supplementary feeding program and child supplementary feeding program to non-formal strategies that the communities employ to survive drought such as stealing, food sharing, commercial sex work, rural – urban migration, early marriages, selling drought relief food, selling vegetables, border jumping, selling firewood, beer brewing and poaching of wild game.

KEYWORDS

Drought; Survival strategies; Food security; Climate change

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VULNERABILITY REDUCTION AND BUILDING RESILIENCE TO FLOODS

ABSTRACT

The increase of informal settlements in Zambia has not only created need for more services but also created hazards and potential disasters. In the past five years and more, the community of Kanyama in the Lusaka district and Lusaka province has continued to experience floods. This has raised many questions about why most vulnerable people of this community are the most affected. The analysis of the 2009/ 2010 floods discusses the impact on socio-economic, ecosystems and political variables. The researcher of this study outlines how different characteristics of these factors have shaped people's livelihoods and caused vulnerability to flood hazards and the diseases it comes with. The issue of vulnerability being associated with poverty, and people with social capital perceived to be less vulnerable is also investigated. The subject of resilience has been analyzed with reference to social capital and how much assets one has to be able to build resilience during floods or recover after floods. The impact of flooding and measurement of vulnerability and resilience through application of relevant tools and methodologies have been investigated. These have been derived from the theoretical frameworks from which there has been a design of an adapted framework on which recommendations to this study have been made as a follow up on further studies. Application of the adapted frameworks are based on the framework for vulnerability reduction and resilience building and outlined as vulnerability assessment, identification of vulnerability and resilience indicators, Identification of root causes, analysis of capacities, identification and linkages of key stakeholders, review of legislation and policies, financial resource mobilization and disbursements and decentralization of strategy formulation. The core words used are: vulnerability, resilience, preparedness, risk, hazard, disaster, socio-economic, ecosystems, political systems, disaster management, emergence response, and recovery and community participation. The work on the study began in 2011 before Zambia went for her 6th democratic elections and concluded after the elections had taken place. Some information regarding Zambia may have changed in line with the new government.

KEYWORDS

Informal settlements;

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AN ANALYSIS OF COMMUNITY AWARENESS TO CHEMICAL HAZARDS IN ZAMDELA TOWNSHIP – SASOLBURG

ABSTRACT

Production and use of chemicals have increased globally over the years. Despite their multiple benefits to human beings, chemicals are reactive, unstable in nature and capable of changing, which can cause chemical accidents. In many instances, chemical manufacturing plants are located close to human dwellings as in the case of Zamdela Township. These chemical plants expose surrounding communities to chemical hazards such as explosion, pollution, gas releases etcetera. Owing to the nature of materials, chemical accidents often require specialised response measures. A more compounding challenge relating to chemical hazards is that they are often not understood by the community. Appropriate measures to deal with chemical hazards are often complex and should be communicated to the local emergency personnel and to the local community through public awareness campaigns. This study sought to probe what the local authority has done to raise awareness in respect of prevailing chemical hazards in Zamdela Township. The study found that the majority of participants were not aware of awareness programs being implemented for chemical hazards. There was also an indication from participants that the majority of the community was not aware of procedures to be followed in case of chemical accidents. Positive findings, however, are that the majority of participants indicated that they were involved in community programmes such as volunteerism, education and training and also that they were willing to attend awareness meetings. The results were also supported by the interview with the Fezile Dabi District Municipality disaster management official who confirmed that their focus was more on HAZMAT affecting communities alongside the N1 and N3 roads rather than on the chemical hazards. The results indicated that there was still a lot to be done in educating the community about chemical hazards in Zamdela Township. The study concludes with recommendations which may be used by the municipality to educate the community on chemical hazards, and also on measures to improve awareness campaigns through schools and community organisations.

KEYWORDS

Chemicals; Community awareness; HAZMAT

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ENVIRONMENTAL AND SOCIAL IMPACT OF ILLEGAL GOLD MINING ON SURROUNDING COMMUNITIES (A CASE STUDY OF WELKOM)

ABSTRACT

The purpose of this study is to explore the environmental and social impact of illegal gold mining on surrounding communities of Welkom. Different stakeholders, government departments and South African Police Services faced challenges of reducing illegal gold mining activities because the operations undertaken does not resolve the existing problem. Environment and human beings are affected by negative effects resulting from unregulated events such as prostitutions, conflicts, Crime, land degradation, HIV/AIDS, and others. Unemployment is considered to be contributing factor to poverty in South Africa however it is believably the root cause of many other problems such as illegal mining. In this study qualitative and quantitative research were utilised using illegal miners or panners, stakeholders and community as sample for the effective findings. Illegal miners are comprised of the ones operating underneath and upper ground as well as from different areas of operations. 132 respondents were selected to answer the questionnaires which is divided of three annexures which includes panners, community and stakeholders, the questionnaires were answered depending on the willingness of the respondents Qualitative and quantitative data was collected using questionnaire, observations and interviews in order to get reliable information for the study. Illegal gold mining activities has resulted with grave health hazards linked with mercury utilisation during the process of operation. Lack of ventilation underground during the panning is established to be the cause to the deaths of many panners. The data was analysed and interpreted using charts and tables. Illegal gold mining activities were found to be contributing to serious future disasters which need mitigations from different stakeholders as well as community for the protection and sustainability of the livelihood. Despite having only negative effects to humans life it was established having negative effects to the environment as well. Risk impacts are not well recognised by illegal miners because of awareness not provided. Community members believed job creation could be the best solution to the problem. Recommendations to the study is that the establishment of cooperative for panners to enhance the work in safety and responsible procedures could be introduced, training and awareness of the impacts of illegal gold mining should be provided as this will minimise the risks that resulted from panning activities. Zama zamas or Dirotó as the names illegal miners are known by in Welkom can as well play crucial role by rehabilitating the land after excavating, the training to be provided could be of imperative for reducing environmental damages. Disaster management is the coordinated approach thus required by three spheres of government to develop strategies and methods to reduce the impact caused by illegal gold miners not forgetting community participation during policy formulations. For the establishment of cooperatives the panners needs financial resources it thus recommended for government to provide funds for enhancement of the operations.

KEYWORDS

Gold panners; Environmental impact; Social impacts; economic impacts; Diseases

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HUMAN RESOURCE GAP ANALYSIS FOR DISASTER MANAGEMENT QUALIFICATIONS IN THE FREE STATE PROVINCIAL GOVERNMENT EMERGENCY MEDICAL SERVICE (FS EMS)

ABSTRACT

The study investigated the human resource gap amongst the EMS supervisors and managers with reference to disaster management qualifications and training in the Free State Provincial Government Emergency Medical Service (FS EMS), South Africa. The choice of the topic is guided by literature related to the lack of disaster management education and training, as well as the required knowledge and skills of the FS EMS managers and supervisors to fulfil their core role in disaster response in the Free State Province. The focus on the EMS managers and supervisors are due to the strategic level of decision-making they need to fulfil during the disaster response. There is a lack of education and training of the different parties involved in the medical management of disasters (Hubloue & Debacker, 2010:129-130). Wang and Chang (2006:60) state that EMS professionals lack training in disaster response, and Bradt and Drummond (2007, 364-368) state that there are currently no explicit interagency standards for the education and training or evaluation of health personnel who respond to disasters. MacFarlane, Joffe and Naidoo (2006:451-456) support the above literature by indicating that there is a scarcity of skills to deal with the management of disasters. As a role-player in disaster management with a responsibility for making strategic decisions, the FS EMS managers and supervisors are obliged to be trained and educated in disaster management as required by the South African National Disaster Management Act (South Africa, 2002) and the South African Disaster Management Framework of 2005. It is therefore required that they be up to par with the international disaster management training requirements and recommendations. Fifty EMS managers and supervisors in the Free State Provincial Government were assessed by using a questionnaire. It was found that 66% of the respondents did not receive training to equip them to fulfil their disaster management functions. The remaining 34% indicated that they received training. The data obtained in the research identifies a training gap of 66% when it is compared with the Humanitarian Charter and Minimum Standards in Disaster Response as it states that the standards regarding disaster management training is that health workers should have the proper training and skills for their level of responsibility. In this study it is clear that there is a human resource gap in disaster management qualifications and training amongst the EMS supervisors and managers in the Free State Provincial Government's Emergency Medical Service. The findings make it clear that there are several positive aspects in the already established practice of disaster management education and training in the FS EMS; however, it is apparent that there is opportunity for revision and improvement which will contribute to bridging the gap.

KEYWORDS

Disaster management curriculum; Education and training; Emergency management services; Human resources; Disaster response

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IMPACT OF ARTISANAL SMALL SCALE GOLD MINING IN
UMZINGWANE DISTRICT, ZIMBABWE: A POTENTIAL
ECOLOGICAL DISASTER

ABSTRACT

Artisanal small-scale mining (ASM) has devastating impacts on the environment, such as deforestation, over-stripping of overburden, burning of bushes and use of harmful chemicals like mercury. These environmental impacts are a result of destructive mining, wasteful mineral extraction and processing practices and techniques used by the artisanal small-scale miners. This paper explores the ecological problems caused by ASM in Mzingwane District, Zimbabwe. It seeks to determine the nature and extent to which the environment has been damaged by the ASM from a community perspective. Interviews, questionnaires and observations were used to collect qualitative data. Results indicated that the nature of the mining activities undertaken by unskilled and under-equipped gold panners in Mzingwane District is characterised by massive stripping of overburden and burning of bushes, leading to destruction of large tracts of land and river systems and general ecosystem disturbance. The research concluded that ASM in Mzingwane District is an ecological time bomb, stressing the need for appropriate modifications of the legal and institutional frameworks for promoting sustainable use of natural resources and mining development in Zimbabwe. Government, through the Ministry of Small Scale and Medium Enterprises, need to regularise and formalise all gold mining activities through licensing, giving permanent claims and operating permits to panners in order to recoup some of the added costs in the form of taxes. At the local level, the Mzingwane Rural District Council (MRDC) together with the Environmental Management Agency (EMA) need to design appropriate environmental education and awareness programmes targeting the local community and gold panners.

KEYWORDS

Artisanal small scale mining; Ecosystem; Land degradation; Environment; Risk Accumulation; Biodiversity

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**ANALYSIS OF THE EFFECTIVENESS OF WORLD VISION
SOUTH AFRICA'S FLOOD DISASTER PREPAREDNESS
TRAINING PROGRAMMES: A CASE STUDY IN ORLANDO EAST,
GAUTENG PROVINCE, SOUTH AFRICA**

ABSTRACT

Orlando East is a flood-prone area and it is severely affected by floods when flooding occurs. This is the spark that raised an interest in conducting this study. This study aims to analyse the effectiveness of World Vision South Africa's (WVSA) disaster preparedness training programme and the capacity-building programme. It also aims to determine the community participants in the training programme. WVSA has offered a disaster preparedness training programme in Orlando East to capacitate the community in managing disasters to enhance community resilience. Questionnaires were used and interviews were conducted with the participants to get the information from Orlando East. The key informants were community members who were trained on disaster preparedness by WVSA. WVSA documentations about disaster management were also reviewed, and information was recorded in the study. Quantitative and qualitative methods were used in this study. The data obtained from the key informants was recorded on computer, and data analyses were done through the use of Excel and coding. The research findings revealed that the WVSA's disaster preparedness programme is able to educate communities about the hazards they are exposed to, and identify community elements that contribute to its vulnerability and the elements that can enhance community resilience. The programme also increases capacity building, as it allows the community to take over in managing disasters with the help of the community structure, which ensures involvement of the whole community in disaster management. The challenge that is hindering the community to implement disaster preparedness activities, which they have learnt from the training, is the prioritisation of disaster preparedness. The recommendation that was directed to the government was to increase awareness of the general public about the significance of the disaster preparedness activities through the media. The other recommendation that was directed to Orlando East was to have a disaster management committee that would be responsible for all pre- and post-disaster management issue.

KEYWORDS

Disaster Preparedness; Capacity building; Community participation

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ASSESSMENT OF WASTE HANDLING PRACTICE AS CONTRIBUTING FACTOR TO HEALTH RISK: CASE OF HLOTSE URBAN COUNCIL IN LERIBE, KINGDOM OF LESOTHO

ABSTRACT

The current study assesses the household knowledge, attitude, and practice concerning hand hygiene within a context of waste handling in households. A sample of 360 households were selected out of 6 766 (six thousand, seven hundred and sixty-six) in 40 villages, and for each a questionnaire was filled in. The research assessed the range of knowledge, attitudes, practices and hand hygiene of respondent households concerning waste management. The results were subsequently established. The inefficient collection system, with irregular and poor monitoring by service providers, was raised as a concern by households on the waste management system on the one hand; and on the other hand, a lack of education was also found to be a problem regarding proper waste management. However, education could contribute considerably to environmental sustainability. This study advocates the participation of NGOs and other private sector entities operating with the government in order to improve the waste management system through proper and meticulous monitoring and assessment, to facilitate efficient environment sustainability and good health. Data was analysed using descriptive and inferential statistics computed by the Statistical Package for the Social Scientists (SPSS). The study found that knowledge, attitude and practice were highly influenced by education, and that a lack of proper information was the one factor hindering effective hand hygiene. The study recommends that the army, NGOs and the private sector should assist the government towards achieving a proper and sustainable waste management system through action, education, campaign and public awareness activities in the Hlotse Urban area in order to minimise potential health hazards and environmental degradation in the community.

KEYWORDS

Risk assessment; Waste management; Knowledge attitude and practice; Personal hygiene; Environmental impact

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THE IMPACT OF SNOWFALL ON THE PEOPLE OF MOLUMONG (HARAFOLATSANE), MOKHOTLONG, LESOTHO

ABSTRACT

The study sought to investigate the impact of snowfall on the people of Molumong (Harafolatsane) in the district of Mokhotlong Lesotho. A quantitative, descriptive and exploratory design was used. Data was collected by administering a questionnaire to a sample that comprised shepherds, farmers, domestic workers as well as the unemployed people. The study noted that people were affected differently by snowfall. For example, there were people who got stuck in snow, while there were a small percentage of reported deaths. Moreover, there were people who had animals that were killed by snowfall; other people, especially shepherds, reported that frostbite posed a lot of problems. In some incidences, it was also noted that the type of building material contributed to collapsed houses during snowfall because weak building materials do not contain the pressure of a heavy snowfall. Lack of fuel and a decrease in wool and mohair production were other incidences that were found. The study also observed that dissemination of information to vulnerable people that include shepherds was not done, event though farmers claimed to have sent their crucial information. As a result most trapped and snowbound people were shepherds because they do have radios. Furthermore the study noted that the village disaster management committees had been elected but they were inactive, hence their role during snowfall was not clear.

KEYWORDS

Snowfall; Livestock; Farmers; Herdsman; Public awareness

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THE EFFECTIVENESS OF SECTOR COORDINATION MECHANISMS
IN DISASTERS: AN EVALUATION OF THE WATER AND SANITATION
CLUSTER IN ZIMBABWE

ABSTRACT

In recent years, Zimbabwe has become susceptible to disasters; natural, epidemiological and man-made, including the impact of the severe climatic variations such as global warming. This is manifesting itself in many ways, evidently in the water sector. Zimbabwe is experiencing an increase in floods and droughts; and the impact is greater due to people's reduced capacities from the downturn of the Zimbabwean economy, affecting mitigation initiatives. Taking a look at the year 2000 and 2001, Zimbabwe was impacted by Cyclone Eline, floods, and an unprecedented drought. This prompted the Zimbabwean government to invite the international humanitarian community to assist. This study evaluates a mechanism (cluster) that the humanitarian community put in place to coordinate the response to water, sanitation and hygiene (WASH) in Zimbabwe. On the overall, the study reveals that sector coordination, through clusters in Zimbabwe, is an effective system, taking the WASH Cluster as a case-study. According to the findings of this study, the WASH Cluster has been effective in disaster response but needed to improve networking, implementing disaster risk reduction and reducing perceptions that the cluster is biased towards certain geographic locations. In running the Cluster, the concepts of co-leadership and dedicated cluster leads were generally preferred. The management of cluster meetings, information sharing and information products were rated as being very good, albeit with a few suggestions for improvement. The lowest rating on the usefulness of any information product was 59%. Broadly speaking, the cluster was rated as being relevant to its membership. Suggestions for improvement for the cluster to deliver better were also shared.

KEYWORDS

Water and sanitation; Global warming; Disaster risk reduction

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CORRELATION BETWEEN PERCEPTION OF FLOOD RISK AND FLOOD RESPONSE BEHAVIOR IN MORLA COMMUNITY

ABSTRACT

Differences in flood response behavior among people living in flood plains are commonly observed as some people tend to react with timely evacuation, while others choose not to flee after evacuation alerts are disseminated. A better understanding of the drivers of flood response behavior can potentially contribute to improve guidelines for community-based early warning systems. This study utilizes the psychometric paradigm of risk perception as a conceptual framework to examine perceptions of flood risks among inhabitants of Morla community, located in the floodplain of Licungo River, in the Province of Zambézia, in Mozambique. To measure flood related risk perception two rating scales were administered to a randomly selected sample of 127 adults and to 11 institutional representatives. In addition, focus group discussions were conducted in two groups of influential members of the community, namely 10 women and 10 men. Even though study participants ranked floods and AIDS highest as potentially hazardous among 24 pre-identified hazards, the results of the study suggest that the majority (63.5%) remain in low lying areas during occurrence of floods. Based on the Principal Components Factor Analysis of 16 pre-selected flood risk characteristics used to assess participants' flood risk judgments, the study identified five main factors of risk perception. The results indicate that there are differences between persons who flee and those who choose to stay in lowlands after the official alert is disseminated. The former seem to perceive floods as events of infrequent and uncontrollable nature with rather delayed effects that bring along more risks than benefits. The latter see floods as an old and familiar threat to which people are individually and collectively exposed and which will continue to threaten future generations. No statistically significant differences were found on perception of flood risk between men and women. The study concludes with recommendations on the use of different perceptions of flood risks to improve early warning messages tailored to rural communities in flood plains in Mozambique.

KEYWORDS

Perception of risk, flood risk perception, flood response behavior, psychometric paradigm of risk perception, early warning systems

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THE ROLE OF SOCIAL WORK WITH REGARDS TO PSYCHOSOCIAL INTERVENTION IN THE DISASTER MANAGEMENT CYCLE

ABSTRACT

An explorative and descriptive investigation was conducted into the role of social work with regards to psychosocial intervention in the disaster management cycle. A self-constructed questionnaire was used to gather information pertaining to this role. The questionnaire asked respondents about the skills, the knowledge and the dispositions that social workers have that can be used during the disaster management cycle, as well as the implications of these for social work service-rendering on a macro level. The sample consisted of 520 social workers from a population of 15 712 social workers registered with the South African Council for Social Service Professions (SACSSP). Probability sampling was conducted and the sampling method constituted simple random sampling as each individual case in the population theoretically stood an equal chance of being selected for the sample. A number was allocated to each registered social worker in South Africa from the list provided by the SACSSP. Quantitative data was represented in the form of diagrams with interpretations, to show the results of the study and the implications for social work service delivery through descriptive statistics. From the results it emerged that social workers need training in disaster management. Training in disaster work needs to be included in undergraduate social work curricula and workshops need to be designed which focus specifically on the role of social work during the disaster management cycle. Social workers are well-positioned through their skills and knowledge to render services during all the phases of the disaster management cycle. Social workers are also able to render micro-level interventions as well as macro-level implementation of community development during disaster situations. Through training and awareness of the disaster management cycle, social workers will be able to render effective services to communities, groups and individuals who are vulnerable and at risk when disasters occur.

KEYWORDS

Social workers; Traditional disaster management cycle; Psycho-social intervention

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FIRE EMERGENCY PREPAREDNESS IN RESIDENTIAL CARE FACILITIES: THE CASE STUDIES IN CHILD AND YOUTH CARE CENTRES IN JOHANNESBURG, SOUTH AFRICA

ABSTRACT

The perception of disaster as acts of God is gradually shifting. Society links disaster to vulnerable circumstances which are created by various factors. Change of those circumstances can prevent or mitigate the impact of disaster. Preparedness is one of the core components of a disaster management continuum which seeks to ensure that the adverse effects of a hazard are minimized through effective precautionary actions, rehabilitation and recovery to ensure the timely, appropriate and effective organization and delivery of relief and assistance following a disaster. The Child and Youth Care Sector is not immune from hazards, one of them being fire. Literature reveals that several Child and Youth Care Centres in South Africa and other parts of the world have experienced fire and its devastating effects. Despite the availability of legislation for the establishment, registration and monitoring of CYCCs in South Africa, the mushrooming of unregistered CYCCs is rife. This increases the risk of children and adults in those centres to fire hazard because proper registration and approvals processes are not followed to ensure safety in these centres. As such, this study sought to assess the preparedness of CYCCs to fire hazard in regions C, D, G and F in the Johannesburg Metropolitan Municipal area. The study revealed that lack of training and education on preparedness, coupled with limited monitoring of compliance, creates an environment where fire safety is not prioritized. People are aware of other aspects of disaster management but need more training and education, drills, a culture of record keeping, and cooperation from all stakeholders to ensure coordinated efforts. As a result, CYCCs operate in an unstandardized way when it comes to prioritizing disaster preparedness in their planning and operation. Regular monitoring of compliance in CYCCs by the Department of Social Development (DSD) is crucial to ensure quality assurance in rendering child and youth care services. This ensures that buildings and equipment used are up to standard and do not pose dangers to the children. This makes it essential for the CYCCs to have an emergency plan which guides on actions to be taken to prevent, mitigate, respond, recover and rehabilitate from fire disaster. Poor and inconsistent preparedness plans in CYCCs show that there is still room for improvement to enhance the safety of the children and adults in those CYCCs from fire hazard. Hence, the recommendations from this study can be utilized to improve the situation of preparedness in the CYCCs. This will go a long way in creating a conducive environment for growth and development of those children who were removed from their family of origin owing to various circumstances and placed in CYCCs. Their safety will be improved and secondary neglect will be avoided. Safe environments will allow them to develop and become responsible adults, which is a legislative requirement arising from South African Children's Act, No. 38 of 2005.

KEYWORDS

Disaster preparedness; disaster response; Child and youth care; Fires; Public awareness

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IMPACT OF HIV/AIDS AT TSHILIDZINI HOSPITAL IN VHEMBE DISTRICT MUNICIPALITY

ABSTRACT

The statistics of individuals infected with HIV/AIDS is alarming in South Africa and is increasing tremendously day by day. Since the detection of Human Immune Virus, which causes AIDS in 1982, the rate of those infected is multiplying and statistic of those dying of HIV/AIDS is increasing. (Whiteside & Sunter 2000:141) This study was conducted when it was noticed that Tshilidzini hospital is experiencing a challenge of staff shortages due to increased number of health workers absenteeism caused by ill health. Estimations by United Nations Programme on HIV/AIDS (UNAIDS) indicated that the epidemic of HIV/AIDS in South Africa is one of the fastest growing in the world. Unless a cure is found or therapy to prolong life is made available, the majority of 3.6 million South African already infected with HIV will die within the next ten years .If interventions to reduce the spread of HIV is not taken into consideration an additional 550 000 persons will become infected each year. (South African Health Review 1999:305) Nationally approximately 120 000 death were reported contributing to 40% of all death in the age group of 15-49, and 25% of total deaths in all age group. The main focus of this study is HIV/AIDS, its impact on human resource, and service delivery at the health institutions .HIV/AIDS is bringing additional pressure to bear on the health institutions when more patients suffering from HIV/AIDS are admitted .As the epidemic increases the demand for care of those living with HIV/AIDS raises and has effects on the health workers responsible for care of those who are sick. (Fredriksson&Kannabas&2003:1) The impact of HIV/AIDS epidemic is most evident in the health sector where these patients are admitted. The quality of health service in the health institution is affected when nurses and doctors fail to cope with the demand of more patients admitted suffering from HIV/AIDS. (Cornia et al 2002:10). Importance of the study is that it will provide insight into the impact of HIV/AIDS in the health institutions, highlight strategies and guidelines which can be utilized to minimize impact of HIV/AIDS and to assess the statistic of the intake of patients infected with HIV/AIDS admitted in the health institutions. Assessing the statistics of patients infected by HIV/AIDS will assist the institution to know the intake and to plan future budget and identifying the strategies which can be utilized to cope with the impact HIV/AIDS at Tshilidzini Hospital Quantitative research was conducted and structured interviews and statistics from the hospital was used as methods of data collection. Recommendations for this research includes providing counseling giving support to health care workers and to ensure that patients receive quality care and to focus on educating health care workers and patients on issues related to HIV/AIDS to assist them to understand about the disease in a better way.

KEYWORDS

HIV/AIDS; Health workers; Patients; Hospitals

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HOSPITAL EMERGENCY AND DISASTER PREPAREDNESS: A STUDY OF ONANDJOKWE LUTHERAN HOSPITAL, NORTHERN NAMIBIA

ABSTRACT

When disasters occur, hospitals are among the most important institutions as they are viewed as sanctuaries where victims seek solace. This study explored emergency and disaster preparedness at Onandjokwe Lutheran Hospital in Northern Namibia. The focus was on the policies governing emergency and disaster preparedness at Onandjokwe Lutheran Hospital, the Onandjokwe Lutheran Hospital emergency and disaster preparedness plan and the knowledge, attitudes, and practices of healthcare workers regarding emergency and disaster preparedness. The study utilized both quantitative and qualitative research methods. Data collection was through a self-administered questionnaire, semi-structured key informant interviews and a hospital disaster plan checklist. The study involved all the healthcare workers at Onandjokwe Lutheran Hospital and respondents were stratified according to occupation or current position held at the hospital, and then conveniently selected based on those who were available on the day that the questionnaires were administered. The response rate was 75%. The results showed that Onandjokwe Lutheran Hospital was moving in the right direction in terms of preparing for emergencies and disasters though it was still in the early stages. The efforts made by the disaster committee of the hospital towards emergency and disaster preparedness were commendable. At the time, the hospital was working on its disaster plan, which was at the draft stage and covered the major components that should be included in a plan. The hospital had a shortage of staff. The majority of the staff members (62.7%) perceived their knowledge on managing mass casualty incidents to be fair to poor. Most of the staff members had a positive attitude towards emergency preparedness, and 95.6% of them would be willing to be called for duty during a mass casualty incident while only 54.9% were willing to work during an infectious disease outbreak. Emergency and disaster preparedness was governed by the disaster risk management policy of 2009, the National Health Emergency Preparedness and Response Plan (NHEPRP) of 2003 and the Emergency Preparedness and Response Plan of 2009.

KEYWORDS

Preparedness; Response; Health; Hospitals

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LANDSLIDE HAZARDS: HOUSEHOLD VULNERABILITY,
RESILIENCE AND COPING IN BUDUDA DISTRICT, EASTERN
UGANDA

ABSTRACT

Landslides are among the most widespread geological hazards that threaten human lives worldwide, most especially on the mountainous regions of the world. On 1 March 2010, a devastating debris flow occurred in Nametsi village, Bukalasi Sub County, Bududa district in Eastern Uganda. The landslide event caused significant damage to farmland, crops, and livestock; claimed over 400 human lives and displaced an estimated 5,000 people. The high death toll and damage suffered by households from this landslide suggested high level vulnerability, absence of resilience and coping mechanisms. This study focuses on the assessment of household landslide hazard vulnerabilities and vulnerable elements in Bududa. It addresses the household awareness of landslide hazards, landslide early warning, mitigation, resilience and coping strategies that have been employed by households in the area over time. This was a qualitative study with a cross sectional approach. It was found out that in Bududa, children were the most vulnerable to landslide hazards followed by the elderly persons. Lack of awareness of landslide hazards, location of their homes on steep slopes and inability to run away quickly from the threat contributed to their vulnerability although most households in Bududa have places for evacuation in case of landslide occurrence. Meanwhile it was established that most people were able to cope with landslide hazards through prayers to God, the presence of many families around, talking to friends, support from nongovernment organizations and government. Assistance from relatives, use of personal savings and migration to other areas within relieved the impact. However it has been suggested that vulnerabilities in the area could be reduced through afforestation, proper sitting of houses, restricting settlement and agricultural activities such as cultivation and grazing on the danger prone areas. Community participation in the management of natural resources, public awareness campaigns and outreach programmes are recommended. The relocation of settlements programme that was fronted by the government requires further investigation to be carried out especially in terms of willingness to relocate to safer places. Also more work needs to be done in the area to change production systems, improving household income levels, landslide hazard mapping, assessment, development of predictive models, early warning and slope monitoring mechanisms.

KEYWORDS

Coping capacity; Landslides; Agriculture; Livestock; Resilience; Early warning

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STOCK FODDER DROUGHT RELIEF SCHEME: A CASE OF THE DEPARTMENT OF AGRICULTURE IN POLOKWANE MUNICIPALITY

ABSTRACT

The objectives of this study were to assess whether the livestock fodder drought relief scheme was implemented according to the predetermined criteria, and to recommend action to be taken for the improvement of the scheme. The study focused on communal farmers who bought fodder from three departmental depots under Polokwane Municipality Department of Agriculture as an organ of the state. The cluster sampling was drawn from the database of livestock farmers who applied for a fodder drought relief scheme in four service centres of Polokwane Municipality. Polokwane Municipality Clusters were Maja/Chuene; Molepo, Mojapelo, Mothapo; Mothiba, Makotopong, Mamabolo, Dikagle and Moletjie/Maraba. The agricultural extension technicians, animal health officers and natural resource management technicians who implemented the drought relief scheme were interviewed regarding the implementation process. The advisory forums consisting of all stakeholders and technical advisory team participating at the district municipality, local municipality and service centres of the department of agriculture dealing with disaster risk management had not been established. There were no formal structures dealing with disaster risk management at the district, municipality and service centres. Capacity building on drought risk assessment, drought risk reduction, drought response and recovery, information and communication and funding arrangements were done by national and provincial disaster management staff. These individuals were assigned the responsibility of disaster risk management planning and operations. The Disaster Management Act should be successfully implemented at Polokwane Municipality Department of Agriculture as part of the organ of the State. Both farmers and responsible officials in disaster management should be trained and empowered. Disaster prevention strategies should be working, the implementation of drought relief scheme should be efficient and cost effective to the government and the beneficiaries. Polokwane residents should be able to recognize the benefits of disaster management in their lives.

KEYWORDS

Drought; Stock fodder; Livestock; Agriculture; Communal farmers; Drought relief

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ASSESS THE STATE OF INFORMAL SETTLEMENT FIRE PREPAREDNESS AT PHOMOLONG INFORMAL SETTLEMENT IN MAMELODI, PRETORIA

ABSTRACT

South Africa has experienced accelerated rural to urban migration of black people during the recent past, particularly between 1991 and 2001. Previously, legislation confined this people to designated rural homelands and restricted their movements and place of residence. Most large South African cities have experienced this migration and have subsequently experienced an increase in population density. The overwhelming numbers of people involved in this urbanization result in them settling on any available land in an attempt to secure accommodation next to those cities in which there are perceived job opportunities. In South Africa, local government has been obliged by the Disaster Management Act (57 of 2002) to integrate efforts and plans pertaining to multi-sectoral and multi-disciplinary processes, as well as implement measures, all aimed at emergency preparedness. This initiative has changed the focus from being reactive to disasters (in the form of provision of relief) to a more proactive effort (including the alleviation and promotion of risk avoidance and preparedness). This study purports to assess the state of readiness or preparedness measures, in the case of fire in the Phomolong Informal Settlements. The study aimed at assessing fire preparedness measures, availability of structures in the community to reduce the impact of fire incidents, and the capacity to build awareness within the community with regard to fire preparedness. The study was conducted using various methods, such as literature review and interviews in order to answer the research questions. The findings showed a need of an improved preparedness measures in the informal settlement to increase proactivity. The fire preparedness framework for informal settlements was subsequently developed with the hope of increasing fire awareness and creating a prepared community regarding fire incidents.

KEYWORDS

Community resilience; Contingency planning; Disaster risk reduction; Disaster Risk management; Early warning systems; Informal settlement; Preparedness framework; Structural/ Informal settlements fires.

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THE IMPACT OF HIV/AIDS AS A DISASTER ON THE POPULATION STRUCTURE OF LESOTHO

ABSTRACT

The aim of the research was to investigate how HIV/AIDS disaster has affected the population structure of Lesotho between 1986 and 2006. Adult HIV prevalence rate in Lesotho was 23.2%, (third highest affected country in the world). The total population of Lesotho decreased seriously between 2003 and 2006 without any war. The PAR model and Demographic Transition model were used to explore and explain the cause and effects of the HIV/AIDS pandemic on the population structure. The study used a mixed method approach where 116 medical personnel completed a questionnaire from a simple random sampling. Seven out of ten districts were covered. Face-to-face interviewed was conducted with the Lesotho Disaster Management Authority (DMA). The study also used Secondary Data Analysis (SDA) where the 1976, 1986, 1996 and 2006 national population census data as well as data from HIV/AIDS monitoring institutions like the UNAIDS, the Lesotho Ministry of Health and Social Welfare (MOHSW), the Lesotho National AIDS Commission (NAC), the World Health Organisation (WHO) . The data were analysed and interpreted using simple descriptive statistical techniques. The key findings from the research were that: HIV/AIDS has an impact on all the components of the population structure of Lesotho, the highest impact was the rapid increase in morbidity and mortality rates; The number of AIDS orphans and vulnerable children continue to rise in Lesotho, this very vulnerable group of the population may have unmet psycho-social and other needs that warrant further investigation and lastly, HIV/AIDS disaster had a different management set up from other disasters in Lesotho. Key recommendations were that: The population pyramid of Lesotho and those of other developing countries heavily affected by HIV/AIDS needs to be redrawn and lastly, management of HIV/AIDS needs ways to improve on positive behavioural changes among adults in Lesotho with regards to HIV/AIDS. More research is needed on the socio-economic and psycho-social impact of HIV/AIDS especially on children in Lesotho and also HIV/AIDS disaster could be managed like other natural and man-made disasters

KEY WORDS

Disaster management; HIV/AIDS; Lesotho; Population structure; Vulnerability



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PREGNANT WOMEN AS BENEFICIARIES OF THE VULNERABLE GROUP FEEDING (VGF) PROGRAMME IN MBIRE DISTRICT ZIMBABWE: AN ASSESSMENT OF NUTRITIONAL VULNERABILITY

ABSTRACT

The study intended to investigate the prevalence of malnutrition among the vulnerable pregnant women in Mbire and establish why they remain nutritionally vulnerable when they are benefiting from the World Food Programme (WFP) funded Vulnerable Group Feeding (VGF) Programme. Both quantitative and qualitative approaches were employed to gather data for the survey. The mid upper arm circumference (MUAC) and the Body Mass Index (BMI) were the anthropometric indicators used to determine nutritional status of the vulnerable pregnant women. Evaluation of the VGF food basket and micronutrient supplementation coverage also provided information on the nutritional status of the women. The questionnaire collected information on nutritional status of the vulnerable pregnant women and some of the factors contributing to nutritional vulnerability. The focus group discussion (FGD) provided information on cultural taboos and religious beliefs that impact on what pregnant women eat. The sample comprised of 100 pregnant women. A two-stage sampling procedure was used. Simple random sampling was used to select the two rural health centres (Masoka and Angwa) and purposive sampling to select the cases for the survey. To choose participants for the FGD, simple random sampling was used with patients who had visited the clinics, but not necessarily VGF beneficiaries. Major findings of the research were that 24% of the vulnerable pregnant women had a MUAC of less than 22 cm, which according to WHO and WFP standards is an indication of malnutrition. The BMI for the pregnant women ranged from 20 – 26.3 and for some it was again below the internationally accepted threshold. The study revealed that the VGF food basket was inadequate to meet the nutritional needs of the vulnerable pregnant women because it is meant for people with other sources of food. It was not designed to cater for the additional nutritional demands during pregnancy. It also emerged that besides inadequate food there were other immediate and underlying determinants of nutritional vulnerability. This leaves the vulnerable pregnant women susceptible to nutritional deficiency risks like anaemia and compromised immunity, which can result in morbidity, maternal and infant mortality. Major recommendations were that to address nutritional vulnerability of the vulnerable pregnant women a food aid intervention only is not enough. An intersectoral approach is needed whereby government ministries, NGO's, traditional leaders, faith based organizations and the community itself come together with different innovative risk reduction initiatives like food security and water and sanitation interventions to address the immediate and underlying causes of malnutrition. However, more research on micronutrient status may reveal more prevalence of malnutrition among the vulnerable pregnant women in Mbire.

KEYWORDS

Malnutrition; Pregnant women; Vulnerability; Non-governmental organisations; Food aid

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TEACHERS PERCEPTIONS ABOUT LESSON PLANNING TO INCLUDE A DISASTER RISK REDUCTION FOCUS

ABSTRACT

This study presented the three schools from Atteridgeville Township that were used as case studies to demonstrate how primary school teachers within the City of Tshwane Metropolitan Municipality implement their curriculum planning processes to address and manage their local disaster issues. The study also highlighted concerns that societies should be aware of regarding disaster problems, and the need for reasonable measures to be taken worldwide and particularly in South Africa to deal with these disaster problems. The disaster management legislation and the policies within the National Department of Education were cited as examples of the measures put in place by the government of the Republic of South Africa to address the vulnerabilities of the communities and to prevent and mitigate the adverse impacts of disasters for the attainment of sustainable development. The study acknowledged that teachers still lacked proper knowledge and understanding of their policies. Proper guidance from the curriculum developers will enable them to address their own local issues. The situation at schools was found to have been entrenched and influenced by the realities that infiltrated into the curriculum approaches, and prevented opportunities for integration of a disaster risk reduction focus into lesson planning by teachers. Poor or lack of proper resources, support, and security and safety measures at schools played a major role in hindering the successful integration and implementation of the disaster risk reduction policies of the education system. While the study acknowledged that the integration of a disaster risk reduction focus cannot be a one size fits all products, but a process, it provided some recommendations. The National Department of Education should address disaster risk reduction issues at schools and develop national guidelines that can assist teachers to implement them, acquire skills and augmented knowledge for the implementation of a disaster risk reduction focus through lesson planning. This study also recommended that teachers' skills be harnessed for effective and progressive teaching and be enabled to develop their contextual local safety and disaster risk reduction policies that were in line with their environments.

KEYWORDS

Primary schools; Teachers; Curriculum; Prevention; Mitigation; Safety; Statutes

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**FLOOD RISKS AND THEIR IMPACT
ON INSURANCE COMPANIES: THE CASE OF GEORGE LOCAL MUNICIPALITY, AT THE
SOUTH COAST OF SOUTH AFRICA**

ABSTRACT

Flood risk poses major problems for the community and insurance companies alike. Annually, losses resulting from floods have a direct or indirect impact on insurance levies and payouts. This study aims to investigate the extent of flood impact on insurance in the George Local Municipality (GLM). A quantitative methodology was utilised, to analyse four data sets, in an attempt to determine the flood impact in the GLM. These included: a) questionnaire completed by specialists; b) observations through a transect walk through a selected portion of the study area; c) data from the South Africa Insurance Association claims and payout database; and d) the data from South African Weather Services regarding weather and storm occurrences. The findings indicate that floods is a major natural hazard that set back development in the area; spring and winter seasons are the peaks months of rainfall occurrences (1921 to 2007); the 2006/07 rainfall year reflected unusually high claims related to flood damage in the GLM. The study furthermore indicates that floods have divesting impact on insurance, the insurance industry has lost an estimated total of R 3, 869,000 (which amounts approximately UK £ 3.22 million pounds) on the 2006/7 floods alone. As a response to the 2006/7 floods, internationally acceptable mitigation and prevention measures have been identified to reduce the flood impact in the GLM. Finally, recommendations are presented for future research in relation to flood risks and the insurance industry, where this study was not able to provide details.

KEYWORDS

Floods; Insurance coverage; Insurance claims; Flood risk homeowner's policy;

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COMMUNITY-BASED FIRE RISK REDUCTION AT KHAYELITSHA INFORMAL SETTLEMENT, GRASSLAND PHASE 4 OF MANGAUNG METROPOLITAN MUNICIPALITY

ABSTRACT

Informal settlement fires have taken many lives lost in South Africa. This study was conducted because of a concern stemming from shack fires that persist to occur at Khayelitsha, Grassland Phase 4 informal settlement of Mangaung Metropolitan Municipality. Through this study, the researcher hoped to get insight about attitudes, beliefs, perceptions, vulnerabilities and coping capacity of Khayelitsha community regarding fires. The aim of the research was to study the causal factors of shack fires and to highlight the importance of implementing proactive fire risk reduction measures in the study area. The study was conducted from a disaster risk management point of view, and utilised the Pressure and Release (PAR) model as the main conceptual framework. The basis of the model is that a disaster is the intersection of two opposing forces, that is, processes generating vulnerability on one side and the hazard on the other. The release idea is incorporated to conceptualize the reduction of disaster (Wisner, 2004: 50). Through the application of the model, the researcher was able to discover the vulnerabilities that the community of Khayelitsha are faced with. A comprehensive literature review from international and local sources was carried out. Firstly, an overview of informal settlements and categories were explored in global and local contexts, placing the study area at the centre. Because the aim of the study was fire risk reduction, the history of disaster risk reduction and South Africa's legislative support for disaster risk management were looked into. Also considered was the status of disaster risk reduction in South Africa and eventually, that of Mangaung Metropolitan Municipality. As a final point, the review of literature considered community-based fire risk assessment as the correct first step towards achieving fire risk reduction at Khayelitsha informal settlement. The study followed a qualitative research approach, involving the use of observations and semi-structured interviews conducted with adult Khayelitsha community members (respondents) as methods of data collection. The respondents were obtained by random sampling. The interviews and observations allowed the researcher to have a better understanding of why fires cases are increasing in Khayelitsha. After the data had been collected, analysis followed whereby interviews and observation results were interpreted and displayed through pie charts and tables. Finally, conclusions and recommendations were drawn based on the review of literature and the empirical investigation that was carried out. The key findings revealed that Khayelitsha informal settlement community was economically, politically, socially, culturally and educationally vulnerable, hence the risk of fire. Finally, recommendations were proposed for implementation by Mangaung Metropolitan Municipality and Khayelitsha community.

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KEYWORDS

Informal settlements; Fire; risk reduction; Public awareness; Pressure and Release model.

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RISK REDUCTION OF WATER, ENVIRONMENT AND SANITATION RELATED DISASTER HAZARDS IN INFORMAL SETTLEMENTS: A CASE STUDY OF KOROGOCHO SLUMS IN NAIROBI, KENYA

ABSTRACT

Motivated by the belief that housing and cost of living in informal settlements in Nairobi are relatively cheap compared to other parts in the city; many poor families in Kenya migrate from the rural areas in search of employment. They prefer to settle in these settlements, which more often than not are located in very insecure locations. The direct consequence of this is exposure of dwellers to inadequate access to critical social services, which drastically increases their vulnerability to disaster hazards. The main goal of this research was to identify the key water, environment and sanitation (WES)-related disaster hazards and risks in such settlements. Literature on global trends regarding access and affordability of water and sanitation services, particularly in informal settlement as well as the likely impacts as a result of their absence was reviewed. The Pressure and Release (PAR) Model tool for analyzing vulnerability is adopted in this study. This was applied to help to identify the root cause of disasters in urban informal settlements and the dynamic pressures that are in play before people decide to settle in unsafe conditions that increase their vulnerability. A field study which involved administration of 330 questionnaires to selected, sample households in Korogocho slums was conducted. This was followed with gathering of additional secondary information from reconnaissance surveys, interviews with key informants and focus group discussions with selected groups in Korogocho. These surveys revealed the four major WES disaster hazards through probability and severity of occurrence in Korogocho in the order of severity as:- Epidemics (malaria, cholera, typhoid, amoebic dysentery, etc.); poor living conditions and environment due to air pollution, water pollution and squalid living conditions; the risk of flash floods that expose people to WES diseases and risks of drowning in abandoned quarries (particularly children and drunkards at night. Chemical analysis of water samples taken from various points of the Nairobi River (which passes through Korogocho) revealed that the water is extremely polluted with high levels of alkalinity, sulfides, permanganate, high levels of suspended and insoluble solids as well as high conductivity. This poses a serious health hazard to the residents who use the river water for cleaning of plastic materials for selling or recycling. However, the research has also revealed that despite the high levels of pollution in the surrounding environment, the tap water in Korogocho was fit for human consumption and with adequate chlorine residue. In summation, it is safe to conclude that it is possible to reduce and mitigate WES-related risks present in Korogocho slums and indeed in other Kenyan slums. However, this can only be achieved by careful considerations of all the factors and conditions at play in each of the slums and the application of multifaceted, multi-pronged strategies to address both the socio-economic and structural contexts within which these slums subsist. The recommended interventions should not deal with symptoms, but rather address the underlying root causes making the approach sustainable.

KEYWORDS

Environment, Water, Sanitation, Health, Vulnerability and Informal Settlements

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AN ASSESSMENT OF THE WATER AND SANITATION PROBLEMS IN NEW FOREST, BUSHBUCKRIDGE LOCAL MUNICIPALITY, SOUTH AFRICA

ABSTRACT

The purpose of the study was to assess the problems facing the world, South Africa and in particular New Forest in the provision of water and sanitation. New Forest is a small village found in Mpumalanga province. The issue of improving water and sanitation began over centuries ago, but still there are countless factors hindering water and sanitation services. The study has progressed through various phases. The first phase of the case study included sampling of the household in New Forest. The second phase included the use questionnaires, literature review, site observation and telephone interview as a data collection tools. In parallel with the literature survey, collection of basic background data was obtained from journals, water reports and approved thesis from internet, for site observation collection of data was done by taking photos and for telephone interviews data was collected through notes writing. The study used the combination of qualitative and quantitative approach. The third phase included combining the findings of several studies and this data was critically analysed using, notes writing, tables and graphs. Through the distribution of questionnaires to members of the village it was confirmed that there was water and sanitation problem. For most people the desire was to have access to water and sanitation. The community's access to water and sanitation is severely limited due to their socio-economic status, mostly poverty. The villager's access to water and sanitation is caused by lack of employment. Lack of unemployment forces people migrate to urban to look for better opportunities. Most rural people are poor and are highly affected by privatisation. Lack of participation is another socio-economic factor that deprives people from receiving water and sanitation services, people in this village are poorly informed on almost aspect of water and sanitation problems. Water and sanitation coverage is poor in this village due to infrastructure failure. The literature search showed that there are also other factors contributing to water and sanitation problems, which includes lack of capital and funds by the government to provide access to water and sanitation. Water and sanitation coverage is poor in rural areas because of the scattered nature of settlements. The increasing population was also causing serious depletion in water's availability and this was also causing an impact on the environment and economy. Water availability is also limited by low or irregular rainfalls and again there is too much water available on the world surface, but most of this water is saltwater and only a small amount of freshwater is accessible. People use indigenous knowledge to survive water and sanitation problem. People in New Forest dig traditional hand dug wells to survive water problems and some access water from the community river. The community borehole also supply water to the villagers, but when water is not available people hire cars to collect water for them in areas where water is available. People in New forest use pit latrine for sanitation. Pit latrines are considered as part of improved sanitation options. These facilities are cheap, easy to operate and no maintenance is required. Majority of the villagers do not own flushing toilets because of water shortage and some villagers do not have toilets at all; they share toilets with their neighbours. In conclusion the assessment of water and sanitation problem led to recommendations of mitigating these problems in the village of New Forest.

KEYWORDS

Water and sanitation; Water access; Poverty; Traditional/indigenous knowledge

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A DISASTER MITIGATION FRAMEWORK TO REDUCE THE RISK AND VULNERABILITY CAUSED BY THE INCREASED HUMAN MIGRATION INTO THE WESTERN CAPE PROVINCE

ABSTRACT

Motivated by the belief that the Western Cape province can provide all its residents with employment, better service delivery and proper housing, some 48 000 people migrate to the Western Cape each year. The direct consequence of this in-migration is inadequate service delivery and housing provision as well as a drastic increase in disasters due to the occupation of high risk (hazardous) areas by these migrants, which make them vulnerable to disasters. The primary aim of this research is to develop a Disaster Mitigation Framework (which concurs with the best practices in the field of Disaster Management), that will reduce the increased risk and vulnerability of humans to disasters, caused by this increased in-migration. Two different areas of academic enquiry are examined namely the increased human in-migration into the Western Cape and the spectrum of disaster mitigation approaches that could be applied. The Disaster Management Act 2003, has a direct influence in the compilation of this mitigation framework because of its focus on disaster risk reduction principles. This research is applied to the area of the Western Cape province and the mitigation framework will mainly focus on the City of Cape Town's informal settlement areas, as a case study. Additional to the normal literature study, research also involved semi-structured personal interviews with professionals in the field of disaster management. Combining the results of the literature study and field research with the argument constructed in the dissertation that the increased in-migration increases disaster risk, it was found that it is possible to reduce risk, and vulnerability to disaster, through the application of the "Progression of Safety" model which was developed by Wisner, Blaikie, Cannon & Davis (2003: 51). This model is successfully utilized to set the parameters for the Disaster Mitigation Framework as proposed. The "Progression of Safety" model provides a much wider scope for the application of risk reduction options as what are usually instituted in standard disaster mitigation approaches. This research is not only focusing on measures pertaining to hazard reduction and the provision of safer living conditions, but also analyzed ways to reduce the dynamic pressures, namely better service delivery for utilities such as health, welfare and education. Lastly this research also endeavours to reduce the root causes of vulnerability by increasing the access of vulnerable group to power structures and resources which focuses on the reduction of poverty and sustainable development.

KEYWORDS

Migration; Risk; Vulnerability; Informal Settlements; Mitigation

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ANALYSIS OF FOOD AID PROGRAMME IN MUREHWA DISTRICT AND ITS CONTRIBUTION TO COMMUNITY RESILIENCE

ABSTRACT

Over the last few decades, aid in the form of food has been a popular way to mitigate the effects of natural disasters, poor economic performance and other emergencies on food consumption. Food aid efforts are important to sustain life, protect and restore people's self-reliance. There is however an urgent need to support vulnerability reduction for high risk populations through addressing the root causes of risk accumulation, many of which are anchored in development approaches. This paper presents the findings of a qualitative research on food aid programme in Murehwa district for the period 2003 to 2005. The study analyzed the contribution of the food aid to building resilience to future food crisis for sixty (60) households in three wards that were benefiting from an on-going food aid programme. The research findings showed that food crisis interventions had failed to invoke adequate action to improve food production in the study area. Inadequate technical support, lack of micro-financing and failure to create non-agricultural livelihoods alternatives also meant lack of survival options for the vulnerable. Food crisis thus remained critical and there was risk of chronic food shortage despite the existence of the food aid programme.

KEYWORDS

Food aid, Resilience, Food shortage and Sustainable livelihoods

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