REVIEW AND UPDATE OF THE SISONKE DISTRICT MUNICIPALITY DISASTER MANAGEMENT PLAN
In accordance with Act 57 of 2002,

SISONKE DISTRICT MUNICIPALITY
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TOWARDS DISASTER MANAGEMENT IN ACCORDANCE WITH act 57 of 2002, FOR THE SISONKE DISTRICT MUNICIPALITY

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1   EXECUTIVE SUMMARY

The review and update of a disaster management plan is an extensive process and is a joint effort between the municipality, local communities and the project team. Through Aurecon's appointment we have compiled an updated plan consisting of the academic analysis which has resulted in both the qualitative and quantitative outputs as described in this plan. The outcome of this process results in Sisonke District Municipality complying with the Disaster Management Act, Act 57 of 2002.

The Project Team would like to acknowledge the valuable contribution of the Sisonke District Municipality, all the local municipalities and councillors. Disaster Management Planning within the Sisonke District Municipality is very well established and has progressed continuously and systematically over the past couple of years. The Sisonke District Municipality has a Disaster Management Plan which was approved by the relevant structures within the Sisonke District Municipality in August 2008. The Municipality also have a Disaster Management Framework that has been adopted by the municipality that will form the basis for this project. Sisonke District also has a fully functional District Disaster Management Advisory Forum. A budget is in place to acquire Disaster Relief Material and Disaster Management Awareness campaigns are being implemented to educate communities within the district regarding disaster management issues. Further achievements by the Sisonke District Municipality in terms of Disaster Management include compilation of an Integrated Waste Management Plan, implementation of the Sisonke District Municipality Snow Protocol and launch of the District Aids Council. There appears to have been an increase in lightning related incidents over the past few years within the Sisonke District. The District is in the process of procuring lighting detectors to be erected in vulnerable communities.

A few areas for improvement were identified during the review process. There appears to be some communication challenges relating to the sharing and dissemination of information. Workshops should be held with all departments and councillors to educate them on disaster management and create awareness on their roles in disaster management. Councillor/s need to be trained to conduct community based risk assessments for their respective areas where after they must meet with Disaster Management to discuss the feedback on the risk assessment. Councillors must then meet to identify projects and budget for the projects which require funding. Strategies must be presented to the local advisory forum who will take the proposals forward to the Executive Committee for approval and adoption by council. It is important for councillors to understand the concept of disaster management and to have the tools to be able to conduct their own risk assessments. This will assist in expansion of the institutional capacity of the District and local municipalities.

The local municipalities need to compile a relief protocol and standards/guidelines which identifies to whom they provide relief, which type of relief and for what magnitude of an incident relief is provided. These guidelines will assist councillors when assessing an incident to determine the extent of assistance required and to communicate the correct information in terms of what assistance will be provided by the municipality to those affected. Damaged goods need to be classified so that people can know how long it will take to receive assistance. Assistance should be provided by either the LM where possible or the DM where the LM does not have the capacity to provide assistance.

The process of the review involved updating of the Municipal Incident Register. It should be noted that there is a lack of captured data available for all the local municipalities, especially KwaSani and uMzimkhulu, which may have a significant impact on the assessment of the current situation in terms of prioritizing hazards. Monthly fire incident reports are submitted by Rural Metro to the KwaSani and Umzimkhulu local and Sisonke district municipalities. However, these incidents are not being captured in the incident register database.

The updated plan requires revision at least twice per year and on an ongoing basis. Through this process, new projects should be identified and existing projects reviewed. To simplify the process, the status of all new and existing projects should be kept on record and should be available on request. This sector plan should be considered by the municipality in conjunction with all other sectoral plans when developing and reviewing their Integrated Development Plan.

2   INTRODUCTION

The Sisonke District Municipality is primarily responsible for the implementation of the Disaster Management Act, 2002 (Act 57 of 2002) within its area of jurisdiction, with a specific focus on ensuring effective and focused disaster risk reduction planning. The outcomes of a comprehensive disaster risk assessment can ensure that all developmental initiatives as well as contingency planning and practice of the municipality are informed by accurate knowledge of disaster risk, enabling various stakeholders to contribute to the reduction of disaster risk within the Sisonke District Municipality.

Aurecon (previously known as Africon) was appointed in 2007 to compile a Disaster Management Plan for the Sisonke District Municipality. The Plan was approved by the relevant structures within the Sisonke District Municipality in August 2008. The Sisonke District Municipality Disaster Management Plan was then forwarded to the KZN Provincial Disaster Management Centre for input and inclusion into a consolidated provincial disaster management plan. The purpose of the Disaster Management Plan is to enhance the capacity of the municipality to prevent and to deal with disasters and to avoid developments which are subject to the exposure of high risk of disasters. As per Section 14 of the Disaster Management Plan "*The municipality will regularly review and update its plan, as required by Section 48 of the Disaster Management Act. The Disaster Risk Management Advisory Forum shall be responsible for the review and update of the corporate plan on an annual basis.*" Through the review and update of the Disaster Management Plan, the Sisonke District Municipality highlights its current position and preparedness in response to emergencies compared to its position in 2008. Aurecon has been appointed by the Sisonke District Municipality to review the District's Disaster Management Plan.

2.1   Background

South Africa is prone to a variety of natural and human-induced hazards, which occasionally lead to loss of property and lives. In the past decade, these hazard occurrences have become more frequent and severe. The National Government recognised a need for an institutional framework that allows for risk prevention and rapid action during an occurrence and has taken certain steps towards this end, such as:

White Paper on Disaster Management: The White Paper introduced a new paradigm in the management of disasters, by placing an emphasis on risk reduction and preparedness.

Disaster Management Act: The White Paper led to the promulgation of the Disaster Management Act, Act 57 of 2002, which is the regulatory framework for disaster management in South Africa. The Department of Provincial and Local Government (DPLG), through the National Disaster Management Centre (NDMC), administers the Act.

National Disaster Management Framework: The NDMC has prepared a National Disaster Management Framework, which aims to guide the development and implementation of disaster management in the country.

Policy Framework for Disaster Management in the Province of KwaZulu-Natal: The Policy Framework was promulgated in February 2011 and aims to guide the development and implementation of disaster management in the KwaZulu-Natal.

National Disaster Management Centre Guidelines: The NDMC has developed guidelines for the establishment of disaster management centres (DMC's).

National Disaster Management Planning Guidelines: The NDMC has requested proposals to prepare "Guidelines for Preparing Disaster Management Plans" that will assist Municipalities in the drafting of their disaster management plans.

Yokohama Strategy for a Safer World: The Strategy provides guidelines for natural disaster prevention, preparedness and mitigation and its plan of action. It focuses on disaster reduction, centred on the objective of saving human lives and protecting property. The Strategy calls for an accelerated implementation of a Plan of Action to be developed and provides recommendations for the action to be taken at all levels.

Hyogo Framework of Action: The expected outcome of this Framework can be summarised as "*The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries*". The framework includes strategic goals and priorities for action from 2005-2015. In order to achieve these goals and act upon the priorities identified in the Framework, a range of tasks have been identified to ensure implementation and follow-up by regional and international organizations in collaboration with civil society and other stakeholders.

2.2   Disaster Management Plans

The Act requires the review and update of the municipal disaster management plans (Sections 48, 52 and 53 of the Act).

Section 48 of the Disaster Management Act addresses the monitoring, measuring performance and evaluating of disaster management plans as well as prevention, mitigation and response initiatives, namely:

"*(1) A municipal disaster management centre must-*

(a) monitor-

(i) progress with the preparation and regular updating in terms of section 52 and 53 of disaster management plans and strategies by municipal organs of state involved in disaster management in the municipal area;

(ii) formal and informal prevention, mitigation and response initiatives by municipal organs of state, the private sector, non-governmental organisations and communities in the municipal area, including the integration of these initiatives with development; and

(iii) the compliance in the municipal area with key performance indicators envisaged by section 7 (2) (m); and

(b) from time to time, measure performance and evaluate such progress and initiatives.

Section 52 of the Disaster Management Act addresses the review of disaster management planning requirements for Municipal Entities, namely:

"*(1) Each municipality must, within the applicable municipal disaster management framework-*

(c) regularly review and update its plan; and

Section 53 of the Disaster Management Act addresses the review of disaster management planning requirements for Municipal areas, namely:

"*(1) Each municipality must, within the applicable municipal disaster management framework-*

(c) regularly review and update its plan; and

(d) through appropriate mechanisms, processes and procedures established in terms of Chapter 4 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), consult the local community on the preparation or amendment of its plan.

(4) A municipality must submit a copy of its disaster management plan, and of any amendment to the plan, to the National Centre, the disaster management centre of the relevant province,

and, if it is a district municipality or a local municipality, to every municipal disaster management centre within the area of the district municipality concerned."

The Disaster Management Act also requires that the three spheres of government prepare *disaster management plans* (sections 25, 39 and 53 of the Act). It is therefore a legislative requirement that the Provincial Government, as well as District Municipalities and Local Municipalities, develop *Disaster Management Plans* for their area of jurisdiction.

The requirement of the Act that stipulates that Provinces, District Municipalities and Local Municipalities MUST develop *Disaster Management Plans* for their area of jurisdiction, could lead to a huge amount of duplication between the three spheres of government.

The Project Team has considerable expertise in the development of *Disaster Management Plans* and has developed an approach whereby the potential duplication between the spheres of government can be avoided.

2.3 Definition of Key Terms

The following terminology[1] is used in this document:

Development Planning: Development planning is an integrated, multi-sectoral process through which governmental institutions streamline social, economic and spatial growth.

Disaster: A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope, using its own resources.

Hazards: A potentially damaging physical event, phenomenon or human activity, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Mitigation: Activities that prevent an emergency, reduce the chance of an emergency happening, or lessen the damaging effects of unavoidable emergencies.

Preparedness: See **Risk**.

Preventative Measures: See **Risk**.

Resilience: The capacity of a system, community or society to resist or to change in order that it may obtain an acceptable level in functioning and structure.

Response: See **Risk**.

Risk: The probability of harmful consequences, or expected loss (of lives, people injured, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human induced hazards and vulnerable conditions.

Within this context, some terms are often used in this document, namely:

Risk Reduction: The adage "*Prevention is better than cure*" has never been more applicable than in the case of disaster management. *Risk reduction* is the science of reducing the risks to which vulnerable communities are being exposed. The Disaster Management Act

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[1]   "Living with Risk: A Global Review of Disaster Reduction Initiatives", International Strategy for **Disaster Reduction** (ISDR) Secretariat, July 2002.

consequently requires that Municipalities and Provinces should seek to mitigate or reduce the risk of disasters occurring in vulnerable communities as a first prize.

Disaster Preparedness: When the risks have been reduced to the extent that communities are not very vulnerable to risks and/or find it acceptable to live with these risks, the Disaster Preparedness phase kicks in. *Disaster Preparedness* can be defined as the discipline of being prepared to manage any of the residual risks with the utmost speed and efficiency.

Vulnerability: Vulnerability refers to a set of conditions resulting from physical, social, economic and environmental factors, which increase the susceptibility of a community to the impact of a hazard.

3   UNDERSTANDING OF DISASTER MANAGEMENT PLANNING PRINCIPLES

In this section the document demonstrates the understanding of the Disaster Management Planning principles.

3.1   Background

A typical institutional framework comprises of the follow elements:

Key Outcome Points: The "*reason for being*" of any institution or organisation is the services and the products that are being supplied to their constituencies or customers. These products and services are the key outcome points that the institution or organisation should be achieving.

Outcome Based Delivery Processes: For each of the key outcome points, delivery processes (see Figure 1), or business processes, will have to be developed that define the functions that contribute to its delivery at each of three levels, namely:

Strategic Stage: Here the overall objectives and parameters are defined.

Tactical Planning Stage: The budget is assigned and the project or programme is decided upon ~ the how to go about it.

Operational Stage: Where it is done and maintained.
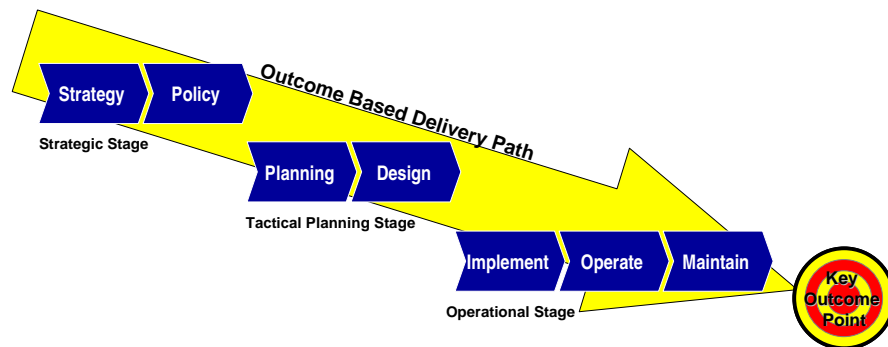
Figure 1: Definition of Outcome Based Delivery Process

Organisational Structure: The organisational structure should be designed to support the outcome based delivery processes. Staff should be placed in the organisation and trained to perform their functions so that the delivery processes keep delivering the desired outcomes.

Office Accommodation: The staff in the organisation should have properly equipped office accommodation, which must facilitate the day-to-day operational activities that staff performs.

Performance Management: To ensure that the desired outcomes are achieved, it is necessary to develop, deploy and maintain information systems that will adequately monitor the performance of the delivery processes and the *impact* being achieved.

3.2   Key Outcome Points of the Act

The National Government has promulgated the Disaster Management Act, Act 57 of 2002, to provide an integrated and co-ordinated disaster management regulatory framework in which various role players can work towards a common purpose. This common purpose (Figure 2) can

best be described as, among others:

Key Outcome Point 1 ~ Risk Reduction: The first *key outcome point* of the Act is that Municipalities and Provinces should seek to mitigate or reduce the risk of disasters occurring in vulnerable communities as a first prize. To achieve this *outcome*, Municipalities and Provinces will be expected to propose, implement and monitor cost-effective and innovative projects and programmes that will mitigate or reduce the risk of disasters occurring in vulnerable communities.

Key Outcome Point 2 ~ Disaster Preparedness: Another *key outcome point* of the Act is that Municipalities and Provinces should be prepared for disasters that could occur. To achieve this *outcome*, Municipalities and Provinces will be expected to plan, practise and improve their preparedness, response and relief activities for disasters that could occur.

Key Outcome Point 3 ~ Disaster Recovery: The third *key outcome point* of the Act is that Municipalities and Provinces should be able to address the consequences of a disaster. To achieve this *outcome*, Municipalities and Provinces will be expected to propose, implement and monitor cost-effective and innovative disaster recovery measures, which will also reduce the risk of the same disaster impacting on the same community again.

**Risk Reduction
(Disaster Mitigation)**

**Disaster Preparedness
(Response & Relief)**

**Disaster Recovery
(Recovery, Rehabilitation & Reconstruction)**

Figure 2: Key Outcome Points of Disaster Management Act

3.3   Performance Management

Typical performance management issues that must be addressed are, to name a few:

Define Impacts to be Measured: To ensure that the Key Outcome Points are being achieved, it will be necessary to define what impacts must be measured in each of the Key Outcome Points. This will, in turn, inform the requirements for information systems relating to the disaster management plans.

Identify Key Performance Indicators along Outcome Based Delivery Process to be Measured: It is also necessary to identify what KPI's must be measured in each task of the outcome based delivery processes. The objective of these performance measurements is to ensure that the delivery processes are functioning optimally and not to monitor individual performance. These KPI's will inform the information systems requirements.

Implement Information Systems: With inputs from the performance management side mentioned above, it will be required that appropriate information system be developed,

implemented and maintained. The objectives of these information systems are two-fold, namely:

Operational Assistance: The primary focus of these information systems will be to ensure that staff is supplied with appropriate tools that will assist them in their day-to-day activities.

Performance Management: A secondary focus is to measure the performance of the impacts being achieved and the performance of the overall delivery process. This information can be fed to the strategic, planning and operational levels to ensure that staff is informed of their progress.

4   PROJECT APPROACH

This section of the document describes the approach taken by the project team to update and review the **Sisonke District Municipality Disaster Management Plan**.

4.1   Outline of the disaster management plan in line with the provincial and national disaster management framework

The National disaster management framework categorises disaster management into two different aspects i.e. Key Performance Area (KPA) or an Enabler, described below.

KPA 1 ~ Integrated institutional capacity

KPA 2 ~ Risk assessment

KPA 3 ~ Disaster risk reduction

KPA 4 ~ Disaster preparedness

Enabler 1 ~ Information and communication management

Enabler 2 ~ Education, training, public awareness and research

Enabler 3 ~ Funding arrangements

Disaster Management Planning within the Sisonke District Municipality is very well established and has progressed continuously and systematically over the past couple of years. The Sisonke District Municipality has a Disaster Management Plan and Disaster Management Framework that has been adopted by the municipality that will form the basis for this project. Sisonke District also has a fully functional District Disaster Management Advisory Forum which has been engaged with throughout the review and update of the Disaster Management Plan. This is to ensure that the prescribed consultative process is followed to allow the plan to consist of the most up to date and relevant information from all role players, stakeholders and local municipalities in the Sisonke District.

The above mentioned components should form the basis of the municipal disaster management strategy. Disaster management is multi-sectoral and multidisciplinary, which require the involvement of multi-agency. This document is structured in such a way to allow for dissemination of information. The disaster management plan is the document which provides the details of what should be done while the disaster management framework provides the guidance and legislative framework to who should be executing the plan. The disaster management plan has to be included in the IDP as a sector plan to ensure that the disaster management strategies form part of the municipal strategy and that funding can be made available to effectively implement the disaster management plan. The following diagram provides a summary of the outline and relations of the various sections.
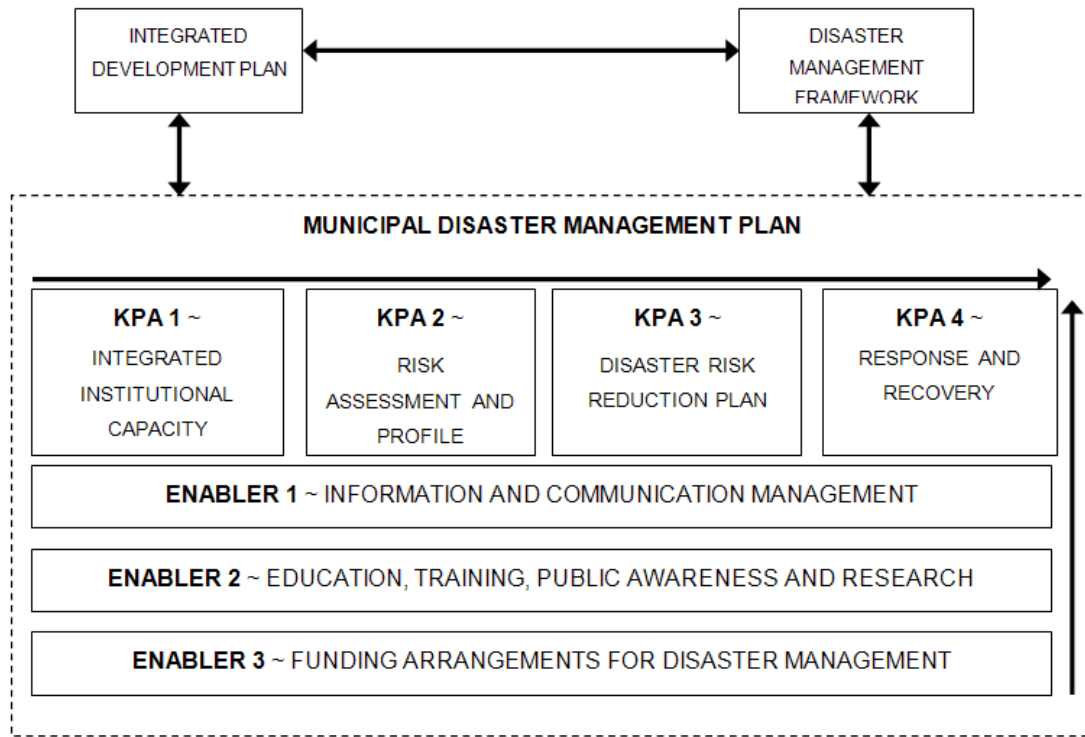
Figure 3: Outline of the disaster management plan

4.2   Disaster Management Plan Review and Update Methodology

Figure 4 graphically depicts the recommended approach for preparing Disaster Management Plans. Sisonke District Municipality implemented this process during 2007-2008 and therefore have a very good basis for further and ongoing planning. It is suggested that this project follow a similar process and build on what was previously done which will allow the project team to verify the relevance, update what has changed since 2008 and provide more detail and expand where required. The recommended actions for each of the phases are described below.

Phase 1 ~ Analysis Phase: In the first phase of the DMP process, as in the IDP process, communities and stakeholders are given the chance to analyse their potential risk areas and determine their priorities, with inputs from Disaster Management. The outputs of this phase of the project will be a list of the intolerably high risks, and the tolerable risks for the area. In this phase all existing plans developed at a local municipal level will be reviewed. In the event that both the intolerable and tolerable risks have not been sufficiently addressed we strongly recommend that support and guidance be provided by the district to ensure that the local municipal plans are compliant. We also recommend that the plans at local level are standardised and consistent to facilitate the consolidation and preparation of the district plan.

Key actions and outcomes:

Review and update the list of hazards, risks and risk prioritisation and risk profile. Update the risk and vulnerability analysis, mapping and identification of vulnerable communities in the Sisonke District Municipality. Assess the resources and capacity to support disaster management.

Phase 2 ~ Disaster Risk Reduction Planning: The **intolerably high risks** are addressed in Phase 2 of the project. In this phase, the Sisonke District Municipality (SDM) will have to arrive at crucial decisions on the most appropriate ways to address the **intolerably high risks**, as well as, to ensure that concrete and sufficiently specified project proposals are designed, which can be used for implementation.

Key actions and outcomes:

Review the implementation status of the disaster management projects. Determine the value the projects add to the municipality. Update project information and develop new projects for implementation which will provide the most benefit to the municipality and the communities.

Phase 3 ~ Disaster Preparedness Planning: The **tolerable risks** are addressed in Phase 3 of the project. In this phase, the municipality will have to arrive at crucial decisions on the most appropriate ways to address the **tolerable risks**, as well as, to ensure that concrete and sufficiently specified project proposals are designed, which can be used for implementation.

Key actions and outcomes:

Update the list of role players and their contact details. Review the communication protocols and make recommendations on improvements. Further develop contingency plans for priority risks. Review the institutional arrangements and its effectiveness.

Phase 4 ~ IDP Integration Phase: In this phase, the municipality have to make sure that the project proposals are in line with the objectives and the agreed strategies of their Council, with the resource frames (financial and institutional) and with legal requirements.

Key actions and outcomes:

Integrate all identified initiatives and risks into the IDP.

Phase 5 ~ IDP Approval Phase: This phase is about the feedback process on the Draft IDP that is supposed to result in a final approval/adoption of the plan by the Municipal Councils.

Key actions and outcomes:

Assist with the approval and adoption of the reviewed and updated disaster management plan

Phase 6 ~ IDP Implementation Phase: The "*Integrated Development Planning (IDP) Guidelines*"[2] from the National Department of Provincial and Local Government does not specifically mention *Phase 6 ~ Implementation Phase*. However, it is logical that once the Municipal Councils have approved the IDP's (with the budgets) that the municipal officials can commence with the implementation of their disaster management projects.

Key actions and outcomes:

Develop business plans and preliminary studies which can be used to source funding. Allocate of role players and teams to assist with the implementation. Implement and update the municipal disaster management information system and capture all disaster management information electronically.

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[2]   http://www.dplg.gov.za/documents/Publications_b.htm
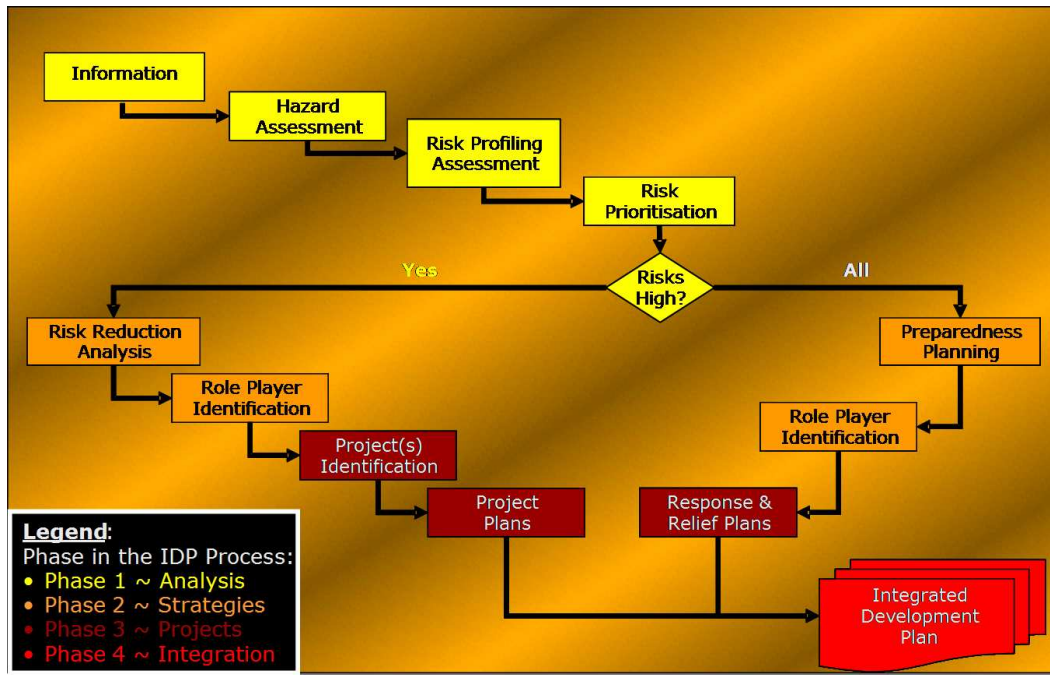
Figure 4: The Recommended Project Approach, Depicting the Various Steps in Preparing a Disaster Management Plan

4.3   Report Structure

For ease of understanding the report has been structured as follow. The process of the review involved review of the latest available Integrated Development Plan (IDP) for the Sisonke District Municipality as well as each local municipality. Updated information regarding demographics and service delivery has also been reviewed. A workshop was held with all stakeholders and community members from each of the local municipalities within the Sisonke District to identify any new hazards within their communities. The review also involved updating of the Incident Register Database to ensure that it is up to date. It is proposed that this database be used for future capturing of incident information. This will make the sharing of information and reporting easier. Maps have been drafted to illustrate the locations of the incidents and types of incidents which occur within the district.

A summary of the findings from the above mentioned activities has been included in Section 4 of this report. The information gathered during the above mentioned activities was then further incorporated into this report by updating the Key Performance Areas (KPA) or Enablers previously identified in the 2008 Disaster Management Plan.

5   FINDINGS

5.1   Status of Disaster Management within the Sisonke District Municipality

The process of the review involved review of the latest available Integrated Development Plan (IDP) for the Sisonke District Municipality as well as each local municipality. Updated information regarding demographics and service delivery has been included below.

The Disaster Management Act highlights four key projects for disaster management. These projects include the establishment of a Disaster Management Centre, development of a Disaster Management Plan and Disaster Management Framework as well as the establishment of a Disaster Management Advisory Forum. The Sisonke District Municipality has embarked on the process of implementing these projects.

5.1.1   Sisonke District Municipality Disaster Management Centre

The municipality has procured a property along the R56 Provincial road, portion (Sub 5 of Lot 419) in Morningside where the disaster management centre will be erected. Draft designs were approved by the Disaster management Forum and Social Services Committee. The designs were then submitted to Ubuhlebezwe Municipality for approval. The estimated construction cost of the Disaster Management Centre is R12 750 000.00, excluding professional fees and VAT. The Department of Cooperative Governance and Traditional Affairs have transferred R1 000 000.00 towards construction of the centre. However, additional funding is still required for the successful completion of the project.

5.1.2   Sisonke District Municipality Disaster Management Plan

The Disaster Management Plan has been finalized. The plan was approved by the Municipal Executive Committee in 2008 and is being implemented. The disaster management plan is currently under review.

5.1.3   Sisonke District Municipality Disaster Management Framework

The Disaster Management Framework has also been developed and adopted by Executive Committee. The disaster management forum has been established and it is up and running and is meeting on a quarterly basis.

5.1.4   Disaster Risk Management: Risk Reduction and Preparedness

The Sisonke District Municipality: Environmental Health Unit has been very active in dealing with minimizing the risks associated with some of the hazards identified in the Disaster Management Plan such as waste management disposal sites and water pollution. Campaigns are being conducted to encourage municipalities regarding proper waste management practises and the importance of waste disposal sites that comply with the legislation. Programs are being implemented such as testing of water samples to determine suitability of water for human consumption. Health and hygiene awareness campaigns are also being conducted to

minimize the risk of communicable diseases. Department of Health is taking on the mitigation of hazards relevant to their mandates and as such the District Aids Council has been launched and is functional.

With regards to snow; heavy storms and fire; the municipality has prepared a Snow Protocol to assist with coordination and effective response in the case of snow. The municipality has also acquired rescue equipment to serve as a backup to the residents within the District.

During 2009, the Sisonke District Municipality conducted a Detailed Fire Assessment Study to determine the effective response mechanisms to deal with fire services in Umzimkhulu Local Municipality. The outcome of the study determined that the poor response by Sisonke DM was due primarily to the lack and inadequate fire fighting equipment such as fire engines and the fire station; lack of human resources and to a certain extent the vastness and the geographical terrain of the area. The District Municipality sourced funding from the Department of Cooperative Governance and Traditional Affairs to deal with the implementation of the recommendations of the study. Fire Awareness campaigns are being conducted to reduce the risk of human generated disasters. More equipment in the form of a Fire Engine and 4x4 Fire Bakkie has been bought and a Fire Station is in the process of being erected.

The municipality is receiving tremendous support from the Department of Local Government and Traditional Affairs in terms of grant funding to implement the disaster management. The municipality also provides internal funding for disaster management to ensure optimal service provision for disaster relief and other matters. A budget is in place to acquire Disaster Relief Material and Disaster Management Awareness campaigns are being implemented to educate communities within the district regarding disaster management issues. This programme will be on-going.

5.2 Demographic Data

The figures below are based on Census 2007 estimates. These figure indicate a population sparsely spread throughout an area of 0.011127 km².

Sisonke District Municipality	2001	2007	2010[3]
Total population	308 999	500 082	519 487
Number of Households	76 069	105 659	105 657

Table 1: Demographic data of Sisonke District 2001, 2007 and 2010

The age group between 15 to 34 years is the most dominant at a district and local municipal level. This age group forms part of the active labour group, which is also sexually active. This is the most vulnerable group from a social perspective with regards to unemployment, HIV/ Aids and other infections. The huge numbers of this age group call for a need for creation of employment opportunities and provision of educational facilities to cater for their needs. Failure to do so will result in a huge influx of youthful members of Sisonke to other major towns for

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[3] "Metro/District Council population estimates by gender and year (based on 2010 projection)". **Statistics South Africa.**

better employment and education opportunities. The Sisonke District Municipality has put money aside to assist this group.

5.3 Outcome of the Workshops Conducted with the Local Municipalities

A workshop was held for each local municipality within the Sisonke District to identify any new hazards within each area. Participants included councillors and officials from the local municipalities, and in some cases officials from the local health and police department, and emergency services. Copies of the attendance registers have been included in Annexure 1. The findings of the workshops have been discussed below.

Ubuhlebezwe	Ingwe	KwaSani	Greater Kokstad	uMzimkhulu
Natural Hazards				
Floods	Floods		Floods	Floods
Fire	Fire	Fire	Fire	Fire
Severe Weather				
Thunderstorms, lightning, drought and heavy winds.	Thunderstorms, lightning, drought, snow and heavy winds.	Thunderstorms, lightning, snow and heavy winds.	Thunderstorms, lightning, drought, snow and heavy winds.	Thunderstorms, lightning, drought and hail.
Biological Hazards				
Communicable diseases and animal diseases	Communicable diseases	Communicable diseases	Communicable diseases	Communicable diseases
Technological Hazards				
Manmade Fire	Manmade Fire	Manmade Fire	Manmade Fire	Manmade Fire
Basic Services				
Lack of adequate basic services i.e. poor conditions of roads and chemical spills on roads.	Lack of adequate basic services i.e. poor conditions of roads and increase in traffic	Lack of adequate basic services i.e. poor conditions of roads, poor sanitation and disruption of water supply, illegal electricity connections, lack of waste disposal sites and waste collection, and	Lack of adequate basic services i.e. Poor conditions of roads and poor drainage.	Lack of adequate basic services i.e. poor conditions of roads and public transport, poor sanitation and water quality, poor drainage, and lack of waste disposal sites and waste collection.

		poor condition of pedestrian bridges over rivers.		
		Housing Infrastructure		
	Poor building	Shacks – unsafe housing structures		
		Political Hazards		
Crime	Over population		Unrest and lack of departmental participation	Over population
		Environmental Degradation		
Soil erosion	Soil erosion and open pits (burrow pits)			Soil erosion

Table 2: Hazards identified during the workshops for each local municipality

Ubuhlebezwe Local Municipality

A workshop was held for the Ubuhlebezwe Local Municipality on the 31st of January 2012 at the Ixopo Library. The most significant hazards identified were thunderstorms, including lightning and heavy wind, as well as fire and road accidents. Not much can be done in terms of prevention of natural hazards; however the aim should be to mitigate the effects of these hazards and ensure that the communities minimise their risk and exposure to such. Lightning conductors can be installed to reduce the risk to lightning in high risk areas. The risk can be further reduced by using cement rather than corrugated iron on top of rondawels to protect against fire caused by lightning. By fast tracking housing developments the municipality can decrease its vulnerability with regards to heavy winds. In terms of fire and road accidents awareness of preventative measures should be implemented such as awareness campaigns for schools, it is believed that children can easily practice an influence on parents. Inspecting fire equipment is also encouraged, however in many cases the rural schools have no water and fire extinguishers have not been serviced. Education on traffic and road safety should also be encouraged at schools. Three (3) awareness campaigns on Disaster Management are conducted every quarter. The Department of health is responsible for health and hygiene awareness.

A key role of the councillors is to form the communication link between the community and the municipality. A greater understanding of the effect of disasters is needed. Councillors need to be aware of the risks in their areas and preventive and/or mitigation measures to be taken. Councillors are responsible for early warning systems e.g. using a whistle in case of a fire. Communities need to be informed of these systems. Councillors should draw up plans to ensure on-going preparedness and mitigation e.g. where an informal housing structure is damaged it must not be replaced with another informal structure but with a proper house. This

needs to be forwarded to the Department of Human Settlement. It should be noted that there is currently an issue with the quality of housing being provided.

In terms of communication and interaction with the municipality, councillors and municipal officials need to plan together. It was identified during the workshop that there is good cooperation between the National, Provincial and District Disaster Management Centres, but there exists a lack of coordination and communication between the local municipality disaster management and the District Disaster Management Centre. The local municipalities do not always attend the scheduled meetings and has a further constraint in that it has limited or no budget allocated for disaster management.

The way forward identified by the councillors included review of the Local Municipality's IDP. The LM must provide feedback and input into the District IDP to prioritise the projects that promote improved Disaster Management. Each LM must establish a DMAF and disaster management must be included on the agenda for stakeholders. The councillors requested training on disaster management at ward level and recommended there be increased interaction with communities and initiation of programs.

Ingwe Local Municipality

A workshop was held for the Ingwe Local Municipality on the 3rd of February 2012 at the Ingwe Municipal offices. The most significant hazards identified are lightning, fire and heavy winds. According to councillor feedback, the occurrence of fires in certain areas was reduced by 99% during 2011. This initiative should be shared and implemented across the district to help reduce the fire risk. Another risk reduction initiative that was implemented is to train the community members on how to get a person out of a house that is on fire. They are taught to crawl into the house with a rope tied around one leg and a damp cloth over their mouth. They then sign to a person outside to pull them out if it gets too hot inside the house. It was acknowledged that fire should be separated into two groups, wild fires and domestic fires. The timber community and local farmers respond to fires within the Ingwe area. Domestic fires tend to be problematic to respond to as it spreads too fast and makes the response difficult considering the limited resources. The economic impact of wild fires is far greater than domestic fires. An example of this is where a forest burned down within the Ingwe area a few years ago. Three (3) sawmills had to close down and as a result many people lost their jobs. Fire awareness campaigns and fire breaks were recommended as preventative measures.

Ward 8 was identified as the main area of concern for lightning and wards 1 and 3 were identified to be high risk areas for heavy wind. Community awareness workshops and use of the correct lightning conductors are needed especially for schools. The councillors felt that further scientific knowledge is required for use of lightning conductors and that more research must be done to prove that they work. It was recommended that services providers should conduct a workshop for the community on the dynamics of the lightning conductors prior to the implementation of such.

In terms of communicable diseases, ward aids councillors have already been identified and Awareness campaigns are being conducted. Councillors recommended water storage and immunisation of animals to mitigate the effects of drought. The impacts of poor road conditions

can be mitigated by tarring gravel/dirt roads and upgrading damaged roads. Speed humps should be construction on roads where accidents are inclined to occur due to speeding.

The Municipality have existing initiatives in place which is in line with the objectives of disaster management however not classified or categorised under the jurisdiction of disaster management e.g. advising communities not to build close to rivers, checking foundations of houses. These are all related to risk reduction projects. Disaster Management is a coordinating function and many of the initiatives and projects identified through the planning process is not for implementation by disaster management but rather by the relevant line function department. The Municipality has also embarked on identification of safety zones and awareness campaigns ETWP. Local Municipalities must have a budget for disaster management and inclusion of disaster management in the IDP will assure funding for projects.

KwaSani Local Municipality

A workshop was held for the KwaSani Local Municipality on the 7th of February 2012 at the KwaSani municipal offices. The major issues identified were severe weather conditions, fires and poor sanitation. The District is in the process of appointing a service provider for the provision of lightning conductors. Further mitigation should include the improvement of housing development structures and adopting pitch roofs so that snow can slide off. The District Municipality has a snow protocol which is reviewed annually and should be adopted by the LM. Fire awareness programmes need to be implemented and firebreaks need to be burned.

Poor sanitation service and lack of sanitation infrastructure is a major issue and was raised by the councillors. Ward 2 and 3 currently work on a bucket system. Collection of the buckets is done on a weekly basis however during December 2011 the buckets were not collected for 3 weeks, which resulted in serious health risks. Sanitation is a district function and need to work closely with the operational teams to ensure that this service is provided effectively. The IDP requested improvement and the details as included in the WSDP are currently being discussed. Implementation of sewerage infrastructure should be prioritised. This should include construction of a waste water treatment works and compilation of a comprehensive waste water treatment programme. Councillors suggested that ablution blocks should be constructed at bus stops for tourists to avoid unhygienic conditions.

It was acknowledged that incidents should be reported to the councillors and that an incident is not necessarily a disaster. This was explained to the councillors in more detail. An advert calling for disaster management volunteers was placed by the District but no responses were received and as such it is evident that there is a gap in communication between the Local and the District Municipality.

Greater Kokstad Local Municipality

A workshop was held for the Greater Kokstad Local Municipality on the 8th of February 2012 at the Kokstad Library. The most significant hazards identified included floods, snow and fires. The 1987 floods have had a significant impact on the Municipality. The horseshoe community below the railway line which is built in a floodplain had been flooded during this time and fish had moved to a new area after the floods. Mitigation measures for floods included proper town planning, review of the municipal Land Use Management System (LUMS) and awareness

creation. In terms of snow it was suggested that building codes be enforced with regards to the shapes of rooftops. Snow resistant measures need to be enforced such as cement or other durable structures as opposed to thatch roofs. Snow protocol awareness also needs to be conducted. Proper fire prevention measures need to be implemented in line with the fire association and the municipality. Fire awareness needs to be conducted and firebreaks need to take place.

Councillors suggested that workshops be held with all departments and councillors to educate them on disaster management and create awareness on their roles in disaster management. They also requested a list of the names of all the volunteers. There appears to be some communication challenges relating to the sharing and dissemination of information. Each department gave input on their link/role/issue with disaster management. The LDMAF must meet on a regular basis and are currently meeting once a year. The Greater Kokstad DMP was reviewed during 2011.

uMzimkhulu Local Municipality

A workshop was held for the uMzimkhulu Local Municipality on the 10th February 2012 at the uMzimkhulu Municipality's Chamber of Commerce. The priority hazards identified include fires and hazards associated with the town being built in a floodplain i.e. floods, poor conditions of roads, poor sanitation, poor water quality and diseases.

Fire is the hazard which mostly affects this municipality. Rural metro is currently providing fire services to the municipality. Fires usually occur due to lack of education, negligence and fire encroachment through irresponsible practices. Fire awareness programmes need to be conducted and firebreaks need to be burned. Lightning conductors also need to be provided to help reduce the risks of lightning strikes. During the workshops councillors commented that the fire department ignore calls regarding fire breaks and do not provide assistance for burning of fire breaks. It was suggested that fire trucks must be brought closer to the people. The District is in the process of identifying the issues with the fire services.

The economic centre of the municipality has been constructed in a floodplain and as a result, when a flood occurs, mainly due to heavy rain that results in overflow of rivers and flooding of the floodplain, there is a negative impact on the economy of the municipal area. Business people affected by floods refuse to pay rates which also impacts negatively on the economy. Flooding of the town also results in bad road conditions and spreading of diseases such as cholera and other waterborne diseases which in turn impact on the water quality of the area. Lack of sanitation and poor condition of sewerage infrastructure can also have a negative impact on water quality and occurrence of diseases. Ultimately the municipality should encourage people to relocate outside of the flood areas. Roads need to be upgraded on a regular basis. Underground pipes lack the capacity to handle the volume of water passing through during a heavy rain event and a lot of construction takes place in the town to mitigate impacts of floods. Education and awareness programmes need to be conducted in terms of communicable and especially waterborne diseases. Proper planning is required in terms of provision of sewerage infrastructure. Old rusted pipes need to be replaced and contractors need to be carefully monitored when constructing sewerage infrastructure. Sanitation, water quality and drainage are major areas of concern for the uMzimkhulu Municipality.

During the workshops conducted with the Umzimkhulu Local Municipality stakeholders; councillors requested further clarification on the difference between an incident and a disaster, as well as when councillors need to assist. The local municipalities need to compile a relief protocol and standards/guidelines which identifies to whom they provide relief, which type of relief and for what magnitude of an incident relief is provided. For e.g. if someone's kitchen burns down and they have no food, the municipality can provide a food parcels. Damaged goods need to be classified so that people can know how long it will take to receive assistance. Assistance should be provided by either the LM where possible or the DM where the LM does not have the capacity to provide assistance. The advisory forum must advise departments on risks. When risks increase councillors, local and district departments need to be advised. A disaster cannot be declared by the local municipality. A report needs to be compiled and submitted to the District Municipality which will be forwarded into the Provincial and National Disaster Management Centres for evaluation to determine if the incident can be declared as a disaster.

5.4   Municipal Incident Register

The process of the review involved updating of the Municipal Incident Register. Incidents captured on paper based forms by the local municipalities i.e. Ubuhlebezwe LM, KwaSani LM, Ingwe LM, Greater Kokstad LM, uMzimkhulu LM, have been electronically captured in Municipal Incident Register for the Sisonke District Municipality. Maps have been drafted to illustrate the locations of the incidents and types of incidents that occur within the district.

The data captured in the incident register database has been summarised in the tables and graphs provided in Annexure 2. The most incidents captured for the Sisonke District were for fires. However, the hazard that affected the most people within the Sisonke District is floods. From the data it appears that Ubuhlebezwe and Ingwe have the highest number of incidents, while KwaSani and uMzimkhulu have the lowest number. **However, it should be noted that there is a lack of captured data available for all the local municipalities, especially KwaSani and uMzimkhulu, which may have a significant impact on the assessment of the current situation in terms of prioritizing hazards.**

The local municipality with the highest number of people affected by hazards is the Greater Kokstad Municipality. This is mainly due to a flood incident which affected 530 people. The local municipalities with the least affected people are KwaSani and uMzimkhulu Municipalities. **Once more it should be noted that there is a lack of captured data available for all the local municipalities, especially KwaSani and uMzimkhulu, which may have a significant impact on the assessment of the current situation in terms of prioritizing hazards.**

Monthly fire incident reports are submitted by Rural Metro to the KwaSani and Umzimkhulu local and Sisonke district municipalities. However, these incidents are not being captured in the incident register database.

5.5   Status of the local municipality disaster management plans

Ubuhlebezwe Local Municipality

According to the Ubuhlebezwe Municipality's IDP the objective of the Disaster Management Plan is to strengthen the capacity of the Ubuhlebezwe Disaster Risk Management system to

reduce unacceptable risks and improve response and recovery activities. Disaster Management within the Ubuhlebezwe Municipality is currently unfunded according to the IDP and is being performed with limited resources. Emphasis has been placed on moving the function of disaster management to the Sisonke District Municipality.

Greater Kokstad Local Municipality

In the Greater Kokstad Local Municipality the function of disaster management is performed by the Local Municipality. Public awareness programmes are still needed in order to ensure that the communities and individuals with access to information on disasters in order to encourage them to adapt behavioural patterns to reduce risk. Such programmes should ensure that communities heed early warnings, recognise risk situation, and take appropriate remedial or evasive action. It should be noted that the construction of a Disaster Management Centre has been included in the Greater Kokstad Local Municipality IDP as a Key Anchor Project to be completed within the next 5 years.

Umzimkhulu, KwaSani and Ingwe Local Municipalities

Since the development and approval of the Sisonke Disaster Management Plan in 2008, the Umzimkhulu, KwaSani and Ingwe Local Municipalities have developed their own Local Disaster Management Plan. According to the latest IDP for KwaSani (2011/2012), disaster management within the municipality is adequate at present. However, the Disaster Management Plan requires to be reviewed. The IDP for Ingwe (2010/2011) states that the Disaster Management plan is under review and would be finalised by the 1st of July 2010.

Recommendations

It is recommended that local municipalities commence with review their disaster management plans as soon as possible. Time and money can also be saved as workshops have already been conducted for the purpose of the district Disaster Management Plan and this information can be made available to the Local Municipalities. However, local municipalities may be required to collect more detailed information for each ward or community. Local municipalities need to ensure that they budget for disaster management and that their project plans are included in their IDPs.

5.6 Status of Projects Identified in the Disaster Management Plan

Fire	
Project description	**What has been done**
Ensure that the community is informed of risks and any planned initiatives.	Fire awareness campaigns are being conducted to reduce the risk of human generated disasters.
Provide training.	Unknown
Annual update of response and contingency plans and communication network before the fire season.	Unknown
Engage in formalised training curricula on the provision of different levels of fire expertise.	Unknown
Conduct a fire study to determine the level of readiness and gap analysis fire fighting equipment. Write business plans to source funding.	During 2009, the Sisonke District Municipality conducted Fire Assessment Study to determine the effective response mechanisms to deal with fire services in **Umzimkhulu Local Municipality**. The outcome of the

	study determined that the poor response by Sisonke DM was due primarily to the lack and inadequate fire fighting equipment such as fire engines and the fire station; lack of human resources and to a certain extent the vastness and the geographical terrain of the area. The District Municipality sourced funding from the Department of Cooperative Governance and Traditional Affairs to deal with the implementation of the recommendations of the study. More equipment in the form of a Fire Engine and 4x4 Fire Bakkie has been bought and a Fire Station is in the process of being erected.
Implement and co-ordinate practical fire drills.	Unknown
Ensure sufficient water supply to informal areas.	Unknown
Enforce the regulation that ensures adequate spacing between housing and infrastructure.	Unknown
Establish a fire awareness forum to facilitate communication and decision making.	Unknown
Educate the public on the dangers of fires and ways to be safe around fires.	Fire Awareness campaigns are being conducted to reduce the risk of human generated disasters.
Establish a collection point and standard protocols to be used in the event of a fire incident.	Unknown
Ensure burning of regular fire breaks to avoid spreading of fires. Establish FBM programme.	Unknown
Integration of Disaster Management into SDF and IDP.	Disaster Management has been integrated into the SDF and IDP.
Train and educate the public, informal settlements and farm workers on correct methods and protocols relating to fire practices and fire incidents.	Fire Awareness campaigns are being conducted to reduce the risk of human generated disasters.
Floods	
Project description	**What has been done**
Ensure that products and goods are stored in a safe place e.g. tunnel silos.	Unknown
Awareness campaigns to educate communities on what procedure to follow in the case of an incident.	The municipality has disaster management awareness campaigns to capacitate the communities within the district about disaster management issues, which assists them to lessen/ reduce the impact of disaster incidents and also lessen the vulnerability of communities to the same. Such a programme is ongoing and will be conducted throughout the years.
Develop contingency plans to provide water to affected areas in case of a flood incident.	Unknown
Develop contingency plans to provide water to affected areas in case of a flood incident.	Unknown
Monitor dam and river levels.	Unknown
Observe the 1:10 year floodline to activate the early warning systems.	Unknown
Make communities aware of the flood risks and encourage them to not build their houses close to the riverbanks.	Disaster Management Awareness campaigns are being implemented to educate communities within the district regarding disaster management issues. This programme will be on-going.
Establish an early warning system and communication protocol to notify communities when there is flood danger.	Unknown
Inform communities which are located in flood vulnerable areas.	Unknown

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Put proper funding mechanisms in place from provincial government to ensure easy access to the fund in the case of a major incident.	Unknown
Farmers should be informed of agriculture techniques to mitigate the effects of floods i.e. avoiding soil erosion by ploughing deeper and horizontal.	Unknown

Food Security and Poverty Alleviation	
Project description	**What has been done**
Develop and implement a programme to guide the community to get involved in job creation and labour based entrepreneurship.	Sisonke have an existing Local Economic Development and Poverty Alleviation Program. Further to the above Sisonke are in the process to sign a Memorandum of Agreement with the Independent Development Trust (IDT) to take on board 30 contractors for contractor development programme. Accredited service providers will train these emerging contractors. The objective is for them to obtain a formal training; they will have to undergo a certain amount of practical experience on site.
Initiate agriculture programmes to create poverty relief opportunities for the community. Feasibility study and implementation.	A number of massification projects have been proposed for the 2010/11 budget.
Initiate agricultural programmes to create food security opportunities for the community. Feasibility study and implementation.	A number of massification projects have been proposed for the 2010/11 budget.
Initiate economic programmes to create business opportunities for communities.	Sisonke have an existing Local Economic Development and Poverty Alleviation Program. Further to the above Sisonke are in the process to sign a Memorandum of Agreement with the Independent Development Trust (IDT) to take on board 30 contractors for contractor development programme. Accredited service providers will train these emerging contractors. The objective is for them to obtain a formal training; they will have to undergo a certain amount of practical experience on site.
Donor funding and foreign investments to be arranged to boost the local economic market.	Unknown

General	
Project description	**What has been done**
Promotion of risk avoidance behaviour.	The municipality has disaster management awareness campaigns to capacitate the communities within the district about disaster management issues, which assists them to lessen/ reduce the impact of disaster incidents and also lessen the vulnerability of communities to the same. Such a programme is ongoing and will be conducted throughout the years.
Allocate funding for response, recovery and rehabilitation plans and programmes to be adopted and implemented.	Unknown
Ensure funding for the implementation of disaster risk reduction projects.	The municipality is receiving tremendous support from the Department of Local Government and Traditional Affairs in terms of grant funding to implement the disaster management. The municipality also provides internal funding for disaster management to ensure optimal service provision for disaster relief and other matters.
Allocate budget for ongoing disaster management operations and establishment of an advisory forum.	The disaster management forum has been established and it is up and running and it is meeting on quarterly basis. A budget is in place to acquire Disaster Relief Material and Disaster Management Awareness

	campaigns are being implemented to educate communities within the district regarding disaster management issues. This programme will be on-going.
Provide budget for education, training and capacity building programmes to be developed and implemented.	A budget is in place to acquire Disaster Relief Material and Disaster Management Awareness campaigns are being implemented to educate communities within the district regarding disaster management issues. This programme will be on-going.
Informal settlement disaster risk assessments.	Unknown
Development of disaster management plans for each sector.	Unknown
Development of facility and event specific disaster management plans.	Unknown
SDF Should make provision for: a) Proper road infrastructure b) Substance housing development c) Electrical supply d) Sanitation system e) Drainage system f) Health facilities.	Provision has been made for this in the SDF.
Have adequate relief measures in available to assist affected communities, i.e. blankets, food, shelter, tents.	A budget is in place to acquire Disaster Relief Material and Disaster Management Awareness campaigns are being implemented to educate communities within the district regarding disaster management issues. This programme will be on-going.
Technical services and support for MIG programme.	Unknown
Poverty relief strategy development and implementation.	Sisonke have an existing Local Economic Development and Poverty Alleviation Program.
Agriculture food security programme implementation and project management.	A number of massification project have been proposed for the 2010/11 budget.
Solid waste disposal survey.	Environmental Health Unit has been very active in dealing with minimizing the risks associated with some of the hazards identified in the Disaster Management Plan such as waste management disposal sites. Campaigns are being conducted to encourage municipalities regarding proper waste management practises and the importance of waste disposal sites that comply with the legislation.
Solid Waste disposal strategy plan implementation.	The Sisonke District Municipality have conducted the public participation meeting towards finalizing the District Integrated Waste Management Plan for which will address all the waste management issues. Currently there is a clean-up campaign programme in place which promotes and also educates community members on proper disposal of waste. In assisting the Local Municipalities the district has embarked on a Cleanest Town Competition project which is also used a platform for the district to identify various challenges and gaps faced within the local municipalities have in refuse collection and proper storage and disposal. The ongoing of monitoring the waste management systems-refuse, health care waste, hazardous waste and sewage. Ensuring that waste is stored, collected, removed and disposed of effectively and efficiently and that proper containers are provided. Investigate complaints and inspection of any activities relating to waste resulting thereof.
Labour intensive road rehabilitation.	Unknown
Backlog study for the following: Infrastructure, Water, Electricity, Sanitation and Housing.	The District assists KZN DOT in addressing backlogs in constructing gravel road to give access to communities. Water & Sanitation Backlog Studies, Implementation of capital projects for backlog alleviation

Municipal asset register and maintenance strategy development and implementation.	The detailed asset quantities, costs, maintenance history and schedules, and other key data is currently scattered and not coordinated in a centralised database that ensures access when required. The plan is to implement a computerised asset management system. Maintenance and inspections are undertaken on an ad hoc basis due to skills challenges and bulk of work being reactive. As outlined in the budget programme, there will be an assessment of all critical assets to determine its condition and establish the necessary interventions to arrest the degradation of infrastructure.
Municipal asset register.	As outlined in the budget programme, there will be an assessment of all critical assets to determine its condition and establish the necessary interventions to arrest the degradation of infrastructure.
Compile municipal housing sector plan.	No
Assessment of defective/substandard housing units.	Unknown
2010 high level transportation plan.	Unknown. However, during the 2008/09 financial year, the Sisonke District Municipality (SDM) finalized the Public Transport Plan which will guide the operations of the SDM as the public transport planning authority.

Hazardous Accidents	
Project description	**What has been done**
Environmental rehabilitation programmes for communities and areas affected by hazardous spillage incidents.	Unknown
Monitor areas where hazardous incidents occurred.	Unknown
Child in traffic campaign.	Unknown
Public education on vehicles with hazardous chemicals and actions to take in case of an emergency.	Unknown
Ensure adequate response and relief items are in place for responding to a hazardous spillage incident.	Unknown
Investigate appropriate area for hazardous chemicals dumping site.	The Sisonke District Municipality have conducted the public participation meeting towards finalizing the District Integrated Waste Management Plan for which will address all the waste management issues. In assisting the Local Municipalities the district has embarked on a Cleanest Town Competition project which is also used a platform for the district to identify various challenges and gaps faced within the local municipalities have in refuse collection and proper storage and disposal. The ongoing of monitoring the waste management systems-refuse, health care waste, hazardous waste and sewage. Ensuring that waste is stored, collected, removed and disposed of effectively and efficiently and that proper containers are provided. Investigate complaints and inspection of any activities relating to waste resulting thereof.
Law Enforcement measures to be put into place to ensure that the carriers of hazardous chemicals adhere to safety requirements.	Unknown
Monitor strategy of potential spillage and dangerous areas before, during and after an incident.	Unknown
Inspect and monitor projects involving hazardous material through the use of committees and officials.	Unknown

Snow	
Project description	**What has been done**

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Public awareness campaigns regarding safety issues in the event of snow periods i.e. road accidents, infrastructure, farming vulnerability.	The municipality has prepared a Snow Protocol to assist with coordination and effective response in case of snow.
Train and capacitate the local communities on building techniques i.e. roofs to be pyramidal.	Unknown
Ensure that a proper survey is done on the areas before building new infrastructure.	Unknown
Identify safe sheds for livestock and feeds for livestock.	Unknown

Table 3: Showing the projects identified in the 2008 Sisonke Disaster Management Plan along with what has been done to ensure that these projects are initiated.

Other projects initiated by the Sisonke District Municipality to reduce their vulnerability to certain hazards have been discussed below:

Waste Management: The municipality is currently developing a comprehensive integrated waste management plan for the district which is according to the new boundaries of Sisonke since the inclusion of Umzimkhulu. The plan was anticipated to be completed in June 2010. Campaigns are been conducted to encourage local municipalities to undertake proper waste management practises and the importance of waste disposal sites that are in compliance with the legislation. Activities conducted by the municipality also include a) ongoing monitoring of waste management systems-refuse, health care waste, hazardous waste and sewage is being conducted. b) Ensuring that waste is stored, collected, removed and disposed of effectively and efficiently and that proper containers are provided. c) Investigation of complaints and inspection of any activities relating to waste.

Chemical Safety: Monitoring, identification, evaluation and prevention of the risks of chemicals that are harmful to human health through inspection of business premises open to the public.

Water Quality monitoring:
- Water sampling and testing for bacteriological and chemical analysis.
- Responding to consumer complaints on contaminations or impurities.
- Monitoring and control of storm water runoff from premises, which may impact on public health.

Environmental Pollution Control:
Air pollution control -
- Investigate complaints relating to environmental health conditions.
- Monitor and control illegal dumping, littering and burning of waste, in collaboration with the department of agriculture, environmental affairs and rural development.

Water Pollution -
- Complaint investigations relating to environmental health conditions ensuring that sewerage and effluents are disposed of in terms of the legal requirements and that no blockages and spills occur and institute remedial and preventative measures.

Surveillance and prevention of communicable diseases excluding immunizations: The district is conducting educational health and hygiene campaigns to prevent such communicable diseases. They also conduct case investigations to determine the source of infection.

HIV/Aids: The District Aids Council has been launched and is functional.

Food Control: According to the department of health statistics Sisonke have quite a number of food poisoning related cases being reported and therefore one of the preventative measures taken is to provide the necessary training to the informal sector in food handling which will be an ongoing program. To provide for the formal sector ongoing consumer protection and ensuring that all foods during production, handling, storage, processing and distribution are safe, wholesome and for human consumption; conform to quality and safe requirements are adhere to. Investigation of food quality and safety related complaints received from consumers and appropriate remedial measures. Implement measures for the recall or condemnation and proper disposal of foodstuff unfit, unwholesome for human consumption. Carry out routine inspection of food handling establishments. Enforcement of the food related provisions of the foodstuffs, cosmetics and disinfectant act, (Act No. 54 of 1972).

Agriculture: An application for funding has been packaged with the Ingwe Local Municipality to solicit funding from the Department of Environmental Affairs and Tourism for the production bio-fuel derived from waste material from the sawmill.

Sanitation: There are three projects which have been earmarked for Labour Intensive Methods, which are Eradication of Sanitation Backlog in Greater Kokstad, Eradication of Sanitation Backlog in Ubuhlebezwe and Ingwe Household Sanitation. The training will be conducted by an accredited training providers appointed by the Department of Labour. Skill such as bricklaying, plastering and administration will be transferred. These will assist the communities of Sisonke to develop their enterprises and to alleviate poverty.

6 Phases 1- 6: Disaster Management Planning

6.1 Phase 1 ~ Analysis Phase

6.1.1 Hazard Identification

In order to distinguish between different hazard types, numerous institutions have developed a variety of hazard classifications. The hazard classification developed by the ISDR[4] (Table 4: A typical classification of hazard types) summarises current thinking, namely:

HAZARDS

A potentially damaging physical event, phenomenon or human activity, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

NATURAL HAZARDS

These are natural processes or phenomena occurring in the biosphere that may constitute a damaging event. Natural Hazards are typically classified into:

Geological Hazards: Natural earth processes or phenomena in the biosphere, which include geological, neo-tectonic, geo-physical, geo-morphological, geo-technical and hydro-geological nature.

Hydro Meteorological Hazards: Natural processes or phenomena of atmospheric, hydrological or oceanographic nature.

Biological Hazards: Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances.

TECHNOLOGICAL HAZARDS

Danger originating from technological or industrial accidents, dangerous procedures or certain human activities, which may cause the loss of life or injury, property damage, social and economic degradation.

ENVIRONMENTAL DEGRADATION

"Processes induced by human behaviour and activities (sometimes combined with natural hazards), that damage the natural resource base or adversely alter natural processes or ecosystems."

Table 4: A typical classification of hazard types

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[4] "Living with Risk: A Global Review of Disaster Reduction Initiatives", International Strategy for **Disaster Reduction** (ISDR) Secretariat, July 2002.

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This phase commences with the initial information gathering where local communities were engaged and indigenous knowledge about the areas were gathered. This is often the source of very relevant and important information and is provided by the community. Indigenous knowledge also provides for historical incidents and often incidents not well documented in any other form. Not all incident or circumstances surrounding a specific incident is normally recorded. Therefore it is critical that the local community is consulted in the gathering of information as it forms the basis for future research. This information is then combined with the scientific assessment to provide the overall picture of potential hazards which exists in that area.

Disaster Management is an interactive and consultative process as well and multidisciplinary and multi-agency. This means that all relevant role players have to be identified and included in the development of the disaster management plan **as well as the regular review and updating** of the plan. The planning process must also include the different spheres of government.

The Sisonke District Municipality has an updated incident register where all relevant information regarding incidents is kept. The outputs from the analysis of the incident register indicated that priority should be given to the following hazards:

Priority Hazard 2008	Priority Hazards 2012
Fires	Fires
Storm surges	Floods
Wind storms	Severe storms
Snow	Wind storms
Lightning	Lightning
Drought	Hail storms

The priority hazards identified for Sisonke district municipality during the workshops were:

Priority Hazard 2008	Priority Hazards 2012
Fires	Fires
Drought	Drought
Snow	Thunderstorms and lightning
Hazardous accidents	Poor condition of roads – road accidents
Cholera	Communicable diseases
Floods	Floods
	Heavy winds
	Poor service infrastructure (sanitation, water and waste)

The outcomes of the risk and vulnerability assessment can easily be included into the district plan for updating on an ongoing basis. The risks identified thus far for each local municipality was compiled into a consolidated list which represented the risk of the district.

6.1.2   Risk Prioritisation

6.1.2.1   Objective

The risk prioritisation exercise includes finalization of the hazard identification through consolidating all information relating to the priority risks. This would include community based assessment, analysis of previously documented incidents and various other sources of information. Based on the ranking of the priority risks appropriate risk reduction strategies will be developed to reduce the risks to a tolerable level.

6.1.2.2   *Capacity to cope*

The manageability (capacity to cope) was determined by taking into consideration the following aspects:

- Awareness
- Legislative framework
- Early warning
- Government response
- Municipal government response
- Existing risk reduction measures
- Public participation
- Municipal management capabilities

6.1.2.3   *Risk prioritisation*

The finalisation of the risk prioritisation for each risk considered the following factors:

- The probability that such an incident will occur
- The impact on the community should such and incidents occur

6.1.2.4   *Relative Risk Prioritisation*

On completion of the risk prioritisation and the analysis of the hazards and vulnerabilities, a profile was determined which is indicative of the risks in the Sisonke District. These risks have been listed below:

- Fire
- Floods
- Severe Weather (Thunderstorms and lightning)
- Poor conditions of roads – road accidents

6.1.3   Spatial Analysis

The GIS allows for spatial modelling and analysis which determines the priority hazards and their primary areas of impact. Another factor which contributes to the level of risk is the vulnerabilities and exposure of the communities to that hazard. Census information forms the base for determining the vulnerability of these communities. The vulnerability of the areas and communities are evaluated and compared against one another to identify the most vulnerable communities in the municipality. These two elements represent the level of risk for the specific hazard.

The maps below illustrate the locality of vulnerable communities in terms of lightning strikes and are based on lightning density data received for the South African Weather Services.
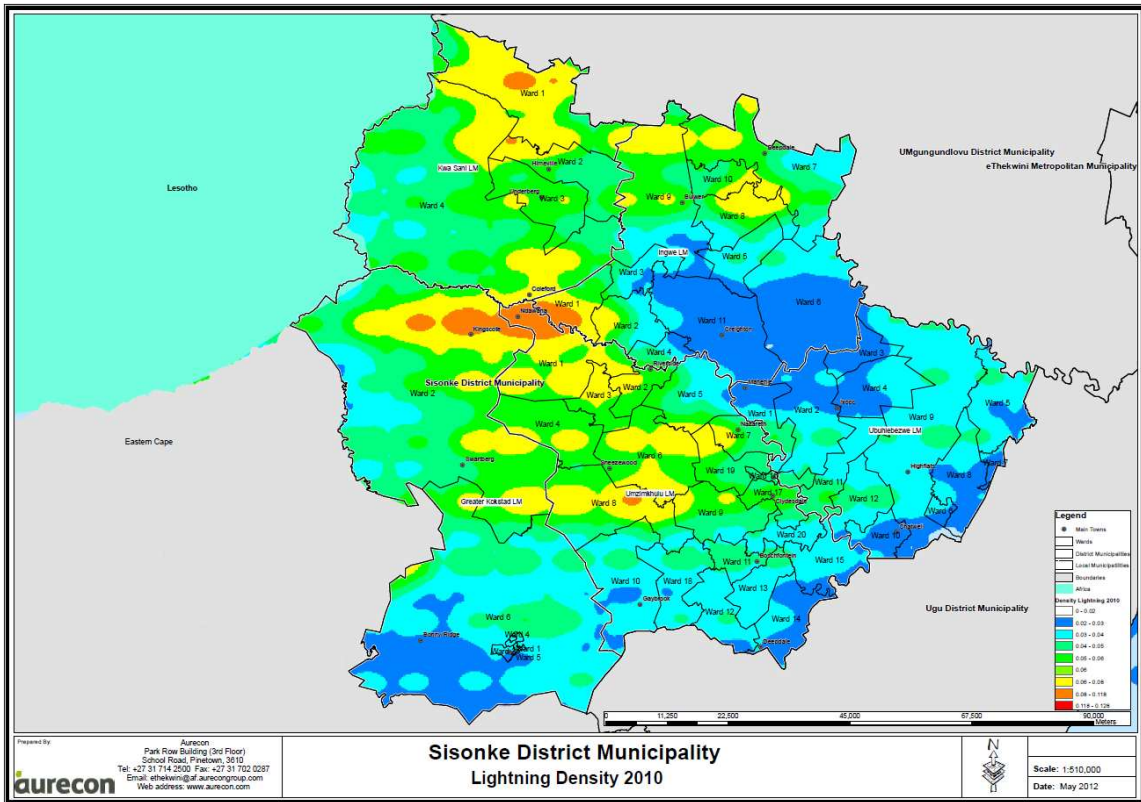
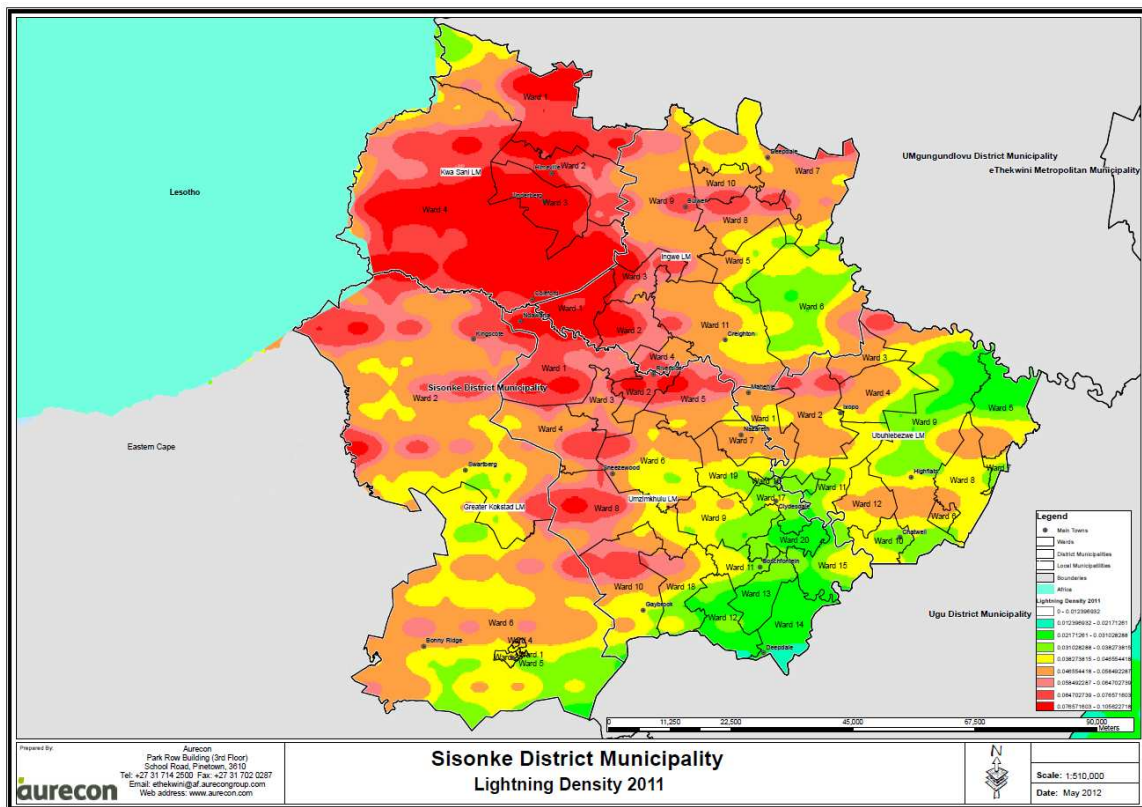*Figure 5: Areas in Sisonke District Municipality most vulnerable to lighting strikes in 2010*

Figure 6: Areas in Sisonke District Municipality most vulnerable to lighting strikes in 2011
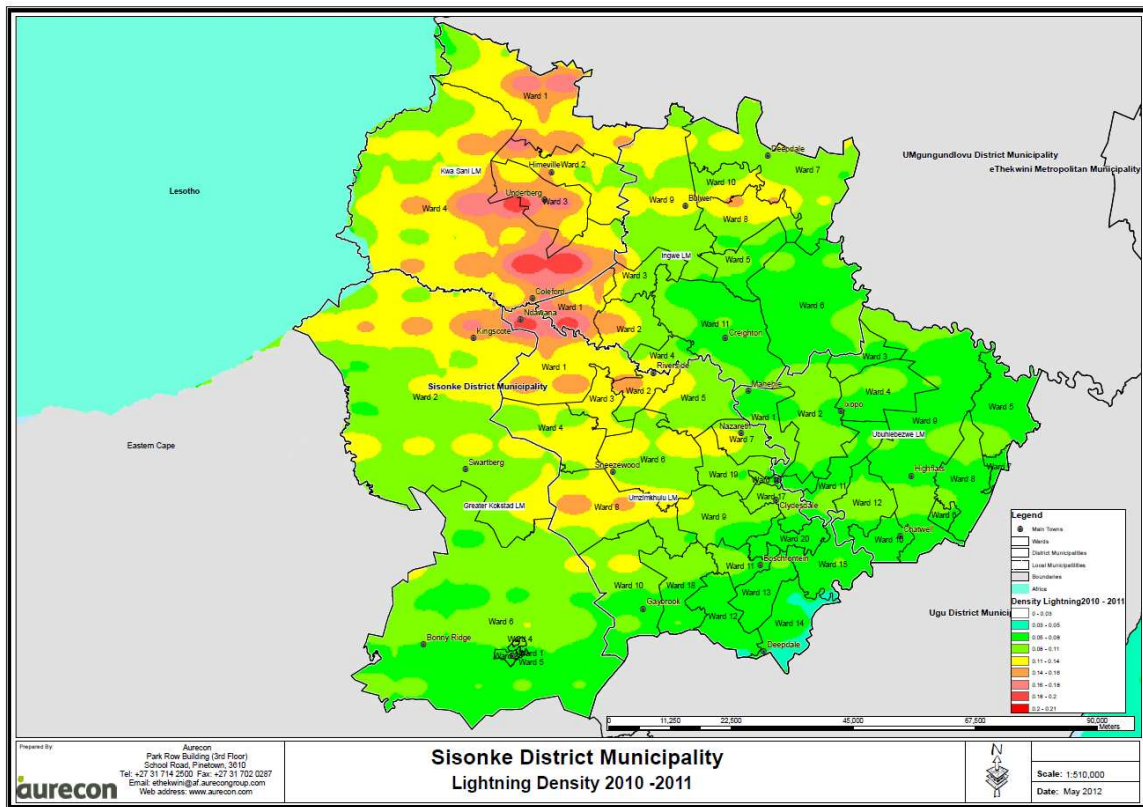
Figure 7: Areas in Sisonke District Municipality most vulnerable to lighting strikes in 2010 and 2011

6.2   Phase 2 ~ Disaster Risk Reduction Planning

In this phase, the district will have to arrive at crucial decisions on the most appropriate ways to address the intolerably high risks and the high risks, as well as, to ensure that concrete and sufficiently specified disaster risk reduction project proposals are designed, which can be used for implementation.

6.2.1   Workshop

6.2.1.1   Purpose of the workshop

This objective of holding a workshop is to include all relevant role players during the process of preparing the Risk Reduction and Risk Preparedness plans. The purpose was also to familiarise the stakeholders with the disaster management planning process. This workshop involved all role players and stakeholder identified in the municipality and district which could contribute or assist with disaster management in the area. These role players should all be included in the process of identifying the hazards and risks within the municipality for them to better understand where and how they can contribute to disaster management.

Through the capacity building exercise, it is important to ensure that the following aspects of Disaster Management are fully understood:

- Definitions and terminology
- The Disaster Management Act

- Hazards vs. Disasters
- Vulnerability
- Putting Disaster Management in place
- Re-active vs. Pro-active behaviour

6.2.1.2 Outcomes of workshop

The workshops held with the district, local municipalities and relevant stakeholders as discussed in Section 4 above has reference. The inputs received at the workshop were incorporated with the local knowledge and previous experience of the consultants to develop the risk reduction plans. Please refer to annexure 3 for the detailed disaster risk reduction plans.

6.3 Phase 3 ~ Disaster Preparedness Planning

In this phase, the district will have to arrive at crucial decisions on the most appropriate ways to address the tolerable risks, as well as, to ensure that concrete and sufficiently specified disaster preparedness project proposals are designed, which can be used for implementation.

6.3.1 Workshop

6.3.1.1 Purpose of the workshop

The purpose of the workshops was to get inputs from all relevant role players during the process of preparing the Risk Reduction and Risk Preparedness plans. It is important to understand where there is capacity and resources in the municipality that can be used in case of these hazardous events. Details regarding all available resources are required to assist in preparing a comprehensive preparedness plan for the municipality. Projects which have already been implemented should be confirmed and new projects have to be identified to assist in the mitigation process.

6.3.1.2 Outcomes of workshop

The inputs received at the workshops were incorporated with the local knowledge and previous experience of the consultants to develop the risk preparedness plans. Please refer to the annexure 4 for the detailed disaster risk preparedness plans.

The aim should be to ensure that the outputs of the disaster risk reduction plan, risk preparedness plan and the disaster management enabler initiatives have to be included in the IDP. The objectives and goals identified in the risk reduction and preparedness plans should be prioritised and the most important initiatives be integrated into the IDP to secure funding. The projects have to be assigned to specific task teams. This will then set the stage for the municipality to continue implementing the identified projects.

6.4 Phase 5 ~ IDP Approval Phase

The updated disaster management plan must be integrated into the IDP after which it has to go through the formal process of the IDP approval.

6.5 Phase 6 ~ IDP Implementation Phase

After the plans and the priority projects have been integrated and approved funding can be sourced and made available for the implementation of the strategies.

7   KPA 1 ~ Integrated Institutional Capacity

7.1   Shared responsibility for disaster management

The responsibility for reducing disaster risk, preparing for disasters, and responding to disasters is shared among all departments and employees of local municipalities within the Sisonke District Municipality, all departments and employees of the Sisonke District Municipality, all provincial and national organs of state operating within the municipality, all sectors of society within the municipality and, perhaps most importantly, all the residents of the municipality.

7.1.1   Nodal points for disaster management

Although the municipal department within Sisonke District Municipality assigned with the Disaster Management function should direct and facilitate the disaster risk management process, it cannot perform the whole spectrum of disaster risk management activities on its own. Disaster risk management is everybody's business. Therefore it is required that each municipal department and each local municipality within the District assign a person or section within the department / local municipality to be the nodal point for disaster management activities in that department / local municipality. The same applies to national and provincial departments operating within the municipality. The disaster management activities to be performed within departments and local municipalities include participation in disaster risk reduction as well as preparedness and response.

7.1.2   Departments with primary responsibility for specific hazards and disaster risks

Where a department has primary responsibility for a specific hazard, the department's role in disaster risk management for that specific hazard will be more than mere participation: it will have to lead risk reduction as well as preparedness activities due to its expertise in the field. Sisonke Disaster Management can support such a department with advice, information, facilitation and coordination.

7.1.3   Assignment of responsibility to deal with specific disaster risks

Departments that are responsible for specific services in normal conditions will remain responsible for such services during disasters. The declaration of a state of disaster and the tighter coordination instituted during disasters does not absolve any agency of its assigned responsibilities. In order to reduce the size of this document a specific and detailed listing of all the disaster management responsibilities of each municipal head of department and those of other role players will not be supplied in the body of this document. Legislation assigns responsibility for most disaster risks to specific departments or functions. There are grey areas related to some disaster risks. In order to ensure clear roles and responsibilities and enhance integrated disaster risk management efforts, such grey areas must be addressed and clearly assigned responsibilities must be confirmed. The risk profile of the Sisonke District Municipality will be considered and primary and supporting role players will be identified for each risk. Such allocation of primary and supporting roles will be done in consultation with all relevant role players, will be informed by existing legal frameworks, and assignment will be done on a consensus basis. The above assignment of responsibilities will be revisited and confirmed on an annual basis, and will be recorded and distributed in the format indicated in table below.

Table 5: Assignment of primary and supporting role players for disaster risks

Description of disaster risks identified in the risk profile of the municipality (Complete one table per risk)	Primary role player in **risk reduction** to be indicated here	Supporting role players
	Primary role player in **preparedness** to be indicated here	Supporting role players
	Primary role player in **response and relief** to be indicated here	Supporting role players
	Primary role player in **recovery & rehabilitation** to be indicated here	Supporting role players

7.2 Corporate Disaster Risk Management Structure for the Sisonke District Municipality

The Corporate Disaster Management structure for the Sisonke District Municipality must deal with both pro-active and reactive disaster management issues and encompasses more than the department which is responsible for the function. The structure will include the following elements:

7.2.1 Sisonke Disaster Management

A department within the Sisonke Municipality has been assigned with the Disaster Management function. A district municipality is legally obliged to establish a Disaster Management Centre. The Disaster Management Centre of the Sisonke District Municipality must aim to prevent or reduce the risk of disasters, mitigate the severity or consequences of disasters, prepare for emergencies, respond rapidly and effectively to disasters and to implement post disaster recovery and rehabilitation within the municipality by monitoring, integrating, coordinating and directing the disaster risk management activities of all role players.

The municipality has procured a property along the R56 Provincial road, portion (Sub 5 of Lot 419) in Morningside where the disaster management centre will be erected. Draft designs were approved by the Disaster management Forum and Social Services Committee. The designs were then submitted to Ubuhlebezwe Municipality for approval. The estimated construction cost of the Disaster Management Centre is R12 750 000.00, excluding professional fees and VAT. The Department of Cooperative Governance and Traditional Affairs have transferred R1 000 000.00 towards construction of the centre. However, additional funding is still required for the successful completion of the project.

7.2.2 Municipal Disaster Management Advisory Forum

District municipalities may establish municipal disaster management advisory forums as described in Section 51 of the Disaster Management Act. It is advantageous for a municipality to establish such a forum to coordinate strategic issues related to disaster management such as risk assessments and to approve and/or review the disaster management plan for the municipality before it is submitted to Council. Frequency of meetings: 2-4 times per year or as required. Leadership from local municipalities within the district should form part of the Forum.

The disaster management forum has been established and is meeting on a quarterly basis.

7.2.3   Interdepartmental Disaster Management Committee

This is an internal coordination forum at manager level where instructions from the Advisory Forum can be implemented and tracked, and serves as a coordination forum for disaster management issues within the municipality. This role can be performed by the top management team of the municipality, thus reducing the complexity of the disaster management structure. Top management from local authorities within the district should form part of the Committee.

7.2.4   Nodal points for disaster management within municipal departments

Refer to section above.

7.2.5   Departmental and local municipality planning groups

This element relates to planning groups that can be established within departments or local municipalities within the District to deal with internal disaster management issues such as the compilation of departmental or local municipal disaster management plans and contingency plans for facilities and services of the department or local municipality. The disaster management nodal points of such departments or local municipalities will be involved in these planning groups.

7.2.6   Risk reduction project teams

A multi-disciplinary project team convened to address and reduce a specific disaster risk. Convened by the primary role-player for the risk and supported by Disaster Management.

7.2.7   Preparedness planning groups

A multi-disciplinary planning group convened to ensure a high level of preparedness for a specific disaster risk. Convened by the primary role-player for the risk and supported by Disaster Management.

7.2.8   Joint response & relief management teams

Mostly flowing from a preparedness planning group, a team that is mobilised to deal with the immediate response & relief required during or immediately after major incidents and disasters. Will normally convene in the Joint Operations Centre (see description below).

7.2.9   Recovery & rehabilitation project teams

Project teams managing recovery and rehabilitation after disasters. Departments who are responsible for the maintenance of specific infrastructure are also responsible for the repair or replacement of such infrastructure after disasters. Disaster recovery and rehabilitation must focus on risk elimination or mitigation.

7.2.10   Sisonke Emergency Control Centre/Group

This centre or group provide 24-hour emergency standby. Responsible for day-to-day emergency response by municipal departments and for the establishment of strategic communication links. The Sisonke Emergency Control Centre / Group will liaise closely with

the Emergency Control Centres / Groups of the local municipalities within the Sisonke District Municipality on an ongoing basis.

7.2.11   Sisonke Joint Operations Centre (JOC)

A facility equipped to serve as command and coordination centre during disasters, where the joint response & relief management team will convene. Alternative facilities should be identified as back-up to the primary JOC.

8   KPA 2 ~ Risk Assessment

8.1   Risk Profile of the Sisonke District Municipality

The following disaster risks were identified during a risk assessment process conducted throughout the Sisonke District in 2012:

8.1.1   Risks requiring risk reduction plans

2008	2012
Fire	Fire
Flood	Flood
Hazardous accidents	Poor condition of roads – road accidents
Snow	Thunderstorms and lightning

8.1.2   Risks requiring preparedness plans

2008	2012
Fire	Fire
Drought	Drought
Flood	Flood
Snow	Thunderstorms and lightning
Hazardous Material Accidents	Poor condition of roads – road accidents
Tornados	Heavy winds
Diseases such as: HIV / Aids; TB; Cholera	Communicable diseases such as: HIV / Aids; TB; Cholera

8.1.3   Priority risks

2008	2012
Fire	Fire
Flood	Flood
Severe Weather (Snow, Tornado)	Severe Weather (Thunderstorms and lightning)
Hazardous Materials Incidents (especially road accidents)	Poor condition of roads – road accidents

The above lists exhibit the types of disasters that might occur within the area of the Sisonke District Municipality and their possible effects.

9   KPA 3 ~ Risk Reduction Planning

Risk reduction plans providing for prevention and mitigation strategies have been compiled through a participative process and have not been vetted or submitted to feasibility studies. The risk reduction plans outlined in this document and its appendices which are implementable must be considered for inclusion within the IDP projects of the municipality and if included must be budgeted for in terms of the operating and capital budgets of the municipality. Each project should be evaluated to determine which municipal department can lead its implementation. When a lead department is assigned through consensus in the DMAF, such a lead department must manage all planning and budgeting processes for said project. The Disaster Management department of the Sisonke District Municipality must assist in this regard. Where the proposed project falls outside the mandate of the municipality, the municipality should establish a lobbying and monitoring mechanism to motivate the need for the project in the correct governmental or societal sector and to track progress on the project. It is anticipated that many projects will need to be executed on a partnership level, and in such cases the department of the municipality responsible for service delivery partnerships should take the lead with support from the Sisonke Disaster Management Centre.

9.1   Risk reduction plans for the Sisonke District Municipality

The project that was developed is categorised according to hazards and strategies and is provide in the risk reduction plan in Annexure 3.

9.2   Risk reduction capacity for the Sisonke District Municipality

The organisational structure for risk reduction within the municipality includes Sisonke Disaster Management, the Disaster Management Advisory Forum, the Interdepartmental Disaster Management Committee, the nodal points for disaster management within municipal departments and local municipalities within the district, departmental and local municipal planning groups, risk reduction project teams and preparedness planning groups. The total structure of the municipality, with every member of personnel and every resource should also be committed to disaster risk reduction. Ongoing capacity building programmes will be required to ensure the availability of adequate capacity for risk reduction.

9.3   Indigenous Knowledge and Community Participation

Section 7.3 of the Sisonke Disaster Management Framework discusses the objectives and the significance of including indigenous knowledge in disaster management. Local communities have well-developed traditional indigenous knowledge systems for environmental management and coping strategies, making them more resilient to environmental change. Communities can easily identify with this knowledge as it facilitates their understanding of certain modern scientific concepts for environmental management including disaster prevention, preparedness, response and mitigation. According to the framework, a major challenge that local communities continue to face is means and acceptable ways of reconciling indigenous knowledge and modern science without substituting each other, respecting the two sets of values, and building on their respective strengths (SDMF, September 2009).

Indigenous methods discussed during the workshops relate mainly to thunderstorms and lightning. Other information illustrated in the table below was collected and analysed in only the

most commonly known disasters within the Sisonke District during the compilation of the disaster management framework in 2009. The disasters are subdivided into four categories –
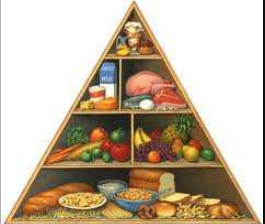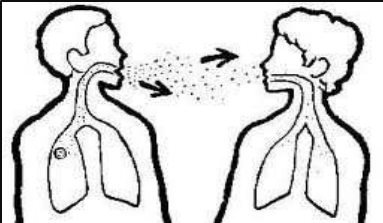
- Natural Hazards,
- Biological Hazards,
- Environmental Hazards, and
- Technological Hazards.

Possible Disaster	Indication	Precautionary Measures
1. Natural Hazards		
Cyclones	Inward strong spiraling winds rotating continuously that come with numerous thunderstorms and heavy rains.	Communities hit tins and chase the cyclone away with such noise to deflate it before it causes damage in the community.
Tornado	A violent rotating column of air associated with hot air masses and thunderstorms causing a lot of destruction in residential areas. Mainly occurs in summer and can cause fire but has a short life before it passes on to other areas.	Communities are advised to protect animals by building kraals and protect human life even though this is no guarantee that one will not be affected.
Snow	Crystallised water ice falling from the clouds bringing cold and dangerous conditions such as disrupting public infrastructure and services, White granular small ice particles can cause slippery roads claiming lives through road accidents or roads shutting down, schools, work & church can also be cancelled, rise in sea water or rivers as it melts and can cause flooding, destruction of vegetation, structural failure on man-made structures, falling trees and harm to marine life.	Accumulation of snow is removed through shovels by communities to make travel easier and safer and decrease long term impacts of heavy snowfall, sprinkling salt to reduce melting temperature of snow, washing snow down with warm water around households.
Drought	Prolonged lack of rain, very high temperatures, and dry vegetation signifies drought and causes harm to communities, starvation for humans and animals due to diminished crop production.	Communities collect and store food and rainwater from roofs in tanks in order to sustain themselves during the drought period. Also planting less water dependent crops. At worst community members migrate to urban areas to seek jobs so as to provide for their families.

Veld/ Forest Fires 	Very high temperatures resulting in veld/forest fires and very hot air.	Communities open up contour banks to act as fire belts around household edges and surrounding fields with such contours to prevent spreading fires.
Structural Fires 	Usually occurs due to various socioeconomic reasons. Due to historical planning and development in South Africa, most towns and cities have formal build-up areas as well as informal settlements. These informal settlements are normally not well serviced and people living here do not have adequate access to basic services. People tend to build shacks to close to each other, which in turn increase the risk of informal settlement fire. Due to the lack of electricity, people are compelled to use open fires/gas for cooking and lighting. Linked to the above is inadequate education in the use of alternative energy sources which in turn leads the incorrect use of open flames which result in fires. Other reasons include the abuse of drugs and alcohol as intoxicated persons become negligent. Malicious intent is another reason why fires start.	In certain Local municipalities the communities are being trained how to get a person out of a house where there is a fire. They are taught to crawl into the house with a rope tied around one leg, with a damp cloth over their mouth and sign to the person outside to pull them out if it gets too hot inside the house.
Floods & Surge Floods 	An overflow or accumulation of water escaping its normal boundaries and submerging the land caused by continuous rainfall for a number of days or strength of river water flowing over river banks causing flooding or runoff on cropland or overflow of sea waters.	Communities open up contour banks around households to act to allow easy flow of water to prevent or minimise flooding as well as planting trees around to prevent further floods. Public awareness also assists communities in understanding damaging effects of floods. Communities should listen to the radio and television for warning or phone the local disaster management centre or weather office or more information. Move pets, vehicles and valuables to safety. Alert neighbours, particularly the elderly. Female and child-headed households and people with special needs. Turn off electricity and gas, unplug electrical items and move them to a higher place. Communities nee to co-operate with emergency services and local authorities as communities may be evacuated to a central assembly point. Avoid contact with flood water as it may be contaminated with sewage.

Hailstorm, Severe Storms & Storm Surges	Heavy dark clouds accompanied by lightning and thunderstorms causing severe damage in roads and residential areas etc. as well as the identification of rain bird (Ingududu) flying in front of the upcoming heavy dark clouds.	Communities open up contour banks around households to allow easy flow of rainwater to prevent or minimise flooding as well as planting trees around to prevent future flooding.
Lightning & Thunderstorms	Very strong high winds with dark clouds and heavy rainfall. You can see lightning within the clouds and also hear far-off rumbling of thunder.	Firstly if is believed that lightning conductors and the use of indigenous methods are equally effective as lightning conductors can fail. During thunderstorms some religions gather in the church to pray. It is also said that if someone has passed away during a thunderstorm a police officer may not come until after 2h00 so that the thunderstorm is not affected. The following should also be avoided during a thunderstorm: • Trees • Traditional footpaths • Water • Running • Working in bare areas • Shiny objects Communities open up at least one window to lessen damage caused and make sure lightning passes by as well as placing motor vehicle tyres over the roof to prevent lightning from striking households. Communities should listen to the radio for warning or other information and suspend all outdoor activities by children. Shelter pets, cover vehicles and disconnect all electrical appliances. Avoid tall trees, towers, fences and power and telephone poles.
2. Biological Hazards		
Food Poisoning	Area vomiting and diarrhea mainly caused by eating meat slaughtered of immunized animals or injected to treat animal disease causes food poisoning to humans, both young and adults.	Communities seek medical assistance from clinics and transfer severe cases to hospitals.

Cholera	Area diarrhea caused by lack of hygienic water causing dehydration, fatigue and weakness.	Communities boil water prior to use or treat it with Jik and fence around sources of water such as rivers and dams.
Measles	Non-itchy body rash, Fine red pimples in the body mainly in children, high body temperatures, and red eyes.	Communities seek medical assistance from clinics, particularly immunisation and severe cases are transferred to hospitals.
Polio	This virus affects bones and muscles mostly in children invading the nervous system causing fatigue, stiffness, painful limbs and possible irreversible paralysis.	Communities seek medical assistance from clinics, particularly polio vaccine and immunisation and severe cases are transferred to hospitals.
Foot and Mouth diseases	A virus / bacteria causing flaky skin, lesions, mouth ulcer and sores, or in between toes is a sign of such disease. Common in human and domestic animals and is highly contagious.	Communities seek medical assistance from clinics and hospitals such as vaccination, immunisation etc. A balanced diet is also recommended.
Pellagra	Redness and swelling of the mouth, tongue and throat, loss of appetite, diarrhea, skin rash, sleeplessness (insomnia) and memory loss, all caused by lack of proper nutrition, alcoholism and excessive smoking in adults.	Communities engage in public awareness during Izimbizo educating communities about balanced diets that are cost effective.
Tuberculosis	Prolonged cough for three weeks, Chest pains, coughing up blood, night sweats, weight loss, fever, prolonged colds and chills, fatigue and loss of appetite,	Communities seek medical assistance from clinics, community awareness about TB effects by health professionals, vaccination of children, or alternatively transferring severe cases to hospitals for proper treatment.

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3. Environmental Hazards		
Land degradation 	Clearing of trees for cultivation or settlement, Extensive use of wood (Deforestation), Overgrazing, poor farming practices depleting soil nutrients, accelerated soil erosion by wind or water, inappropriate land use.	Planting trees, Combating deforestation, Land use management, construction of contour banks and soil erosion structures, soil resource management, educating communities especially farmers about environmentally friendly crop production.
Air pollution 	Respiratory problems caused by solid waste incineration, industrial heating & cooling using coal and built-in fire in poorly ventilated areas.	Educating communities to use ozone friendly products, burn fires further away from residential areas.
4. Technological Hazards		

10   KPA 4 ~ Response and Recovery

10.1 Preparedness Plans

Preparedness plans have been compiled through a participative process and have not been vetted in terms of practical execution.

10.1.1   Preparedness plans of the Sisonke District Municipality

The preparedness plans are provided in annexure 4.

10.1.2   Preparedness capacity for the Sisonke District Municipality

The organisational structure for preparedness within the municipality includes Sisonke Disaster Management, the Disaster Management Advisory Forum, the Interdepartmental Disaster Management Committee, the nodal points for disaster management within municipal departments and local municipalities within the district, departmental and local municipal planning groups, preparedness planning groups, Joint Response & Relief Management Teams, Recovery & Rehabilitation Project Teams, and the Sisonke Emergency Control Group.

The total structure of the municipality, with every member of personnel and every resource can potentially form part of preparedness capacity. Ongoing capacity building programmes will be required to ensure the availability of adequate capacity for disaster preparedness. The Sisonke Emergency Control Group is responsible for the operational procedures associated with day-to-day operational response to emergencies by municipal departments. The Sisonke Emergency Control Group and the Sisonke Interdepartmental Disaster Management Committee are jointly responsible for the emergency management policy framework and organisation that will be utilized to mitigate any significant emergency or disaster affecting the municipality.

10.2   Response and Recovery

During response and recovery operations the relevant disaster preparedness plans of the municipality will be executed by the disaster management structures.

10.2.1   Declaration of a state of disaster and disaster classification

During the workshops conducted for each the LMs, councillors requested clarification on the understanding of the difference between an incident and a disaster, as well as when councillors need to assist. The local municipalities need to compile a relief protocol and standards/guidelines which identifies to whom they provide relief, which type of relief and for what magnitude of an incident relief is provided. For e.g. if someone's kitchen burns down and they have no food, the municipality can provide food parcels. Damaged goods need to be classified so that people can know how long it will take to receive assistance. Assistance should be provided by either the LM where possible or the DM where the LM does not have the capacity to provide assistance. The advisory forum must advise departments on risks. When risks increase councillors, local and district departments need to be advised. A disaster cannot be declared by the local municipality. A report needs to be compiled and submitted by the District Municipality to National level who will evaluate the incident.

When a disastrous event occurs or is threatening in the area of the municipality, the DMC /Section will determine whether the event is a disaster in terms of the Act, and, if so, the Head of the Centre will immediately

- initiate efforts to assess the magnitude and severity or potential magnitude and severity of the disaster;
- alert Disaster Management role players in the municipal area that may be of assistance in the circumstances;
- initiate the implementation of the disaster response plan or any contingency plans and emergency procedures that may be applicable in the circumstances; and
- inform the National Disaster Management Centre and the KZN Provincial Disaster Management Centre of the disaster and its initial assessment of the magnitude and severity or potential magnitude and severity of the disaster.

When informing the National Centre and the KZN Provincial Disaster Management Centre the Sisonke Disaster Management Centre may make recommendations regarding the classification of the disaster as may be appropriate. Irrespective of whether a local state of disaster has been declared or not, the municipality is primarily responsible for the co-ordination and management of local disasters that occur in its area. Whether or not an emergency situation is determined to exist, municipal and other agencies may take such actions under this plan as may be necessary to protect the lives and property of the inhabitants of the municipality.

Declaration of a local state of disaster: In the event of a local disaster the municipal council may by notice in the provincial gazette declare a local state of disaster if existing legislation and contingency arrangements do not adequately provide for the municipality to deal effectively with the disaster; or other special circumstances warrant the declaration of a local state of disaster. If a local state of disaster has been declared, the Council may make by-laws or issue directions, or authorise the issue of directions to:

- Assist and protect the public;
- Provide relief to the public;
- Prevent or combat disruption; or
- Deal with the destructive and other effects of the disaster.

11 Enabler 1 ~ Information and Communication Management

11.1 Objective

The first enabler which is required to ensure that disaster risk management can be implemented effectively is the development of a comprehensive information management and communication system and the establishment of integrated communication links with all disaster risk management role players.

11.2 Introduction

Disaster risk management is a collaborative process that involves a wide spectrum, cross functional and diverse group of role players from all spheres of government, NGOs, the private sector, a wide range of capacity-building partners and communities. Disaster management depends on accurate decision making which can only be possible if current and reliable hazard and disaster risk information is available. This also requires effective information management and communication systems to enable the receipt, dissemination and exchange of information.

11.3 Key performance indicators

- A disaster risk management information and communication system for district and local government has been established and implemented.
- The disaster risk management information and communication system supports the KPAs and enablers at district and local government.
- District and local information management and communication systems are fully compatible with the provincial and national system.

11.4 Outline of this document

This section gives an outline of the basic requirements and flow of communication in the event of an incident. Communication channels have been highlighted in Figure 5 and Figure 6 below. In terms of reporting incidents, the community must contact the call centre prior to contacting the other relevant people in the community. These people identified can be contacted once the incident has been reported to the call centre. This will shorten the response time of relevant services to attend to an incident.

In terms of risk assessments, councillor/s need to conduct community based risk assessments for their respective areas where after the councillor/s must meet with Disaster Management to discuss the feedback on the risk assessment. After the meeting the councillor/s must gather the community to discuss prioritised risks and receive feedback from the community. Councillors must then meet to identify projects and budget for the projects which require funding. Strategies must then be presented to the local advisory forum who will take the proposals forward to the Executive Committee for approval and adoption by council. It is important for councillors to understand the concept of disaster management and to have the tools to be able to conduct their own risk assessments. Assessments should preferably take place on an annual basis and the process of communication repeated to discuss feedback on progress and future projects.
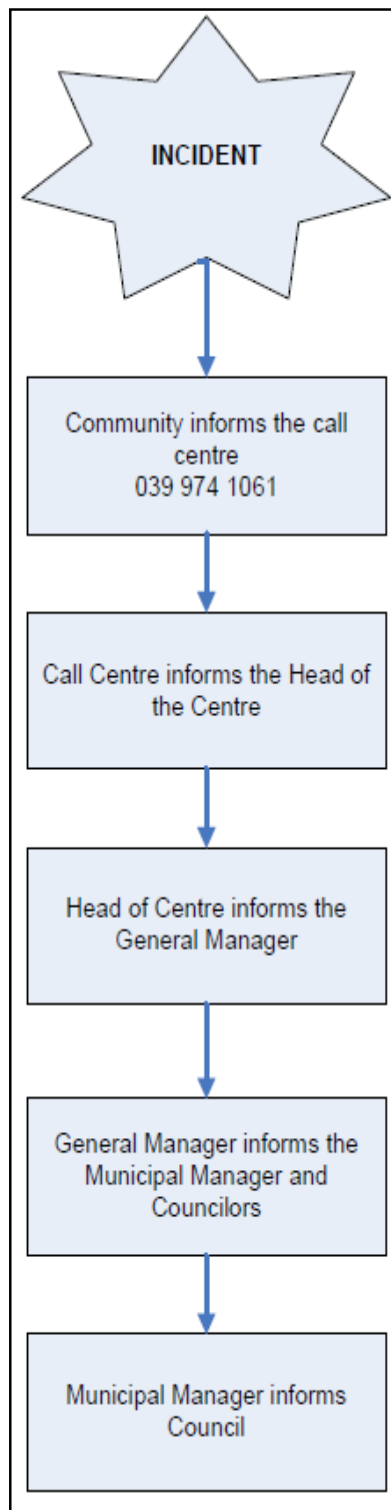
Figure 8: *Communication Channel for Incident Reporting*

Figure 9: Communication Channel for Risk Assessment

An incident register database was developed to assist with the recording and dissemination of information. It is important to have a record of all incidents which occurred in the areas to assist with the preparedness of disaster risk management. Standard forms are provided to assist with the gathering and recording of information. These forms are structured in such a way to easily guide the district disaster management through the handling of an incident. These forms are linked to the database to ensure that all information can be easily captured into the database and disseminated after it has been captured. The forms are aligned with the guidelines provided by the KZN Provincial Disaster Management Centre. The following forms and documentation are provided in this section:

1) Incident report form
2) Incident assessment form
3) Incident conclusion form
4) Relief aid request form

A user manual for the incident register database is also provided to assist with the recording of incident related information.

The process of the review involved updating of the Municipal Incident Register. Incidents captured on paper by the local municipalities i.e. Ubuhlebezwe LM, KwaSani LM, Ingwe LM, Greater Kokstad LM, uMzimkhulu LM, have been electronically captured in Municipal Incident Register for the Sisonke District Municipality. Maps have been drafted to illustrate the locations of the incidents and types of incidents that occur within the district.

12 Enabler 2 ~ Education, Training, Awareness and Research

12.1 Objective

The objective of the second enabler is to promote a culture of risk avoidance among stakeholders by capacitating role players through integrated education, training and public awareness programmes informed by scientific research.

12.2 Introduction

The Disaster Management Act states that the following concepts should form the basis of disaster management awareness and training:

- A culture of risk avoidance.
- Promotion of education and training.
- Promotion of research into all aspects of disaster risk management.

This enabler is aimed at achieving the following requirements:

- Addresses the requirements for the implementation of education, training and research needs.
- The development of an integrated public awareness strategy
- Effective use of the media.
- The development of education and training for disaster risk management and associated professions.
- The inclusion of disaster risk management in school curricula.

12.3 Outline of this component

All the sections prior to this highlight the various aspects of this enabler and the requirements by the act. It is important to ensure that some a strategy is in place to implement awareness, training, education and research in line with the guidelines provided in this document. The National Disaster Management Centre (NDMC) have many ongoing disaster risk management initiatives amongst which is to provide assistance to municipalities. The NDMC is an important source of information and should be utilised optimally. They have conducted many research initiatives and are the custodians of many other disaster risk management literature. The rest of this section provides the strategy which needs to be implemented for achieving compliance with the requirement of Enabler 2.

13 Enabler 3 ~ Funding Arrangements for Disaster Risk Management

Funding arrangements for disaster risk management can be made to cover the costs associated with the following activities (National Disaster Management Framework):

- start-up activities,
- disaster risk management,
- disaster risk reduction,
- response, recovery and rehabilitation activities, and
- training and capacity-building programmes.

The table below provides an overview of the recommended funding mechanisms for each of the five disaster management activities mentioned above.

Activity	Funding source
Start-up activities (KPA 1, Enabler 1)	National government
Disaster risk management ongoing operations (KPAs 2 and 3)	National and provincial government
	New assignment to local government
Disaster risk reduction (KPAs 2 and 3)	National departments
	Provincial departments
	District municipalities
	NDMC - In the case of low-capacity, resource-poor municipalities
Response, recovery and rehabilitation and reconstruction efforts (KPA 4)	National government
	Provincial government
	Local government
Education, training and capacity-building programmes (Enabler 2)	All spheres of government

Table 6: *Funding arrangements for disaster risk management*

It also establishes the principles and the administrative procedures to guide the development of financial arrangements for disaster management. It outlines current financial mechanisms, highlights key problems with the current situation, and proposes a set of future funding arrangements for disasters in the Municipality.

14 Way Forward

This document ensures that the Sisonke District Municipality complies with the Disaster Management Act, Act 57 of 2002. Through the hazard identification process hazards and vulnerable communities have been identified. The risk prioritisation is based on the combination of hazards with the vulnerable communities and their ability and capacity to cope with the exposure to these hazards. With assigning a value to the above parameters, the resultant effect is the overall risk prioritisation rating for each of the local municipalities and the Sisonke District Municipality. The most critical hazards are addressed by the development of disaster risk reduction plans and disaster preparedness plans.

The way forward is to make sure that these plans and strategies which have been identified during this review process are approved and integrated into the IDP. This will secure funding for the implementation of the identified projects. For the municipality to ensure continuous improvement of service delivery, these plans have to be incorporated into their strategic planning and sectoral plans.

Should you require additional assistance regarding any matter arising from the ongoing implementation of the disaster management plan, Aurecon will be more than willing to consult with the municipality and provide ongoing support.

14.1 Disaster Management Plan Improvements and Implementation

This section summarises some of the disaster management improvement and implementation initiatives which should form part of the planning process in terms of the way forward for disaster management within the Sisonke district.

14.1.1   Disaster Management Information System

The first enabler is required to assist disaster risk management to be implemented effectively. This includes the development of a comprehensive information management and communication system and the establishment of integrated communication links with all disaster risk management role players.

Aurecon is assisting the National Disaster Management Centre (NDMC) with the implementation and rollout of a disaster management information system and planning tool. An opportunity exists for the district municipality to upload all their information into this system which can be easily accessed for future use of information. Additional training on the system will ensure that Sisonke can be one of the leaders in the province and country in terms of disaster management planning. Additional licenses and assistance should also be provided to the local municipalities to assist them with the updating of the system.

ENABLERS	OBJECTIVE	KEY INDICATORS
Enabler 1 *(Information and*	To develop a comprehensive Disaster Risk Management information system and	• Identify data needs & sources • Ensure info management &

Communication)	establish integrated communication links with all disaster risk management role players in district, provincial and municipal spheres of government.	communication system supports KPAs & enablers of NDMF, PDMF and DDMF (when developed) • Promote culture of avoidance, create awareness, and ensure good media relations are in place

14.1.2 Development of DMPs for Local Municipalities

Review and update the existing local municipality disaster management plans. This will ensure that there is consistency and alignment between all plans and strategies throughout the district.

14.1.3 Feasibility Studies and Business Plans

Approval to implement projects and the allocation of funding normally requires some preliminary works and technical reports to be in place. As such the development of feasibility studies, business plans, technical reports and preliminary design and costing is crucial to the implementation of various disaster management or engineering related projects. These projects could range from disaster management centres, information systems, fire risks and fire services, disaster management and emergency resources, basic services (water, sanitation, electricity, housing, and roads), waste management and many more.

14.1.4 Ward Level Risk Assessments

For communities, wards, local municipalities or even for the entire district more detailed risk assessments adds value to the preparedness of the district. This can also provide very useful insight into the issues local communities face on a daily basis.

14.1.5 Fire Risk and Fire Hydrant Assessments

Fire is a high risk in the district and more detailed assessments related to fire risk and fire services will reduce the level of risk and improve the preparedness and response to incidents. These studies could evaluate the best possible business models to implement fire service, improve the current service, source funding, and determine the best possible location of satellite stations and fire hydrant assessments.

14.1.6 Disaster Management Training reword

Workshops must be held with all departments and councillors within the district and local municipalities to educate them and create awareness on their roles in disaster management. A number of training courses (by a SERVICE SETA accredited training academy) should be considered, such as:

- A "*Basic Principles of Disaster Management Planning*" course, which covers the basic disaster management planning approach (primarily theoretical of nature).
- A "*Basic Principles of Geographic Information Systems*" course, which covers the basic GIS skills required in the disaster management arena (primarily theoretical of nature).

- An "***Advanced GIS based Disaster Management Planning***" course, which is a follow-on course of modules 1 and 2, that is more practical of nature, where the pupils must now use their theoretical skills obtained in the previous courses to prepare a practical Disaster Management Plan.

- A "***Basic Principles of Disaster Management Information Systems***" course, which covers the basics of disaster management information systems required for the disaster management arena (primarily theoretical of nature).

14.1.7   Request for Volunteers

Volunteers play an important role in disaster management. There is currently a lack of volunteers or the incorrect people are being selected as volunteers, within the local municipalities. This appears to be due to a lack of communication between the local municipalities and the communities. Requests for volunteers are advertised by the district municipality. However these requests are not conveyed by the local municipality/ community members to the relevant people and as such the district do not receive any responses to their adverts. Another means of communication should be sought to ensure that potential volunteers are informed of any requests from the district and should include more direct involvement of not only the local municipality but also the councillors.

14.2 Projects Identified by the District and Local municipalities During the Workshops

District Municipality	
Sisonke	
Fire	Ensure burning of regular fire breaks to avoid spreading of fires
	Awareness campaigns to educate communities on the dangers of fires and ways to be safe around fire
Severe weather	Tree planting campaign
	Awareness campaigns to educate communities on the dangers of lightning and ways to be safe around lightning
	Lightning conductors for schools and houses
	Implementation of research programmes -Scientific knowledge required for use of lightning conductors – to prove that they work
Floods	Inform communities which are located in a flood vulnerable area. Encourage and assist with relocation from floodplains
	Proper town planning in areas vulnerable to floods to not allow development in such areas
	Awareness campaigns to educate communities on weather conditions and on what procedures to follow in the case of an incident Flood awareness programmes
Roads	Ensure that Local Government must do proper maintenance of road surfaces
	Construct speed humps where required
Soil erosion	Education programmes for communities by soil erosion
Poor Sanitation	Replacement of old/ damaged pipes and monitoring of contractors
	Construction of waste water treatment works Construction of waste water

	treatment works
	Construction of new sewerage infrastructure
	Comprehensive waste water treatment programme
	Construction of ablution blocks for bus stops (tourists)
Waste disposal	Awareness campaigns to educate communities on the dangers of incorrect waste disposal, possible safe waste disposal measures and waste disposal bylaws
	Clean up campaigns
	Landfill survey. One central dumping place/ waste disposal site for a community
Drought	Awareness campaigns to educate communities on ways to reduce the impacts of drought
	Immunisation of animals
Communicable Diseases	Ward Aids councillors for wards
	Awareness campaigns to educate communities on the dangers and warning signs of communicable diseases and ways to protect themselves
	Water quality monitoring programmes
	Regular monitoring of Health Centres
Open Pits (burrow pits)	Burrow pits must be rehabilitated if it is not being used
	Erection of warning signs and implementation of necessary safety precautions so that burrow pits are not accessible to animals and unauthorised persons
Housing	Low cost housing development feasibility
	Implement a monitoring programme for improvement of building structures
	Rural housing building technique assessment and improvement strategy Improve housing development structures to withstand severe weather
Snow	Educate and capacitate the local communities on building codes and techniques i.e. roofs to be pyramidal and snow resistant measures (cement vs thatch)
	Snow protocol awareness campaigns
General	Awareness campaigns to educate communities on the dangers of sun and ways to be safe in the sun (i.e. wear hats, sunscreen, sunglasses, and drink lots of water)
	Review IDPs for Local Municipalities. Prioritise projects that promote improved Disaster Management and include these projects in the district IDP.
	Development and implementation of Disaster Management training programmes at ward level Training at ward level on disaster management
	Workshop with all departments and councillors to educate them and create awareness on their roles in disaster Management

Local Municipalities		
Umzimkhulu		
Fire	Ensure burning of regular fire breaks to avoid spreading of fires	
	Awareness campaigns to educate communities on the dangers of fires and ways to be safe around fire	

Severe weather	Tree planting campaign
	Lightning conductors for schools and houses
Roads	Ensure that Local Government must do proper maintenance of road surfaces
Soil erosion	Education programmes for communities by soil erosion
Poor Sanitation	Replacement of old/ damaged pipes and monitoring of contractors
Waste disposal	Awareness campaigns to educate communities on the dangers of incorrect waste disposal, possible safe waste disposal measures and waste disposal bylaws Education and awareness programmes on waste disposal and bylaws
	Clean up campaigns
Ingwe	
Drought	Awareness campaigns to educate communities on ways to reduce the impacts of drought
	Immunisation of animals
Fire	Ensure burning of regular fire breaks to avoid spreading of fires
	Awareness campaigns to educate communities on the dangers of fires and ways to be safe around fire
Severe weather	Lightning conductors for schools and houses
	Implementation of research programmes -Scientific knowledge required for use of lightning conductors – to prove that they work
	Tree planting campaign
Roads	Ensure that Local Government must do proper maintenance of road surfaces
	Construct speed humps where required
Communicable Diseases	Ward Aids councillors for wards (well work-shopped already)
	Awareness campaigns to educate communities on the dangers and warning signs of communicable diseases and ways to protect themselves
Floods	Inform communities which are located in a flood vulnerable area. Encourage and assist with relocation from floodplains. Relocation from floodplains and no new settlements in floodplains
	Proper town planning in areas vulnerable to floods to not allow development in such areas
	Awareness campaigns to educate communities on weather conditions and on what procedures to follow in the case of an incident Flood awareness programmes Education on weather conditions and changes
Housing	Rural housing building technique assessment and improvement strategy Improve housing development structures to withstand severe weather
Open Pits (burrow pits)	Burrow pits must be rehabilitated if it is not being used
	Erection of warning signs and implementation of necessary safety precautions so that burrow pits are not accessible to animals and unauthorised persons
Waste Disposal	Landfill survey. One central dumping place/ waste disposal site for a community
General	Awareness campaigns to educate communities on the dangers of sun and ways to be safe in the sun (i.e. wear hats, sunscreen, sunglasses, and drink lots of water)

KwaSani	
Snow	Educate and capacitate the local communities on building codes and techniques i.e. roofs to be pyramidal and snow resistant measures (cement vs thatch)
	Snow protocol awareness campaigns
Communicable Diseases	Water quality monitoring programmes
	Regular monitoring of Health Centres
Housing	Low cost housing development feasibility Housing development programs
	Rural housing building technique assessment and improvement strategy Improve housing development structures to withstand severe weather
	Implement a monitoring programme for improvement of building structures
Poor Sanitation	Construction of waste water treatment works Construction of waste water treatment works
	Construction of new sewerage infrastructure
	Comprehensive waste water treatment programme
	Construction of ablution blocks for bus stops (tourists)
Fire	Ensure burning of regular fire breaks to avoid spreading of fires
	Awareness campaigns to educate communities on the dangers of fires and ways to be safe around fire
Greater Kokstad	
Floods	Awareness campaigns to educate communities on weather conditions and on what procedures to follow in the case of an incident Flood awareness programmes Flood awareness programmes
Snow	Educate and capacitate the local communities on building codes and techniques i.e. roofs to be pyramidal and snow resistant measures (cement vs thatch)
	Snow protocol awareness campaigns
Fires	Ensure burning of regular fire breaks to avoid spreading of fires
	Awareness campaigns to educate communities on the dangers of fires and ways to be safe around fire
General	**Workshop with all departments and councillors to educate them and create awareness on their roles in disaster Management**
Ubuhlebezwe	
General	Review IDPs for Local Municipalities. Prioritise projects that promote improved Disaster Management and include these projects in the district IDP.
	Development and implementation of Disaster Management training programmes at ward level Training at ward level on disaster management

15 Disaster Management Plan Implementation

The measure of success for the implementation of the plan will be dependent on satisfying the indicators as described and unpacked in the table below. The implementation should also be programmed to identify which of these indicators will be satisfied within the next 3 year time frame. It must also be highlighted that some of these KPA's have been satisfied through the Disaster Management Planning process. The Municipal evaluation tool is used to measure the key deliverables achieved during the implementation phase and to monitor the extent to which these indicators have been met. Although these indicators determine the extent to which the plan is currently being implemented, it should not be seen as a "once off" exercise but should be updated and reviewed annually to ensure that the information and current scenario is always taken into account. It is also necessary to ensure that although a certain level of compliance may have been achieved for these indicators, it is very necessary to ensure that this is improved upon and reviewed each year to ultimately achieve full compliance on each indicator. There will be a natural progression towards this as the knowledge, information and awareness about the topic of Disaster Management becomes more widely spread and better understood at the "Grass Roots" level. Disaster management is about planning ahead and being prepared.

Table 7: Checklist for the implementation of the Disaster Management Plan

KPAs	OBJECTIVES	KEY INDICATORS
KPA 1 *(Integrated Institutional Capacity for Disaster Risk Management)*	Establish integrated institutional capacity within the municipal sphere to enable the effective implementation of disaster risk management policy and legislation.	• Establish mechanisms for DRM policy. • Put in place arrangements for integrated direction & execution of DRM Policy. • Put in place mechanisms for stakeholder participation & technical advice. • Establish & ensure effective operation of the Disaster Management. • Ensure the operational capacity of the Disaster Management Section is in place. • Ensure the DM Advisory Forum (DMAF) is in place (optional).
KPA 2 (Disaster *Risk Assessment and Monitoring*)	Generate an indicative Municipal Disaster Risk Profile by establishing and maintaining a uniform methodology to continuously assess and monitor risk.	• Conduct Disaster risk assessments to inform risk management. • Generate municipal disaster risk profile. • Monitor, update & disseminate risk information to entities and communities. • Conduct quality control (*meaning have evidence of capacity building, consultation & verification of actual situations with communities & appropriate government stakeholders, validate assessments before publication & dissemination, ensure implementation of risk reduction initiatives based on assessments etc.*).
KPA 3 (*Disaster Risk Reduction*)	Integrated Disaster Management Plans and risk reduction programmes by all disaster management stakeholders developed in	• Ensure DRM plans are in place. • Prioritise disaster risks, declared areas, communities & households. • Scoping & development of DR reduction plans, projects & programmes must be in

	accordance with approved frameworks.	place. • Include in strategic structures risk reduction efforts. • Implement & monitor DR reduction programmes & initiatives.
KPA 4 *(Preparedness, Response and Recovery)*	To ensure effective and appropriate preparedness, response, recovery and rehabilitation through: • Implementing a uniform approach to the establishment of effective early warning strategies. • Avert or reduce the potential impact in respect of health impacts, personal injury, loss of life, property, infrastructure, environments and government services. • Immediate integrated and appropriate response and relief actions when significant events or disasters occur or are threatening to occur. • Conduct all rehabilitation and reconstruction strategies conducted following a disaster are implemented in an integrated and developmental manner.	• Identify mechanisms for dissemination of early warnings. • Put in place mechanisms & guidelines for assessment, classification etc. • Ensure response & recovery efforts are integrated. • Standardise & regulate relief measures • Conduct integrated rehabilitation & reconstruction activities. • Ensure all departments have a disaster Management plan including finance.

ENABLERS	OBJECTIVE	KEY INDICATORS
Enabler 1 *(Information and Communication)*	To develop a comprehensive Disaster risk Management information system and establish integrated communication links with all disaster risk management role players in provincial and municipal spheres of government.	• Identify data needs & sources. • Ensure info management & communication system supports KPAs & enablers of NDMF (also PDMF and DDMF when developed). • Promote culture of avoidance, create awareness, and ensure good media relations are in place.
Enabler 2 *(Education, Training, Public Awareness and Research)*	To promote a culture of Risk avoidance among stakeholders by capacitating all role-players through integrated education, training and public awareness supported by scientific research.	• Conduct education, training & research needs & also resource analysis. • Put in place DRM education framework & programmes. • Ensure alignment of such programmes with provincial and municipal programmes.
Enabler 3 *(Funding)*	Establish mechanisms for the funding of disaster risk management in the municipality.	• Establish funding arrangements for: ☞ Assessments ☞ Risk reduction ☞ Response & recovery ☞ Education & training

16 RESOURCES

- Disaster Management Act, Act 57 of 2002, Department of Provincial and Local Government (DPLG)
- Greater Kokstad Local Municipality Integrated Development Planning (IDP) 2009/2010
- Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters. Extract from the final report of the World Conference on Disaster Reduction(A/CONF.206/6)
- Ingwe Local Municipality Integrated Development Planning (IDP) 2010/2011.
- Integrated Development Planning (IDP) Guidelines. www.dplg.gov.za/documents/Publications_b.htm
- KwaSani Local Municipality Integrated Development Planning (IDP) 2011/2012
- Living with Risk: A Global Review of Disaster Reduction Initiatives, International Strategy for Disaster Reduction (ISDR) Secretariat, July 2002
- Sisonke District Municipality Integrated Development Planning (IDP) 2011/2012
- Sisonke District Municipality Disaster Management Plan, August 2008
- Sisonke District Municipality Disaster Management Framework, September 2009
- Ubuhlebezwe Local Municipality Integrated Development Planning (IDP) 2011/2012
- Umzimkhulu Local Municipality Integrated Development Planning (IDP) 2011/2012