

Msinga Local Municipality

Disaster Management Plan



P/Bag X530, Tugela Ferry, 3010

Tel (+27) 33 4930762/3/4 Fax (+27) 33 4930766

E-mail: info@Msinga.org.za

**Disaster Management is everybody's
Business**



DOCUMENT CONTROL PLAN

DOCUMENT HISTORY

Name of the Project	
Project Team	

QUALITY ASSURANCE

VERSION	STATUS	DATE
Version 0.1	FINAL	December 2015

APPROVAL

APPROVED BY THE MSINGA LOCAL MUNICIPALITY MUNICIPAL MANAGER			
Name	Designation	Signature	Date
Mr F.B Sithole	Municipal Manager		09 / 12 / 15

TABLE OF CONTENTS

1. Introduction.....	0
1.1. Purpose of the Disaster Management Plan.....	0
1.2. Requirements in terms of Disaster Management Legislation and Policy	0
1.2.1. Guiding Policy framework and Approach of Developing this Plan	1
1.3. Paradigm Shift in Global and South African Approach to Disaster Management.....	2
1.3.1. New International Approach: Disaster Risk reduction.....	3
1.3.2. The South African Context:	4
1.4. Definitions of Key Terms and Concepts	4
1.4.1. Disaster	4
1.4.2. Disaster Risk Management	5
1.4.3. Disaster Risk Reduction.....	5
1.4.4. Mitigation	5
1.4.5. Response	5
1.4.6. Recovery	5
1.4.7. Relief	5
1.4.8. Disaster Risk.....	6
1.4.9. Disaster Risk Assessment	6
1.4.10. Human-Made Hazards.....	6
1.4.11. Natural Hazards.....	6
1.4.12. Vulnerability	6
1.4.13. Capacity.....	6
2. Description of the Msinga Local Municipality	7
2.1. Geography, History and Economy	7
2.2. Demographics.....	9
2.2.1. Population Dynamics	9
3. Integrated Institutional Capacity for Disaster Risk Management	11
4. Disaster Risk Assessment Design and Methodology	14
4.1. Disaster Risk Assessment Design	14
4.2. Data Source.....	14
4.3. Data Collection Technique	14
5. Disaster Risk Assessment Presentation and Analysis.....	14
5.1. Hazard Identification	14
5.2. Disaster Risk Maps	17

6. Disaster Risk Reduction.....	25
6.1. Alignment/Integration between the IDP and DMP	30
7. Response and Recovery.....	34
7.1. Contingency planning	34
7.2. Declaration of a local state of disaster.....	36
7.3. Immediate and effective response	36
7.4. Disaster relief.....	37
7.5. Post disaster impact assessments.....	38
8. Information Management and Communication.....	39
9. Education, Training, Public Awareness and Research	40
10. Funding Arrangement for Disaster Management	43
11. Summary and Conclusion	45
12. Recommendations and Implementation Plan	45
13. Bibliography	46
14. Annexures	46

Foreword by the Mayor

The Msinga Local Municipality herewith presents its Disaster Management Plan (DMP) in compliance with Section 53 of the Disaster Management Act, 2002 (Act No. 57 of 2002) (DM Act). DM act requires our municipality to prepare a disaster management plan for its area according to the prevailing disaster risk and such plan must form an integral part of the municipality's integrated development plan.

Msinga Municipality appreciates the importance of providing services in an efficient and sustainable manner. Studies and empirical evidence have demonstrated that disaster risk reduction (DRR) is a critical contributor in ensuring sustained service delivery, as it plays a key role in safeguarding lives and infrastructure.

Within this context, in line with our government's outcomes approach to service delivery and development, our Municipality has committed to ensuring a responsive, accountable, effective and efficient system of disaster management. We are, however, mindful of the fact that realising this objective requires a suite of measures, some of which revolve around the need to establish DRR into programmes and projects. This must also happen within a framework in which there is a closer relationship between DRR development and the management of the effects of changes in climate and weather patterns. In this light the DM Act provides adequate legislative measures to ensure that not only are the required relationships fostered through participation in our Municipal Disaster Management Advisory Forum (MDMAF), but that programmes are aligned to this agenda across the activities of our departments.

One other risk that is drawing increased debate is climate change, since it is expected to significantly affect the frequency and intensity of hazard occurrence. Msinga is mostly affected by extreme weather events such as lightning, drought, and runaway fires that are often exacerbated by drought conditions. Unfortunately these events tend to result in fatalities, loss of property and livelihoods. This plan thus seeks to promote an integrated and coordinated system of disaster management with special emphasis on prevention and mitigation by all role players involved in disaster management and communities.

Disasters are a problem that we can and must reduce. I commend this plan to all involved in the effort to build resilient communities in our municipalities.

Honourable Mayor:

Msinga Local Municipality

Overview by the Municipal Manager

The Disaster Management legislation and policy advocate for an integrated and coordinated disaster management that focuses on preventing, mitigation and preparedness as well as rapid and effective response to disasters. The Msinga has since developed the Disaster management plan that seeks to systematically deal with disaster management issues in our municipality.

While many people are aware of the terrible impact of disasters throughout the world, few realize that this is a problem that we can do something about. If well implemented the Msinga Disaster Management Plan should help us to change that. Our disaster management plan contains many logical examples of action by individuals, communities and role players, not only to reduce the risks and impacts of natural and technological hazards, but also to avoid creating those risks in the first place.

Like many other parts of our province and the country at large, Msinga Municipality faces increasing levels of disaster risks. It is exposed to a wide range of hazards, including drought, lightning, fires, floods and severe storms that often trigger widespread hardship and devastation particularly in our poverty stricken communities. The negative impact of these disasters leave our municipality to deal with issues such as loss of lives, damage to infrastructure and the environment, disrupted livelihoods, schooling and social services.

The best way of reducing the effect of disasters is by the integration of resilience in the daily service delivery, poverty reduction and sustainable development programmes. And this plan has well captured that aspect and philosophy of Disaster Risk Reduction (DRR) by recognising that disaster management should form the integral part of our development initiatives be it economically, socially or structurally. Coordination and integration of activities is also a cornerstone of successfully reducing the vulnerability of our communities to hazards.

It is heartening to report that this plan has been developed internally by the group of disaster management technocrats in consultation with our communities therefore the plan is much more understood and very practical. The Msinga Municipality has long established the Disaster Management Unit that incorporates Fire and Emergency Rescue services. The Municipality is in a process of strengthening this function so that our communities, infrastructure and the environment can be in a much safer position.

I can assure that this plan will receive every possible administrative and resources support to ensure its successfully implementation.

Municipal Manager:

Msinga Local Municipality

Executive Summary

In terms of disaster risk reduction principles, the local sphere of government is the first line of response and responsibility in the event of a disaster occurring or threatening to occur. In terms of the Disaster Management Act of 2002, the Local Municipality is responsible for the co-ordination and management of the disaster incident until such time that the responsibility escalates to a higher level of Governance. Thorough disaster risk management planning and effective co-ordination of all line function response agencies is, therefore, key to saving lives and limiting damage to property, infrastructure and the environment. They (disaster risk management plans) also facilitate the optimal utilization of resources.

Acronyms

CBO	Community based organizations
DRMF	Disaster Risk Management Framework
DMA	Disaster Management Act No 57 of 2002
DRA	Disaster Risk Assessment
DRR	Disaster Risk Reduction
DRMAF	Disaster Risk Management Advisory Forum
DRMP	Disaster Risk Management Plan
EIA	Environmental Impact Assessment
EMRS	Emergency Medical Response Services
FPA	Fire Protection Association
GIS	Geographical Information Systems
GM	General Manager
JOC	Joint Operations Centre
MDMC	Municipal Disaster Management Centre
MFMA	Municipal Financial Management Act No. 45 of 2003
NDMC	National Disaster Management Centre
NDMF	National Disaster Management Framework

NGO	Non –governmental organization
PDMC	Provincial Disaster Management Centre
PFMA	Public Financial Management Act No. 1 of 1999
PHOC	Provincial Health Operations Centre
SOP	Standing Operating Procedure

1. Introduction

1.1. Purpose of the Disaster Management Plan

The purpose of this plan is to ensure the implementation of an integrated and coordinated disaster management that focuses on prevention, reduction of disaster risk, emergency preparedness, rapid and effective response to incidents/disasters and post-disaster recovery within the area of the Msinga Local Municipality.

1.2. Requirements in terms of Disaster Management Legislation and Policy

Section 53 (1) of the Disaster Management, Act No. 57 of 2002 stipulates that each municipality must, within the applicable municipal disaster management Framework:

- a. Prepare a disaster management plan for its area according to the circumstances prevailing in the area;
- b. Co-ordinate and align the implementation of its plan with those of other organs of state and institutional role-players;
- 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.

Section 53 (2) of the Disaster Management, Act No. 57 of 2002 states that A disaster management plan for a municipal area must:

- a. Form an integral part of the municipality's integrated development plan;
- b. Anticipate the types of disaster that are likely to occur in the municipal area and their possible effects;
- c. Place emphasis on measures that reduce the vulnerability of disaster-prone areas, communities and households;
- d. Seek to develop a system of incentives that will promote disaster management in the municipality;
- e. Identify the areas, communities or households at risk;
- f. Take into account indigenous knowledge relating to disaster management;
- g. Promote disaster management research;
- h. Identify and address weaknesses in capacity to deal with possible disasters;
- i. Provide for appropriate prevention and mitigation strategies;
- j. Facilitate maximum emergency preparedness; and

- k. Contain contingency plans and emergency procedures in the event of a disaster, providing for-
 - i. The allocation of responsibilities to the various role-players and co-ordination in the carrying out of these responsibilities;
 - ii. Prompt disaster response and relief;
 - iii. The procurement of essential goods and services;
 - iv. The establishment of strategic communication links;
 - v. The dissemination of information; and
 - vi. Other matters that may be prescribed

Section 53 (3) of the Disaster Management, Act No. 57 of 2002 states that a Local municipality and the local municipalities within the area of the Local municipality must prepare their disaster management plans after consulting each other.

Section 53 (4) of the Disaster Management, Act No. 57 of 2002 states that a municipality must submit a copy of its disaster management plan, and of any amendment to the plan, to the National Disaster Management Centre (NDMC), the Provincial Disaster Management Centre (PDMC), and, if it is a Local municipality or a local municipality, to every municipal disaster management centre within the area of the Local municipality concerned.

1.2.1. Guiding Policy framework and Approach of Developing this Plan

The National, Provincial and Local Disaster Management Policy Framework formed a solid basis of developing this plan. The Key Performance Areas (KPA) and Enablers of the disaster management policy frameworks of all spheres of government are a fundamental pillars of South African approach to disaster management. Hence, the structure and content of this plan are greatly influenced or is in line with the disaster management policy framework KPA and Enablers (Figure 1).

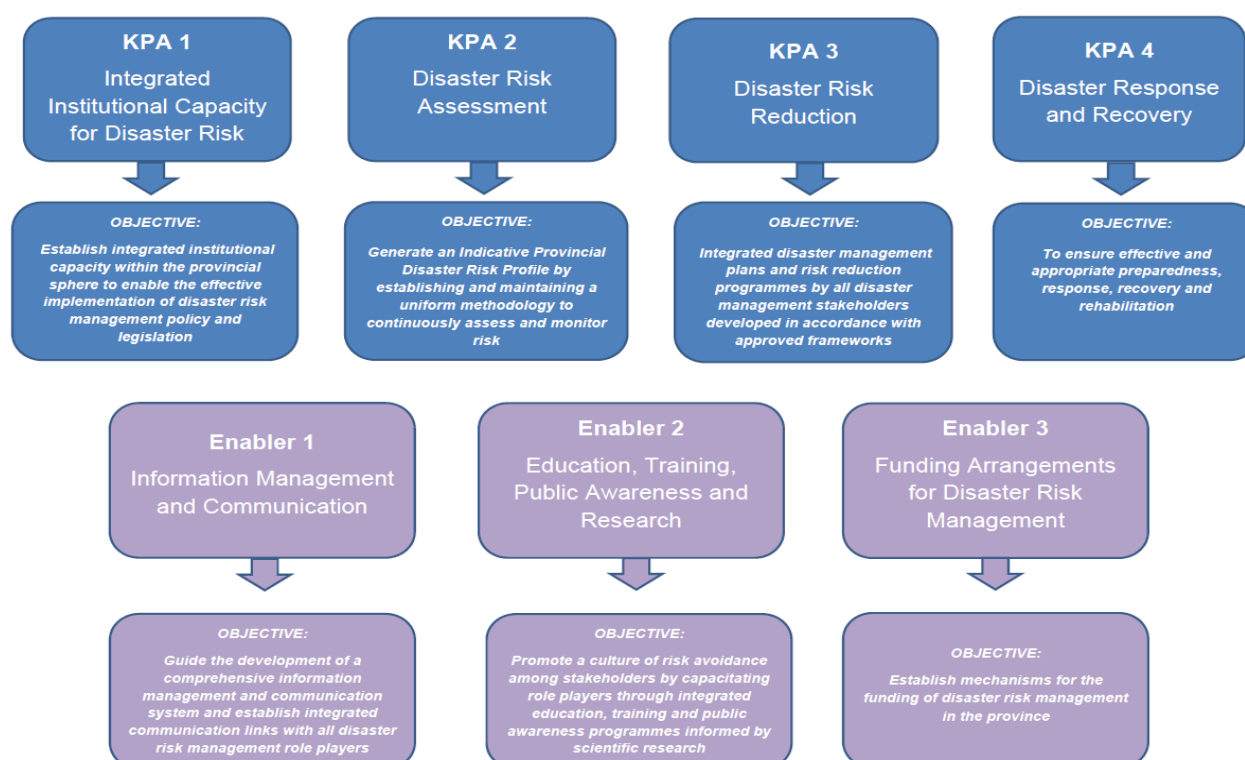


Figure 1: Disaster Management Policy Framework's Key Performance Areas and Enablers.

1.3. Paradigm Shift in Global and South African Approach to Disaster Management

Globally, over the years the impact of disasters on humans including all those killed, injured, or made homeless has been estimated to have affected millions of people (Disaster Management White Paper, 1999). The economic and infrastructure damages are huge in industrialised countries as compared to developing countries, moreover developing countries tend to experience more fatalities and injuries than developing countries (Disaster Management White Paper, 1999). These enormous losses underscore the urgent need for improved disaster reduction, especially when one considers the negative impact disasters have on the lives of those affected.

Disaster Management White paper (1999) acknowledges that disaster management has become increasingly complex, compared to previous limited responses to natural and human-made events. The field of disasters, emergencies and risks is a rapidly changing one. Today, the field of disaster management raises many questions of morality and principle. It entails operations of greatly varying scale and diversity. Disaster management has become a focus area for scientific endeavours to achieve a better understanding of

the hazards that shape the natural and built environments and to set standards to bring about a safer world.

As described by the Disaster Management White paper (1999) disaster management encompasses, for example, interpreting the early warning signals of natural phenomena, such as too little or too much rainfall. Similarly, it involves contingency planning and response to emergency events triggered by both natural and non-natural (including technological) forces. Disaster management seeks to reduce the vulnerability of communities most at risk through improved access to services, development opportunities, information, education and empowerment. It embraces the body of knowledge, policy and practice associated with humanitarian responses to both natural and technological disasters.

1.3.1. New International Approach: Disaster Risk reduction

Over the past 30 years, there has been a continuous evolution in the practice of crisis or disaster management (UNISDR, 2004). These bodies of practice have been known, variously, as civil defence, emergency assistance, disaster response and relief, humanitarian assistance, emergency management, civil protection, disaster mitigation and prevention, and total disaster risk management.

The subject of disaster risk reduction in the modern era draws its relevance largely from earlier contributions and previous practices in the field of civil defence and later disaster management (UNISDR, 2004). In this respect, the traditional focus has been on the preparation and improved operational capacities for more timely and effective response to an impending event, or the provision of urgent services to restore basic requirements of the public if a disastrous event has already occurred.

In many places political commitment and the allocation of resources to address hazardous conditions have been concentrated overwhelmingly on short-term emergency contingencies. There is no doubt that the role of relief assistance during the acute phase of a crisis will remain important and needs to be enhanced at all levels. However, the question must be asked: can modern societies afford to value their social and material assets only after they have been lost in a disaster?

By contrast, in more recent years and perhaps motivated at least partially by the frequency and severity of major disasters during the past decade, those people associated most closely with affected populations such as the local political authorities, a broad range of professional and commercial interests, public organizations, educational institutions and

community leaders – are progressively recognizing the essential public value of sustained efforts to reduce the social, economic and environmental costs of natural hazards.

This translates into the need for much greater attention on implementation of protective strategies which can contribute to saving lives and protecting property and resources before they are lost. It is for this reason that a more holistic approach that emphasizes vulnerability and risk factors has coalesced around the concept of risk reduction, or disaster risk management.

1.3.2. The South African Context:

Since 1994 the South African government's approach to dealing with disasters has changed significantly. The change in old political regime legislation governing disasters was driven by several factors. One of the main reasons was the need to bring the law into the modern era so that it would be in line with international best practice in the field of disaster risk management (NDMC Handbook, 2008). In addition, the government intended to systematically mainstream disaster risk reduction into developmental initiatives at national, provincial and municipal levels.

One of the main reasons for South Africa's Disaster Management Act No. 57 of 2002 being recognised internationally as a model for disaster risk management best practice is that it gives effect to the concept of mainstreaming disaster risk reduction into development through legislation (NDMC Handbook, 2008). The DM Act places statutory responsibilities for disaster risk reduction on every organ of state in each of the three spheres of government and gives a mandate for the establishment of disaster risk management centres in all the spheres.

1.4. Definitions of Key Terms and Concepts

This section defines the core key terms, concepts and variables that are technically used in this plan. The definitions of these concepts and variables are directly extracted from the South African National Disaster Management Policy Framework of 2005.

1.4.1. Disaster

Disaster is a *“natural or human-caused event, occurring with or without warning, causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope with its effects using only their own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of the disaster risk”* (NDMPF, 2005).

1.4.2. Disaster Risk Management

Disaster risk management *“is the systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to prevent or to limit (mitigation and preparedness) adverse effects of hazards”* (NDMPF, 2005).

1.4.3. Disaster Risk Reduction

Disaster Risk Reduction is the *“conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development”* (NDMPF, 2005).

1.4.4. Mitigation

Mitigation refers to *“structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards on vulnerable areas, communities and households”* (NDMPF, 2005).

1.4.5. Response

Response refers to *“measures taken during or immediately after a disaster in order to provide assistance and meet the life preservation and basic subsistence needs of those people and communities affected by the disaster. These measures can be of immediate, short-term or protracted duration”* (NDMPF, 2005).

1.4.6. Recovery

Refers to *“decisions and actions taken immediately after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures”* (NDMPF, 2005).

1.4.7. Relief

Relief refers to *“the provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can include the provision of shelter, food, medicine, clothing, water, etc.”* (NDMPF, 2005).

1.4.8. Disaster Risk

Disaster risk is a *“probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, disrupted economic activity or environmental damage) resulting from interactions between natural or human-induced hazards and vulnerable conditions. Conventionally risk is expressed as follows: Risk = Hazards x Vulnerability. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability”* (NDMPF, 2005).

1.4.9. Disaster Risk Assessment

Disaster Risk Assessment (DRA) *“is a process to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend as well as the evaluation of the effectiveness of prevailing and alternative coping capacities in respect to likely risk scenarios”* (NDMPF, 2005).

1.4.10. Human-Made Hazards

Human-Made Hazards are *“potentially damaging physical event or occurrences that are caused directly or indirectly by identifiable human actions, deliberate or otherwise”* (NDMPF, 2005).

1.4.11. Natural Hazards

Natural Hazards are *“natural processes or phenomena, such as extreme climatological, hydrological or geological processes, that may constitute a damaging event. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing”* (NDMPF, 2005).

1.4.12. Vulnerability

Vulnerability is the *“degree to which an individual, a household, a school, a community, an area or a development may be adversely affected by the impact of a hazard. Conditions of vulnerability and susceptibility to the impact of hazards are determined by physical, social, economic and environmental factors or processes”* (NDMPF, 2005).

1.4.13. Capacity

Capacity is a *“combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personnel or collective attributes such as leadership and management”* (NDMPF, 2005).

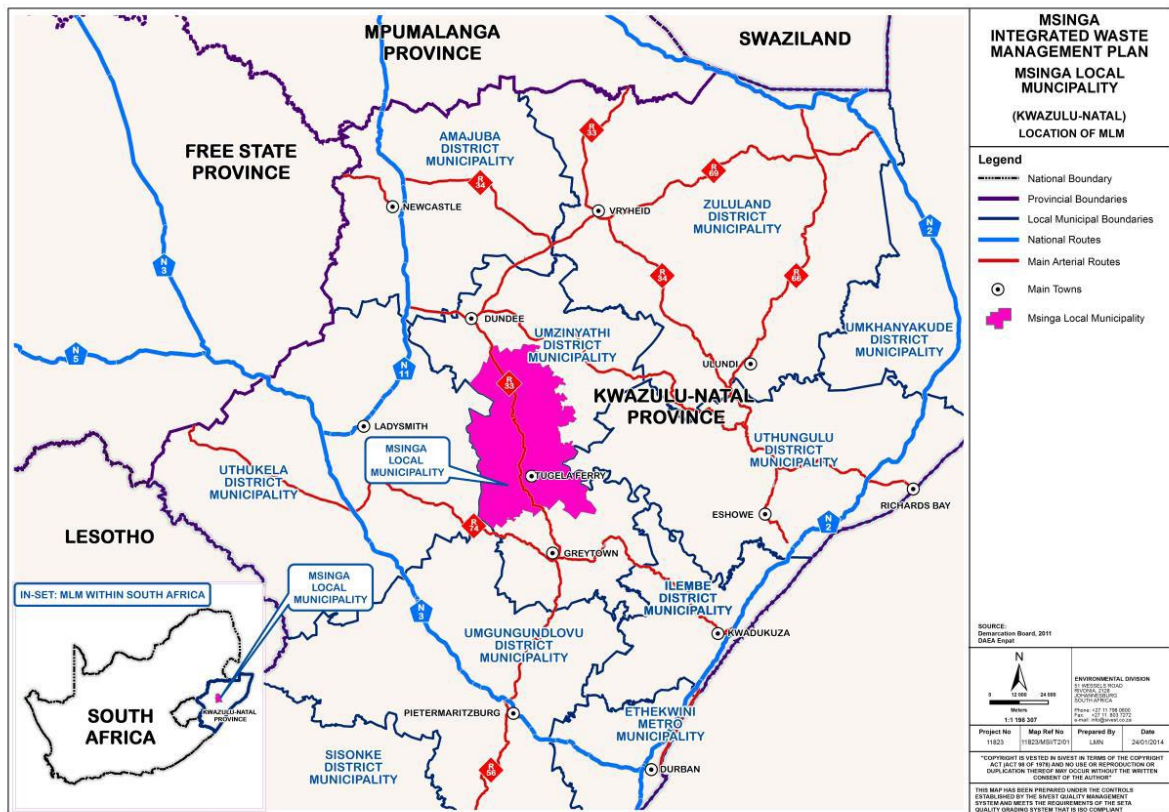
2. Description of the Msinga Local Municipality

2.1. Geography, History and Economy

Msinga Municipality is a local (Category B) municipality established in December 2000 as one of the four local municipalities constituting the uMzinyathi District Municipality in the northern part of the province of KwaZulu-Natal and the municipality is seated in the town of Tugela Ferry. Msinga is composed of six Traditional Authority areas namely, Mqamu, Mchunu, Bomvu, Ngome, Mabaso and Mthembu, comprising an area of 2500 km². The area is divided into 19 political wards with 37 Councillors. Msinga Municipality has a total population of approximately 177 577 an increase from 167 274 in 2001 Population Census, a total of 37 723 households.

The municipality is a largely rural area, 69 % of which (1,725 km²) being Traditional Authority land held in trust by the Ingonyama Trust. The remaining 31% of land is commercial farm land, all of which is located to the north of Pomeroy. Approximately 99% of the population lives in traditional areas as opposed to the formal towns of Pomeroy and the informal towns of Tugela Ferry and Keates Drift. The Msinga Municipality is in the south western part of the District Municipality area, sharing boundaries with the Nquthu and Nkandla Local Municipalities to the east, Umvoti Local Municipality to the south, uThukela district municipality to the west and the Endumeni Local Municipality (LM) to the north. The nature of the topography is such that the Municipality is largely located in deep gorges of the Tugela and Buffalo Rivers. This effectively isolates the Municipal area from the immediate surrounding Municipal areas, such as Umvoti and Endumeni. The Municipal area is accessible via the R33, linking it with Dundee, Ladysmith, Pietermaritzburg, Kranskop and Weenen. The offices of the municipality are situated at Tugela Ferry which is some 85 kms south of Dundee and 48 kms north of Greytown.

Figure 2: Map of the KwaZulu-Natal Province highlighting the location of the Msinga Local Municipality



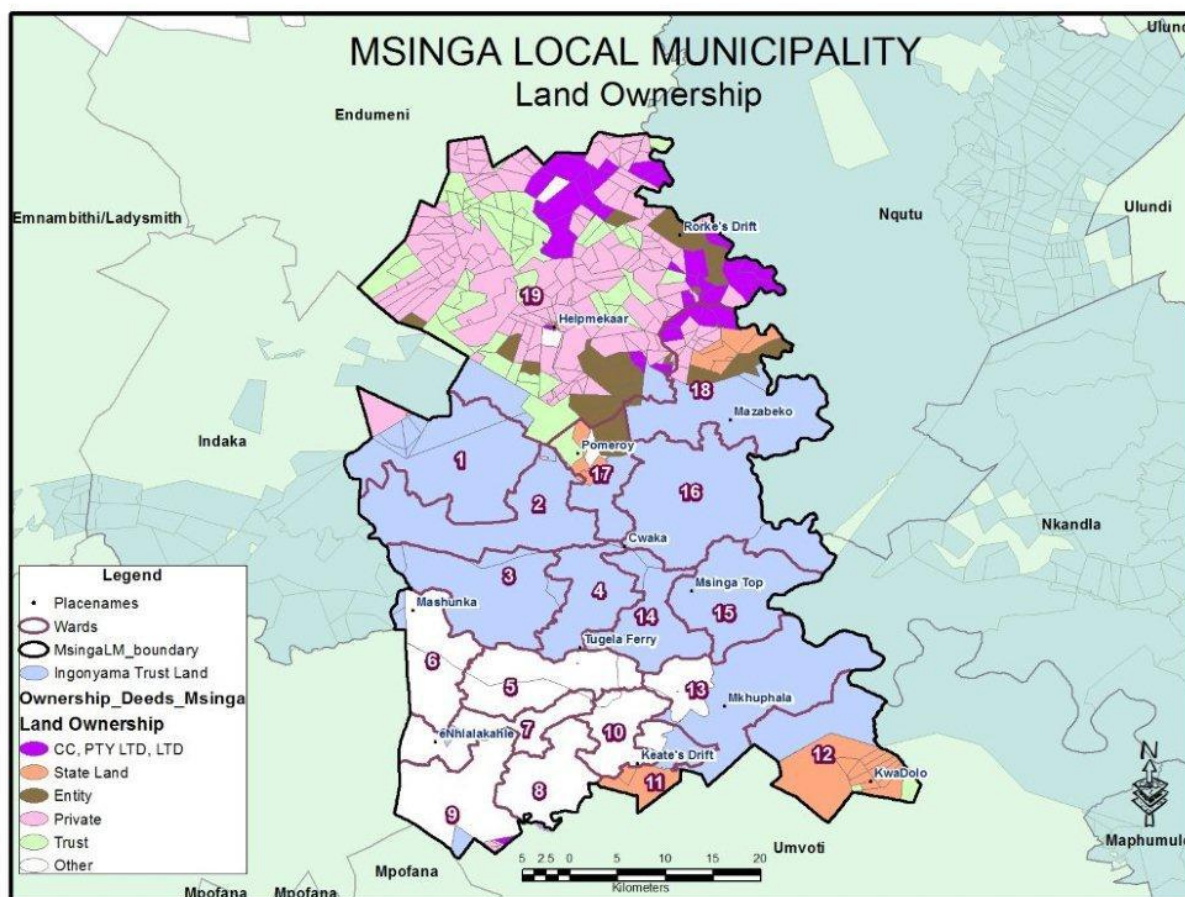


Figure 3: Map of the KwaZulu-Natal Province highlighting the location of the Msinga Local Municipality

2.2. Demographics

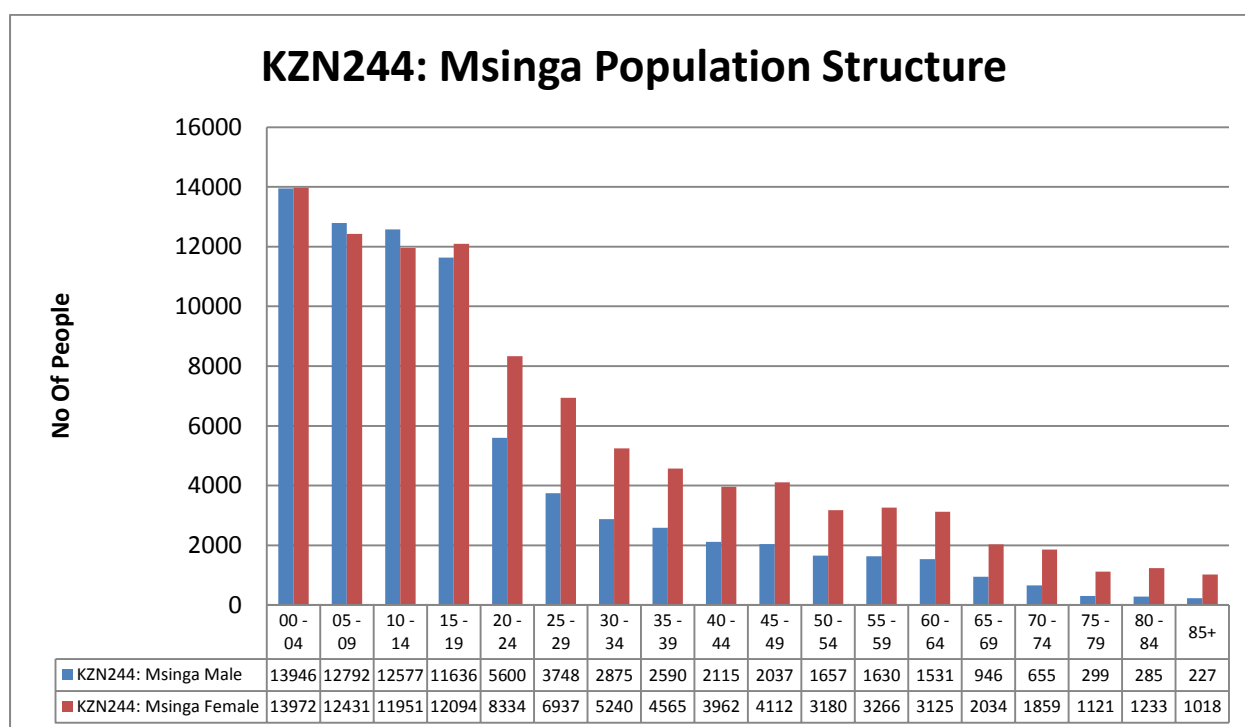
2.2.1. Population Dynamics

Msinga Municipality is a local (Category B) municipality established in December 2000 as one of the four local municipalities constituting the uMzinyathi Local Municipality in the northern part of the province of KwaZulu-Natal and the municipality is seated in the town of Tugela Ferry. Msinga is composed of six Traditional Authority areas namely, Mqamu, Mchunu, Bomvu, Ngome, Mabaso and Mthembu, comprising an area of 2500 km². The area is divided into 19 political wards with 37 Councillors. Msinga Municipality has a total population of approximately 177 577 and increase from 167 274 in 2001 Population Census, a total of 37 723 households.

The municipality is a largely rural area, 69 % of which (1,725 km²) being Traditional Authority land held in trust by the Ingonyama Trust. The remaining 31% of land is

commercial farm land, all of which is located to the north of Pomeroy. Approximately 99% of the population lives in traditional areas as opposed to the formal towns of Pomeroy and the informal towns of Tugela Ferry and Keates Drift. The Msinga Municipality is in the south western part of the Local Municipality area, sharing boundaries with the Nquthu and Nkandla Local Municipalities to the east, Umvoti Local Municipality to the south, uThukela Local municipality to the west and the Endumeni Local Municipality (LM) to the north.

The nature of the topography is such that the Municipality is largely located in deep gorges of the Tugela and Buffalo Rivers. This effectively isolates the Municipal area from the immediate surrounding Municipal areas, such as Umvoti and Endumeni. The Municipal area is accessible via the R33, linking it with Dundee, Ladysmith, Pietermaritzburg, Kranskop and Weenen. The offices of the municipality are situated at Tugela Ferry which is some 85 kms south of Dundee and 48 kms north of Greytown.



As can be seen from the table below, the majority of the population (48.7%) are located in the 15 to 64 year age cohort, followed closely by 44.6% of the population in the 0 – 14 years age cohort. The STATSSA information indicates that the average age in the municipality is 24 years and that there is a very high dependency ratio.

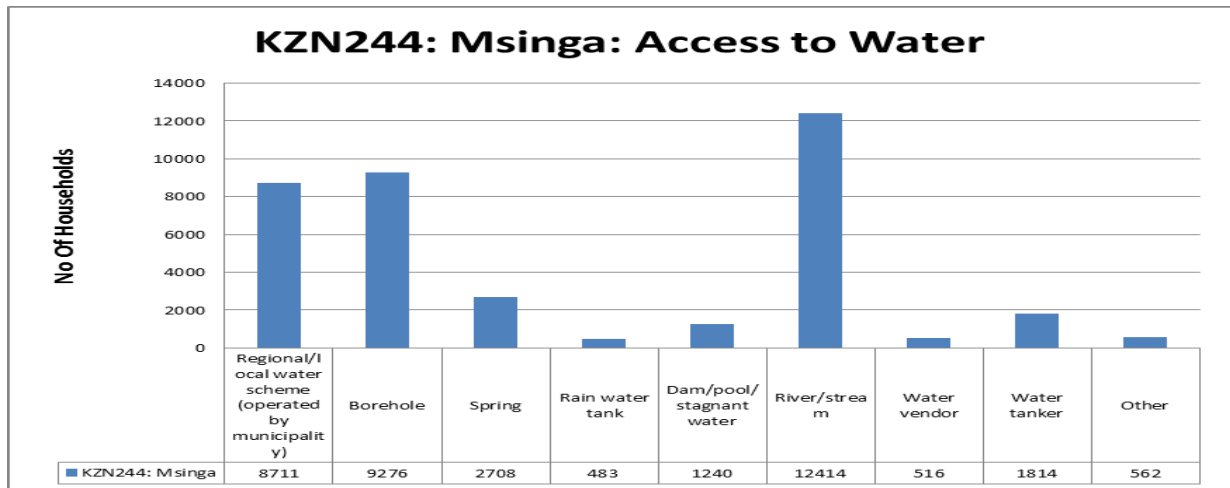


Figure 4: Msinga level of access to basic services (Source: Census, 2011).

3. Integrated Institutional Capacity for Disaster Risk Management in the Msinga Local Municipality

The status of the integrated capacity for disaster risk management of the Msinga Local Municipality will be discussed based on the Key Performance Indicators (KPIs) of the Key Performance Area (KPA) number 1 of the National Disaster Management Policy Framework (NDMPF) of 2005. Number 0, 1 and 2 have been used to rate the level of compliance with the requirements of the NDMPF of 2005 whereas 0 is no compliance, 1 is moderate compliance and 2 is full compliance.

Table 1: Integrated Institutional Capacity for Disaster Management in the Msinga Local Municipality.

Imperatives	Key Performance Indicators	Status
3.1. Establish arrangements for the development and adoption of an integrated disaster risk management policy.	<ul style="list-style-type: none"> The municipal Inter-departmental Committee on Disaster Management has been established and is operating effectively. 	0
	<ul style="list-style-type: none"> Mechanisms for developing and adopting disaster risk management policy have been established and put into operation. 	1
3.2. Establish arrangements for integrated direction and implementation of disaster risk management policy.	<ul style="list-style-type: none"> The job description and key performance indicators for the position of the municipal disaster management officer have been developed. 	1
	<ul style="list-style-type: none"> The municipal disaster management officer has been appointed. 	1
	<ul style="list-style-type: none"> The municipal disaster management, fire and rescue unit has been established and is fully operational. 	1
	<ul style="list-style-type: none"> Disaster risk management focal/nodal points have been identified by municipal departments/entity and responsibilities for disaster risk management have been assigned. 	0
	<ul style="list-style-type: none"> Roles and responsibilities of municipal departments and entities involved in disaster risk management have been identified, assigned and included in the job descriptions of key personnel and are being applied effectively. 	0
3.3. Establish arrangements for stakeholder participation and the engagement of technical advice in disaster risk management planning and operations.	<ul style="list-style-type: none"> The Municipal Disaster Management Advisory Forum or similar representative consultative forums have been established and are operating effectively. 	0
	<ul style="list-style-type: none"> Entities playing a supportive role in facilitating and co-ordinating disaster risk management planning and implementation have been identified and assigned secondary responsibilities. 	0

	<ul style="list-style-type: none"> Disaster management officials have full participation in integrated development planning processes and structures. 	1
	<ul style="list-style-type: none"> Ward structures have been identified and tasked with responsibility for disaster risk management. 	0
	<ul style="list-style-type: none"> A current register of disaster risk management stakeholders and volunteers has been established and is maintained. 	1
3.4. Establish arrangements for co-operation for disaster risk management.	<ul style="list-style-type: none"> Guidelines have been developed and disseminated for entering into partnerships and concluding mutual assistance agreements and memoranda of understanding. 	0
		7/26*100 = 27%

In terms of the above assessment criteria (Table 1), the Msinga Local Municipality is 27% compliant with the requirements of the Key Performance Indicators (KPIs) of the Key Performance Area (KPA) number 1 of the National Disaster Management Policy Framework of 2005 which deals with the issues of integrated institutional capacity for disaster risk management. The lack of compliance has negative implications in the ability of the municipality to comprehensively implement integrated disaster risk management.

4. Disaster Risk Assessment Design and Methodology

4.1. Disaster Risk Assessment Design

The disaster risk assessment equation was used to calculate disaster risk of a particular hazard in each ward of the Msinga Local municipality. The following disaster risk assessment equation proposed by the UNISDR (2002) was then used:

$$\textit{Disaster Risk} = \frac{\textit{Hazard X Vulnerability}}{\textit{Capacity}}$$

4.2. Data Source

The disaster risk assessment data was collected from community ward structures known as Operation Sukuma Sakhe, mainly because these structures are constituted by diverse stakeholders and community leaders.

4.3. Data Collection Technique

Disaster risk assessment entails the systematic collection of data pertaining to certain variables of disaster risk i.e. hazards, vulnerability and capacity. Hence, a community participatory approach was used to administer a structured disaster risk assessment template (attached as annexure A).

5. Disaster Risk Assessment Presentation and Analysis

5.1. Hazard Identification

There are number of hazards that were identified by communities, however in the interest of comprehensive analysis, the data analysis will only be limited to 10 priority hazards identified in the assessment templates. Data will be presented in a form of graphs, tables and maps. The table below (table 2) indicates the type of hazards identified as well as the frequencies or the rate at which there were identified.

Shaluf (2007) developed a schematic representation (figure 5) that shows a variety of almost all possible disasters that can be encountered. The schematic representation includes natural, human induced and hybrid disasters, as well as a combination of natural and human-induced disasters. The Shaluf's schematic representation of hazards was used to identify hazards during the community disaster risk assessment sessions.

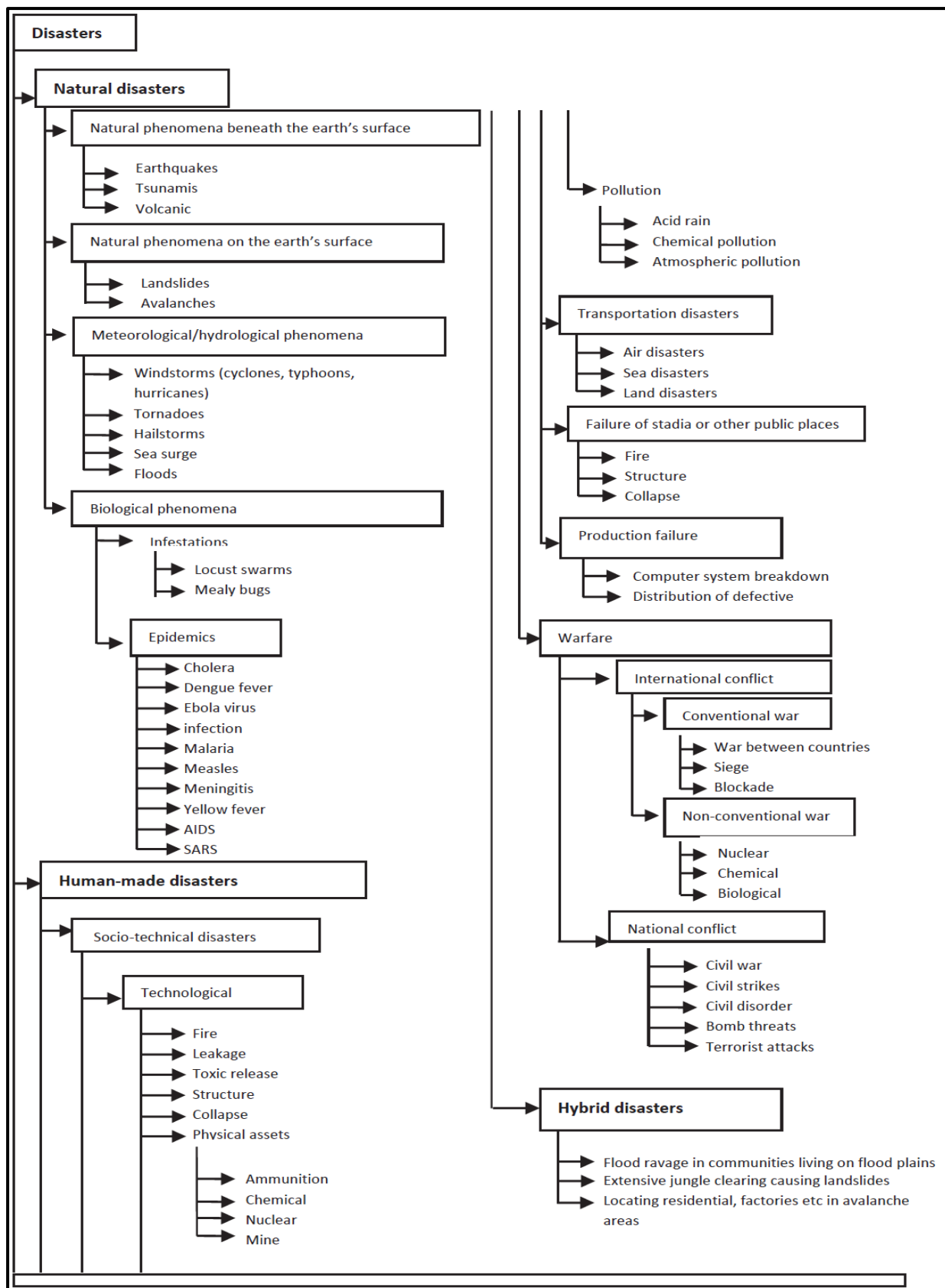


Figure 5: Schematic representation of hazards identified by Shaluf (2007). Source: Shaluf, I., 2007, 'An overview of disasters', Disaster Prevention and Management 16(5), 687–703.

Table 2: Types of hazards and threats identified during the ward disaster risk assessment sessions.

No.	Prevalent Hazards and Threats																			
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
01	Road Accidents	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
02	Drought	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
03	Disease: Animal	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
04	Disease: Human (HIV/AIDS)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
05	Disease: Human (Cholera)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
06	Veld/Forest Fires	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
07	House Fires	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
08	Severe Storms (Heavy Rainfall)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
09	Severe Storms (Floods)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	Severe Storms (Wind)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	Severe Storms (Lightning)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12	Severe Storms (Hail)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
13	Extremely High Temperatures	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
14	Soil Erosion	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
15	Lack of Sanitation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	Lack of Water	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	Lack of Proper Road Infrastructure	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	Water Pollution	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

HAZARD, VULNERABILITY AND CAPACITY ASSESSMENT

HAZARD & CATEGORY NAME	HAZARD ANALYSIS				HAZARD SCORE	PERCENTAGE %
	PROBABILITY	FREQUENCY	PREDICTABILITY	MAGNITUDE		
SCORE	No chance 1	Once in 20 years 1	100% Predictable 1	Affect small area 1		
	Slight Possibility 2	Once every 5 yr 2	Fairly accurate to predict 2	Affect area like ward 2		
	50/50 chance 3	Once a year 3	50/50 chance to predict 3	Affect area like a municipality 3		
	Very good chance 4	Once a month 4	Slight chance to predict 4	Affect multiple munic 4		
	100% certain 5	Once a week 5	Cannot predict 5	Affect large area 5		
Transport hazards Air	2	1	1	1	0.3	25%
Transport Road	4	3	4	1	0.6	60%
Hydro meteorological – drought	4	3	1	2	0.5	50%
Environmental degradation - deforestation	4	5	2	1	0.6	60%
Environmental degradation – erosion	5	4	2	2	0.7	65%
Environmental degradation – Land degradation	5	4	2	2	0.7	65%
Environmental degradation - Loss biodiversity	3	3	2	2	0.5	50%
Fire hazards - veldt/ Forest fires	3	3	2	2	0.5	50%
Fire hazards - Formal& informal settlements	4	3	2	1	0.5	50%
Geological hazards – rock fall	5	5	1	2	0.7	65%
Hydro meteorological hazards – floods	4	2	3	3	0.6	60%
Hydro meteorological hazards – rainfall	3	3	2	3	0.6	55%
Hydro meteorological hazards – severe winds	3	2	4	2	0.6	55%

Hydro meteorological hazards – lightning	4	3	5	2	0.8	70%
Hazardous material – hazmat: spills/release	2	1	3	2	0.4	40%
Hazardous material – hazmat: fire/explosion	2	1	3	2	0.4	40%
Pollution - water pollution	4	5	2	2	0.7	65%
Structural failure – bridge failure	4	1	2	3	0.5	50%
Structural failure – Building informal failure	5	3	1	1	0.5	50%

HAZARD, VULNERABILITY AND CAPACITY ASSESSMENT							
HAZARD & CATEGORY NAME	VULNERABILITY ANALYSIS					VULNERABILITY SCORE	PERCENTAGE %
	POLITICAL	ECONOMICAL	SOCIAL/HUMAN	TECHNOLOGICAL	ENVIRONMENT		
SCORE	Low 1	Low 1	Low 1	Low 1	Low 1		
	Medium-low 2	Medium-low 2	Medium-low 2	Medium-low 2	Medium-low 2		
	Medium 3	Medium 3	Medium 3	Medium 3	Medium 3		
	Medium-high 4	Medium-high 4	Medium-high 4	Medium-high 4	Medium-high 4		
	High 5	High 5	High 5	High 5	High 5		
Transport hazards Air	1	1	1	1	1	0.2	20%
Transport Road	1	2	3	3	3	0.5	48%
Hydro meteorological – drought	1	4	2	1	5	0.5	52%

Environmental degradation - deforestation	1	4	4	1	5	0.6	60%
Environmental degradation – erosion	1	4	3	1	5	0.6	56%
Environmental degradation Land degradation	1	5	4	1	5	0.6	64%
Environmental degradation - Loss biodiversity	1	4	2	1	5	0.5	52%
Fire hazards - veldt/ Forest fires	1	2	3	1	5	0.5	48%
Fire hazards - Formal& informal settlements	1	2	2	2	2	0.4	36%
Geological hazards – rock fall	1	4	3	3	4	0.6	60%
Hydro meteorological hazards – floods	1	3	3	3	4	0.6	56%
Hydro meteorological hazards – severe winds	1	3	3	4	2	0.5	52%
Hydro meteorological hazards – severe hail	1	3	3	3	2	0.5	48%
Hydro meteorological hazards – lightning	1	3	3	3	5	0.6	60%
Hazardous material – hazmat: spills/release	1	3	3	3	5	0.6	60%
Hazardous material – hazmat: fire/explosion	1	3	3	3	5	0.6	60%
Pollution - water pollution	1	4	2	2	5	0.6	60%
Structural failure – bridge failure	1	5	4	4	1	0.7	68%
Structural failure – Building informal failure	1	3	4	4	1	0.5	52%

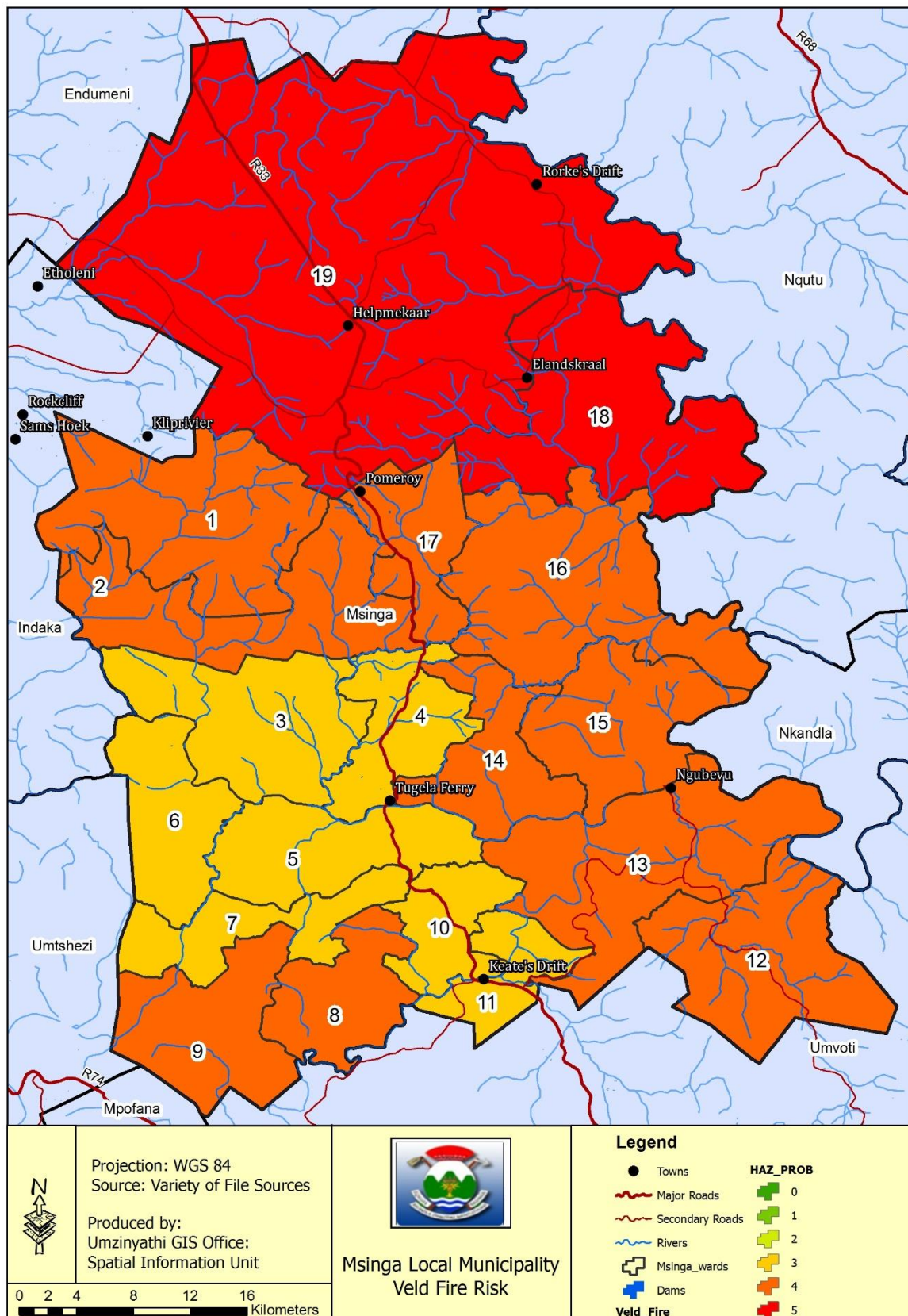
HAZARD, VULNERABILITY AND CAPACITY ASSESSMENT							
HAZARD & CATEGORY NAME	CAPACITY ANALYSIS						
	INSTITUTIONAL & MANAGEMENT CAPACITY	PROGRAMME CAPACITY	PHYSICAL CAPACITY & COMPETENCIES	PEOPLE CAPACITY & COMPETENCIES	SUPPORT NETWORK		
SCORE	Low 1 Medium-low 2 Medium 3 Medium-high 4 High 5	Low 1 Medium-low 2 Medium 3 Medium-high 4 High 5	Low 1 Medium-low 2 Medium 3 Medium-high 4 High 5	Low 1 Medium-low 2 Medium 3 Medium-high 4 High 5	Low 1 Medium-low 2 Medium 3 Medium-high 4 High 5		
Transport hazards Air	1	1	1	1	2	0.2	24%
Transport Road	1	1	2	1	2	0.3	32%
Hydro meteorological – drought	2	1	1	1	3	0.3	32%
Environmental degradation - deforestation	2	1	2	1	3	0.4	36%
Environmental degradation – erosion	2	1	2	1	3	0.4	36%
Environmental degradation – Land degradation	2	1	2	1	3	0.4	36%
Environmental degradation - Loss biodiversity	2	1	2	1	3	0.4	36%
Fire hazards - veldt/ Forest fires	1	1	2	2	3	0.4	36%
Fire hazards - Formal& informal settlements	1	1	2	1	3	0.4	36%
Geological hazards – rock fall	1	1	2	1	2	0.3	28%

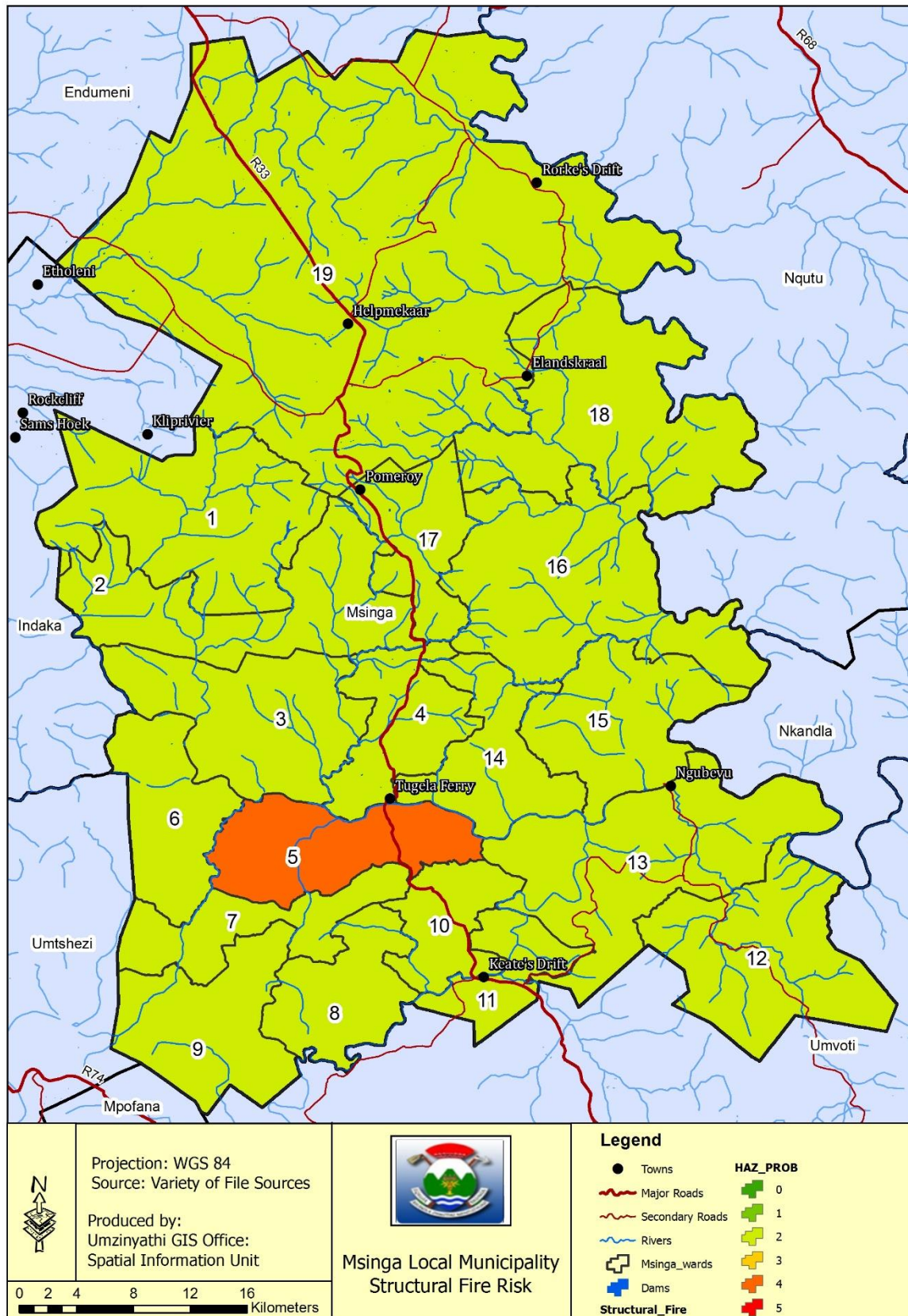
Hydro meteorological hazards – floods	1	1	1	2	2	0.3	28%
Hydro meteorological hazards – severe winds	2	1	2	2	2	0.4	36%
Hydro meteorological hazards – severe hail	2	1	2	2	2	0.4	36%
Hydro meteorological hazards – lightning	2	1	2	2	2	0.4	36%
Hazardous material – hazmat: spills/release	2	1	1	1	1	0.2	24%
Hazardous material – hazmat: fire/explosion	2	1	1	1	1	0.2	24%
Pollution - water pollution	1	1	1	2	2	0.3	28%
Structural failure – bridge failure	1	1	1	1	2	0.2	24%
Structural failure – Building informal failure	1	1	2	1	2	0.3	28%

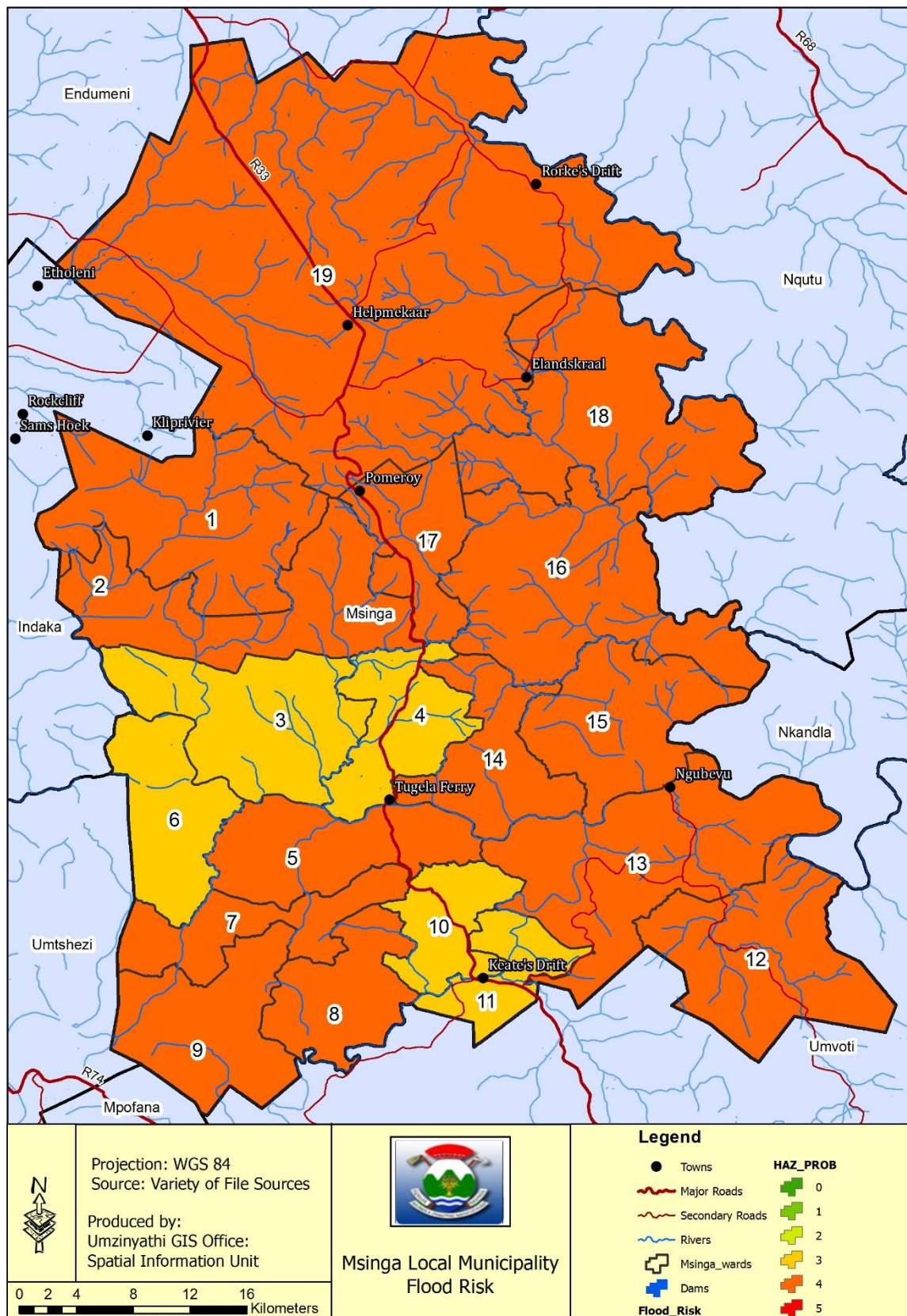
PARTICIPATORY HAZARD, VULNERABILITY AND CAPACITY ASSESSMENT TOOL					
	% SCORE				
CATEGORY NAME	HAZARD	VULNERABILITY	CAPACITY	DISASTER %	AREAS AT RISK
Transport hazards Air	25%	20%	24%	6%	Entire Msinga
Transport Road	60%	48%	32%	23%	Area along R33. Specifically along mountain pass
Hydro meteorological – drought	50%	52%	32%	21%	All ward Pomeroy, Keates Drift, Tugela Ferry
Environmental degradation - deforestation	60%	60%	36%	29%	All areas where informal homes exist
Environmental degradation – erosion	65%	56%	36%	30%	Wards 3,5,6,9,14
Environmental degradation – Land degradation	65%	64%	36%	33%	Wards 3,5,6,9,14
Environmental degradation - Loss biodiversity	50%	52%	36%	22%	All areas of Msinga due to over grazing
Fire hazards - veldt/ Forest fires	50%	48%	36%	21%	Area with open veldts, forest and grazing lands ward 14, 15, 16, 17, 18, 19
Fire hazards - Formal& informal settlements	50%	36%	36%	18%	All areas with informal homes.
Geological hazards – rock fall	65%	60%	28%	29%	R 33 along mountain pass entering ward 5, 8
Hydro meteorological hazards – floods	60%	56%	28%	25%	Areas along the Tugela river ward 5

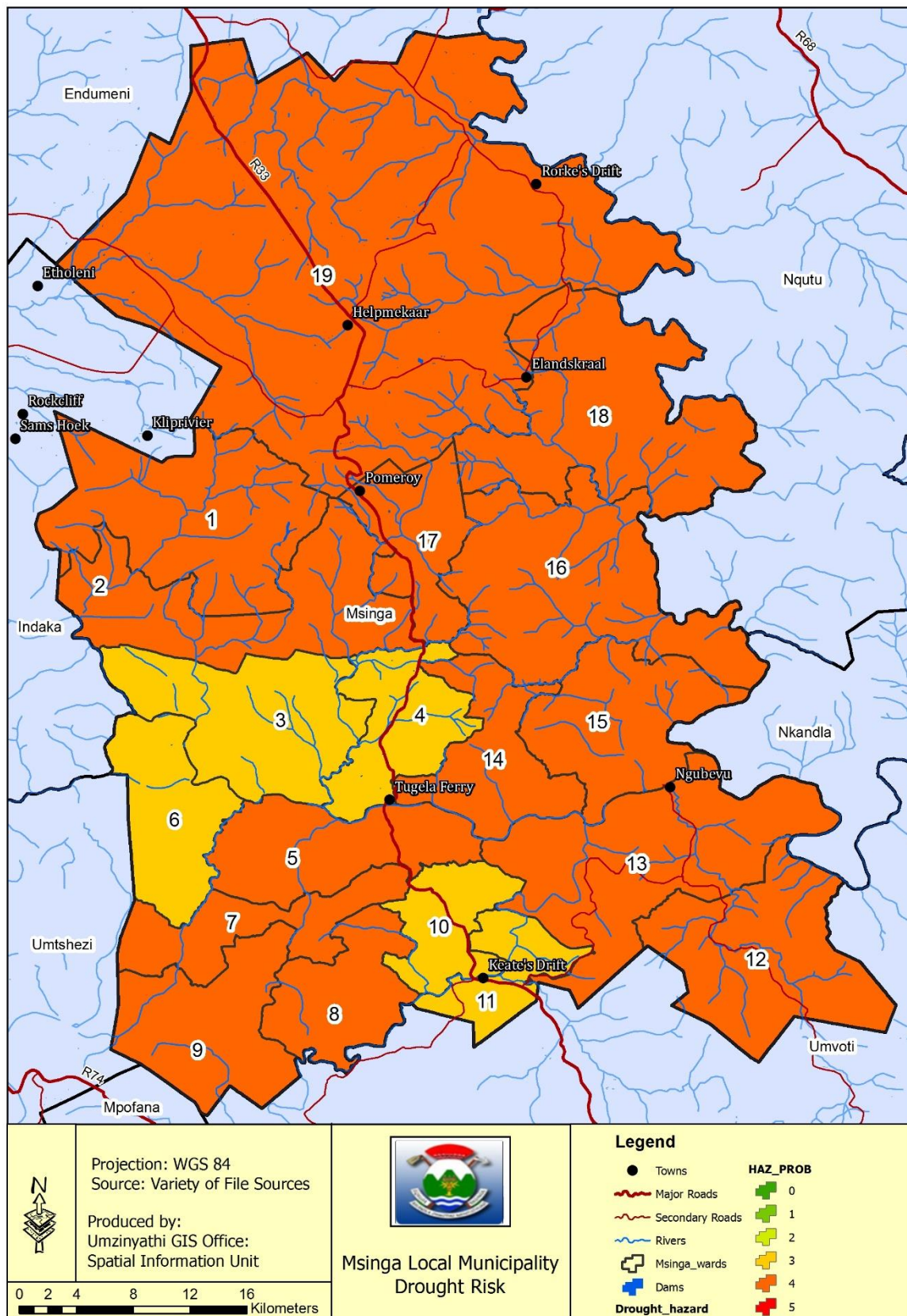
Hydro meteorological hazards – severe winds	55%	52%	36%	29%	All wards on Msinga
Hydro meteorological hazards – severe hail	55%	48%	36%	24%	All wards with informal housing
Hydro meteorological hazards – lightning	70%	60%	36%	25%	Wards, 10, 7, 8, 15, 5. Rondavals with thatch roofing
Hazardous material – hazmat: spills/release	40%	60%	24%	17%	Wards along R 33 due to fuel delivery ward 5, 10, 11, 16, 17, 19
Hazardous material – hazmat: fire/explosion	40%	60%	24%	17%	Wards along R33 due to fuel delivery. Pomeroy, ward 5
Pollution - water pollution	65%	60%	28%	27%	Tugela river, boreholes and natural springs
Structural failure – bridge failure	50%	68%	24%	23%	Steel bridge in ward 5 and Keates drift
Structural failure – Building informal failure	50%	52%	28%	20%	Informal homes in all wards

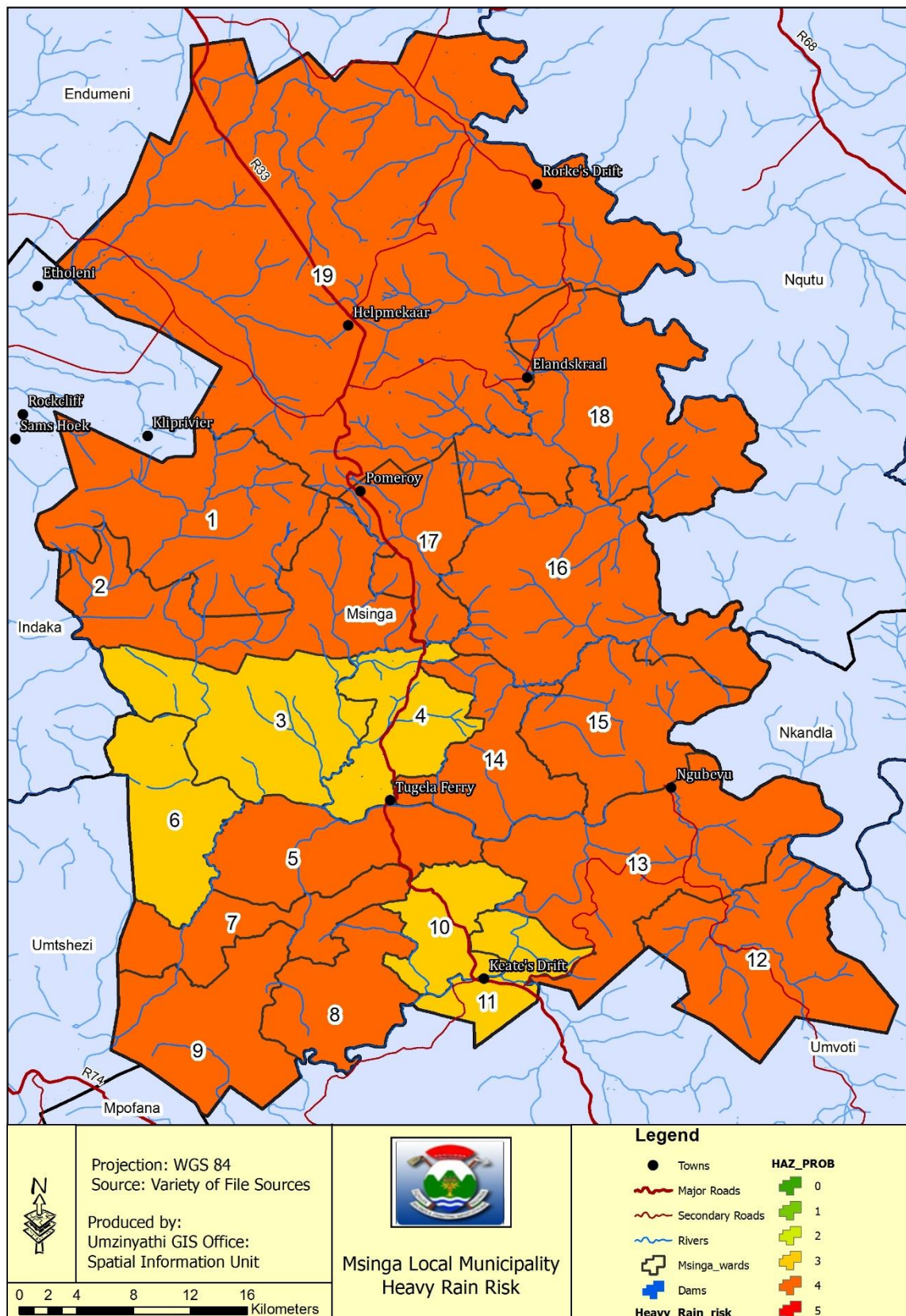
5.2. Disaster Risk Maps

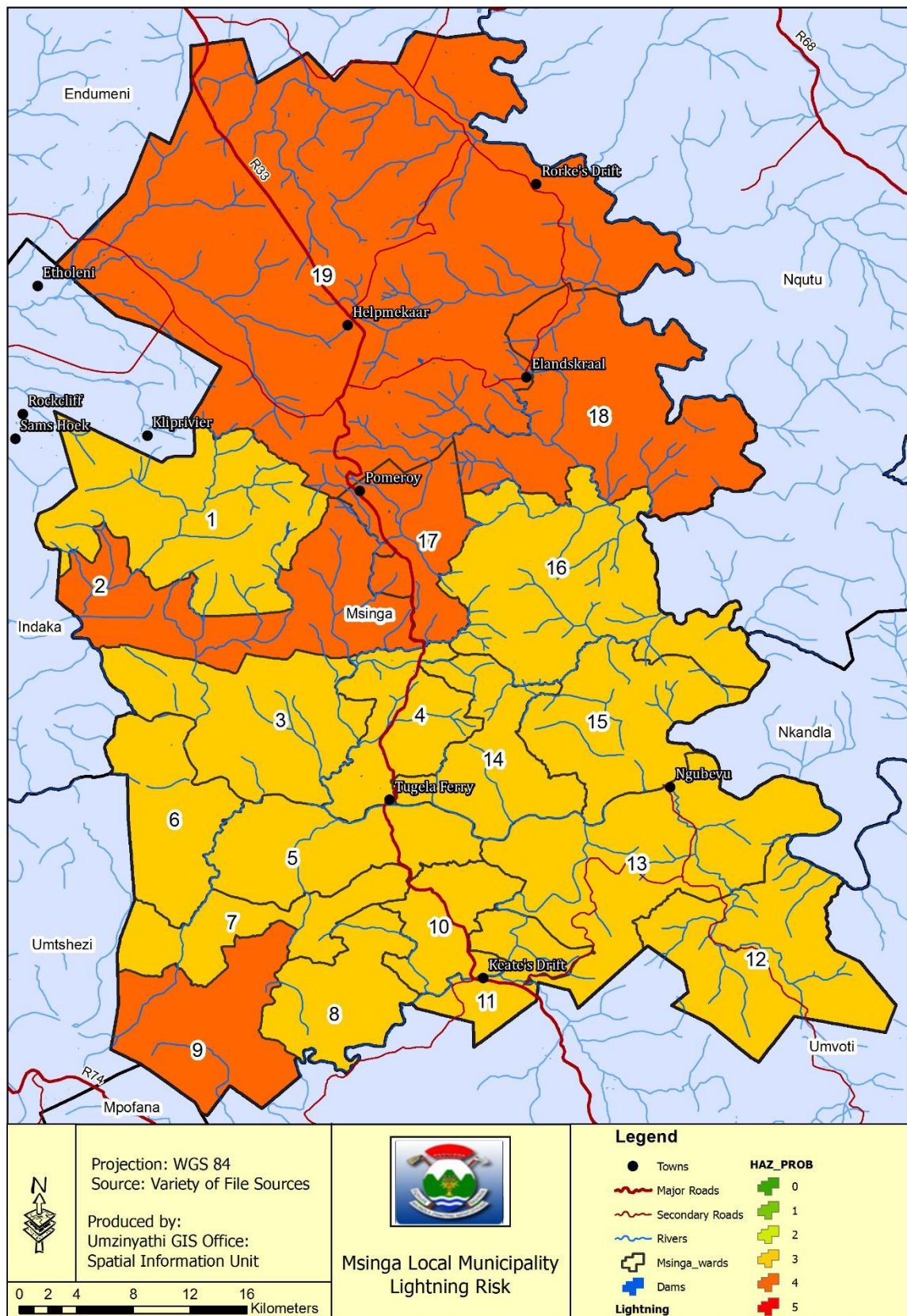


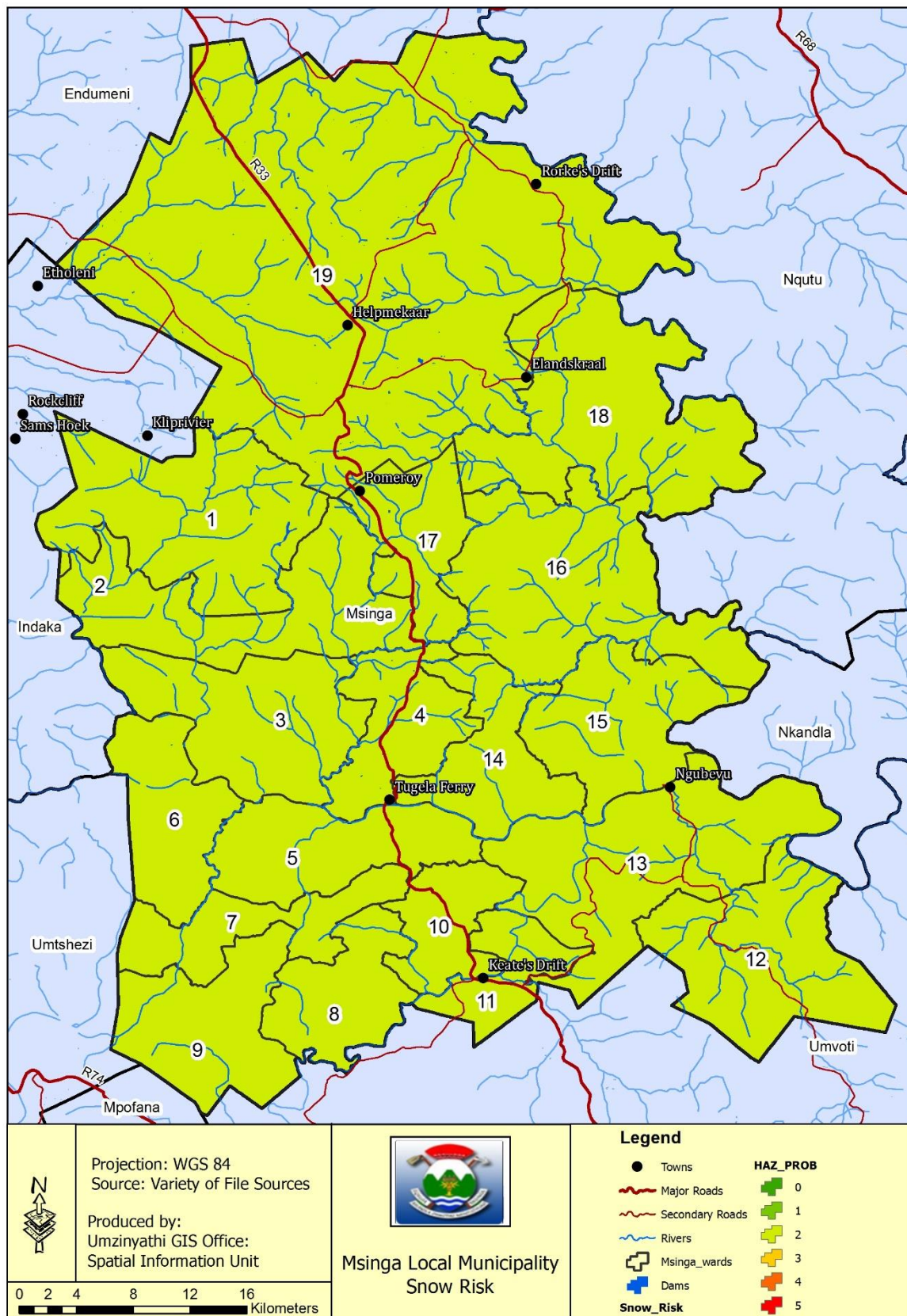


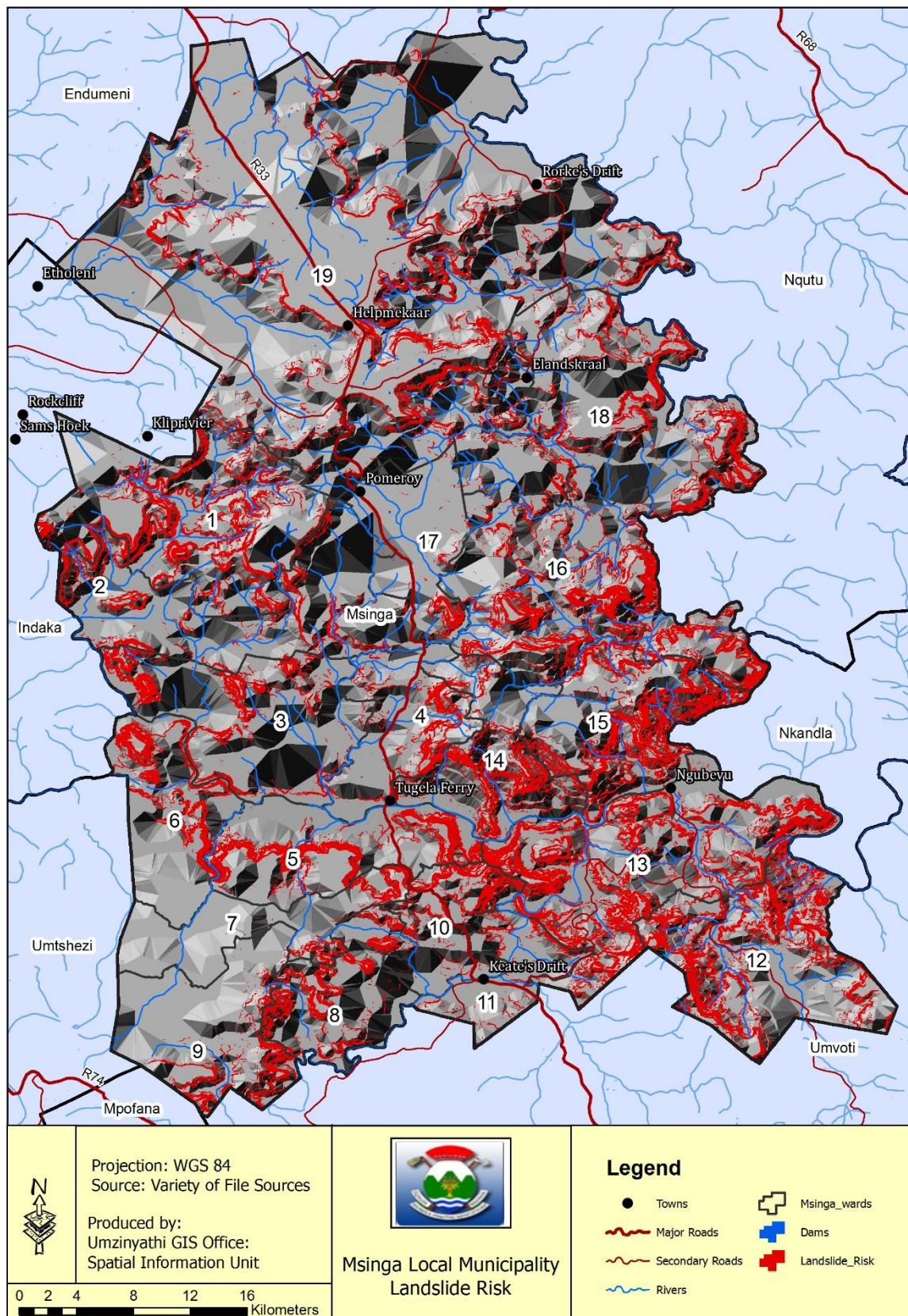












6. Disaster Risk Reduction

Mitigation means 'to make less severe', and mitigation measures are undertaken to reduce the frequency, scale, intensity and impact of hazards. They are typically thought of as being physical in nature and include infrastructures such as the construction of earth bunds, gabion cages, contour planting, strengthened dwellings and public buildings, re-forestation and storm drains.

However, these types of mitigation measures are largely associated with hydro meteorological and geological hazards and we need to expand these typical structural measures to include such non-structural measures as public health campaigns, vaccination programmes (both for livestock and humans), introducing new agricultural practices such as short maturation or drought resistant varieties of crop, promoting dialogue between communities in conflict, relocation of settlements, and awareness and education training programmes.

The following risk factors have been identified in Msinga and we have recommended the following risk mitigation strategies which can be implemented by community participation, stakeholder participation and creation of future projects which can be incorporated into the IDP plan.

A. Land degradation

- a. Education and training for the community will form the base in any form of mitigation plan to be implemented. The community needs to understand the importance and must be willing to participate to ensure the sustainability of the natural resources (land).

- b. Reduce overgrazing of lands

The creation of livestock holding facilities will allow for the vegetation to grow which will prevent land degradation. These facilities can only be created if we have the estimate number of livestock in a given area identified for a livestock holding facility. At least 3 holding facilities need to be created in an area to allow for rotation of the livestock so the vegetation can be given time to grow. These facilities cannot be overcrowded.

This will also eliminate the loss of biodiversity.

B. Soil Erosion

- a. Soil erosion is caused by flash floods, no drainage facilities in place, poor soil conditions which prevents vegetation growth.
- b. Line drains along roads needs to be constructed to allow for proper drainage of rain water. These needs to be incorporated into the construction of future roads that has been planned for Msinga. The water harvested from these drains can be collected in small holding dams which can be used by the subsistence farmers for agricultural irrigation.

- c. Areas that has been eroded needs to be rehabilitated. These can be done by community participation and proposed future projects.

At present we have areas that are severely eroded which requires engineering details and erosion that can be rehabilitated by community participation.

Area with erosion less than 1meter in height can be rehabilitated by creation of rock bolsters, bed mattresses at specified locations along path of erosion. In this way the land rehabilitates itself.

Areas with erosion greater than a meter deep will require baboons, as per engineer's details. These will become projects which will allow for the creation of employment in the community. These areas need to be fenced off and grass needs to be planted to rehabilitate the land.

C. Rock fall

- a. Rock fall is a risk along the R33 entering Msinga (ward5). This is the result of the rocky terrain, which limits vegetation growth and is more evident during heavy rains.
- b. The erection of steel cable fencing along the R33 will trap all fallen rocks. These rocks will need to be removed at set intervals.

- c. The anchoring of steel wire fencing on the face of the mountain to hold the rocks in position will reduce the risk factor. These interventions are costly.
- d. By correcting the above this will reduce the risk factor of road transport.

D. Heavy Rainfall

- a. Heavy rainfall increases the volume of water which increases the rate of erosion. If points 1,2 and 4 are implemented this will reduce the impact heavy rains has on Msinga
- b. By improving the standards of informal homes been built this will limit the number of homes collapsing during heavy rains. At present there is insufficient roof overhang which results in the mud blocks absorbing water which reduces the strength of the block. When these walls become saturated with water they collapse.
- c. The rain water harvested from the roofs can be used for irrigation. Raindrops are like liquid gold to households that rely on subsistence farming and have limited access to water supply. in the poorest wards of the Msinga. Yet when the rains do come - and in many places they come erratically or with decreasing frequency - most of that precious moisture is washed away, unused. Land is so dehydrated that they are unable to grow enough produce even to sustain their families.

Stakeholders can work with communities to introduce simple yet effective irrigation systems to combat the issue.

Even if rainfall is low or erratic, the drip irrigation system enables farmers to nourish and grow the crops they need.

This is how it works:

A large, water harvesting tank in the area catches the rain and stores it.

A resident fills a 20-litre drip bucket and places it one metre above the ground on poles.

The drip bucket is attached to a long hose that criss-crosses the crop field.

Simple gravity provides enough pressure to force the water through the hose. Water drips through the holes in the hose, directly onto the roots of the plants. 100-200 plants can be grown using just one drip bucket system

E. Severe Lightning

- a. The installation of lightning conductors is currently been conducted in Msinga but more need to be install.
- b. Municipality to implement awareness programmes on lightning to communities.

F. Water Pollution

- a. At present the Tugela river is a source of drinking, washing and animal drinking facility. Non-bio gradable waste is also thrown into stream and end up into the rivers.
- b. Designated animal drinking water areas needs to be created to reduce the pollution of the water. Easily accessible sections need to be fenced off to animals. Channels can be created from the rivers for animals drinking trough.
- c. Solid waste collection needs to be extended to all wards.

G. Flooding

- a. Communities in some wards face the regular threat of destructive climatic events. The devastation caused by severe flooding leaves families destitute. It destroys homes, cultivated land, stored food, livestock and even human life. With excessive flooding, soil erosion is increased and silting into the river.
- b. Construction of dykes to channel water away from vulnerable communities is necessary.

- c. Protective structures called Spurs are made of local stones, tightly packed together in 'gabion' wire boxes, extend out into the river, altering the pace and direction of its flow. Spurs can be locally and easily maintained, and on average can act as a form of flood defence for around 7-8 years.
- d. All low lying bridges needs to be brought in line with the road. During heavy rains, these bridges become in accessible. In the interim markers needs to be put in place indicating the width of the bridge and safe level of crossing during heavy rains.
- e. Municipality to implement awareness programmes on flooding to communities.

H. Drought

- a. When drought hits, communities living away from rivers or water supply become extremely vulnerable. With little water for drinking, washing, cooking, growing crops and rearing livestock, families face hunger and desperation. Women are generally responsible for domestic chores and walk long distances to and from scarce water sources. Even then, they cannot carry large loads, so must make regular trips.
- b. Communities rely on donkeys for carrying stuff can be trained to make larger panniers from canvas and plastic bags. They can hold heavy loads and so are used to carry other necessities such as water, firewood or personal items.
- c. Buy creating small holding dams, communities will still have water for irrigation during drought. The drip irrigation system will prevent wastage of water.
- d. Municipality to implement awareness programmes on water usage to the communities.

I. Veld/bush fires

- a. In the open velds, the municipality to implement the fire breaks during fire seasons will limit the risk factors.
- b. Municipality to implement awareness programmes on fire wise communities, fire fighting and safety at homes will go a long way in mitigating fire dangers.

6.1. Alignment/Integration between the IDP and DMP

In terms of Section 26(g) of the Municipal Systems Act, 200, Act 32 of 2000, a Municipality's IDP must contain a disaster management plan. Development projects in the Municipality, as contained in the Municipality's IDP, is thus interlinked with disaster management planning and activities. Risk reduction projects identified as part of disaster risk management planning, such as those identified in this plan and the contingency plans developed and risk assessments should be included into the and Msinga Local Municipal IDP. There are eight key planning points or requirements that must be applied by all municipal organs of state and municipalities when planning for disaster risk reduction initiatives. These must form part of the annual reporting of the municipalities and municipal organs of state to the DMC.

1. Use disaster risk assessment findings to focus planning efforts.
2. Establish an informed multidisciplinary team with capacity to address the disaster risk and identify a primary entity to facilitate the initiative.
3. Actively involve the communities or groups at risk.
4. Address the multiple vulnerabilities wherever possible
5. Plan for changing risk conditions and uncertainty, including effects of climate variability.
6. Apply the precautionary principle to avoid inadvertently increasing disaster risk.
7. Avoid unintended consequences that undermine risk avoidance behaviour and ownership of disaster risk.

8. Establish clear goals and targets for disaster risk reduction initiatives, and link monitoring and evaluation criteria to initial disaster risk assessment findings

A number of risk reduction measures can be identified related to the highest rated identified risks. These measures should be decided upon in consultation with the relevant responsible departments. Some of the possible measures are listed below:

Hazard Category	Strategy	Responsible Department
Disease / Health - Disease: Animal	Implement monitoring program	Department of Agriculture Agriculture Organization
	Implement Training / Awareness Raising Program	Disaster Management Department of Agriculture
	Implement Program to Increase Capacity to deal with Disease	Disaster Management Department of Agriculture
Disease / Health - Disease: Human (HIV, TB, Cholera)	Implement monitoring program	Department of Health
	Implement Training / Awareness Raising Program	Department of Health Disaster Management
	Implement Program to Increase Capacity to deal with Disease	Department of Health Disaster Management
Environmental Degradation	Implement monitoring program	Environmental Department
	Implement Training / Awareness Raising Program	Environmental Department

Hazard Category	Strategy	Responsible Department
Fire Hazards - Formal & Informal Settlements / Urban Area	Increase Capacity to Respond to Fires	Fire Services
	Implement program to upgrade sub-standard housing / buildings	Department of Housing
	Implement Awareness Program	Fire Services Disaster Management
Fire Hazards - Veld/Forest Fires / Urban Fires	Increase Capacity to Respond to Fires	Fire Services Agriculture
	Implement Awareness Program	Fire Services Disaster Management
Hazardous Material: Spill/Release (Storage & Transportation)	Assess and Monitor Movement and Storage of HazMat through Municipality	Fire Services
	Increase Capacity to Response to HazMat Incidents	Fire Services
Hydro-meteorological - Drought	Implement Early-Warning System	Agriculture Department of Water Affairs
	Training / Awareness Raising related to Drought resistant agriculture	Agriculture
Hydro-meteorological Hazards - Floods (Urban, River)	Implement Early-Warning System	Department of Water Affairs
	Develop Floodlines & Conduct Flood Hazard Assessment	Roads and Stormwater Disaster Management
	Implement Stormwater Management Planning and Construct suitable Stormwater Management Infrastructure	Roads and Stormwater
Hydro-meteorological Hazards - Severe Storms (Snow)	Implement Early-Warning System	Department of Water Affairs
	Implement Training / Awareness Raising Program	Disaster Management

Hazard Category	Strategy	Responsible Department
Hydro-meteorological Hazards - Severe Storms (Wind, Hail, Lightning)	Implement Early-Warning System	Department of Water Affairs Disaster Management
	Implement Training / Awareness Raising Program	Disaster Management
	Implement program to upgrade sub-standard housing / buildings	Department of Housing
Infestations - Plant Infestations (Alien Vegetation, Intruder Plants)	Implement monitoring program	Environmental Department
	Increase capacity to respond to eradicate alien vegetation	Environmental Department Agriculture
	Implement Training / Awareness Raising Program	Environmental Department Agriculture
Infrastructure Failure / Service Delivery Failure - Electrical	Implement program for development of alternative energy sources	Environmental Department Engineering Department
	Implement program focused on development and maintenance of electrical infrastructure	Engineering Department
Infrastructure Failure / Service Delivery Failure - Sanitation	Implement program focused on development and maintenance of sanitation infrastructure	Engineering Department
Infrastructure Failure / Service Delivery Failure - Water	Implement program focused on development and maintenance of water infrastructure	Engineering Department Department of Water Affairs
Pollution - Water Pollution	Implement monitoring program	Department of Water Affairs Environmental Department

Hazard Category	Strategy	Responsible Department
	Implement awareness and education campaign	Department of Water Affairs Disaster Management
Civil Unrest - Xenophobic Violence & Other	Implement early warning/monitoring program	South African Police
	Implement Program to Increase Capacity to deal with Civil Unrest Events	South African Police

7. Response and Recovery

7.1. Contingency planning

In terms of sections 52 and 53 of the Disaster Management Act, Act 57 of 2002, (the Act) each municipality and municipal entity must draft disaster management plans for their area. These plans include contingency strategies and emergency procedures.

In terms of section 54 of the Act, a Municipality must deal with a local disaster through existing legislation and contingency arrangements, even if a local state of disaster is not declared.

In terms of the National Disaster Management Framework, contingency planning is defined as follows:

The forward planning process for an event that may or may not occur, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place to prevent, or respond effectively to, an emergency situation.

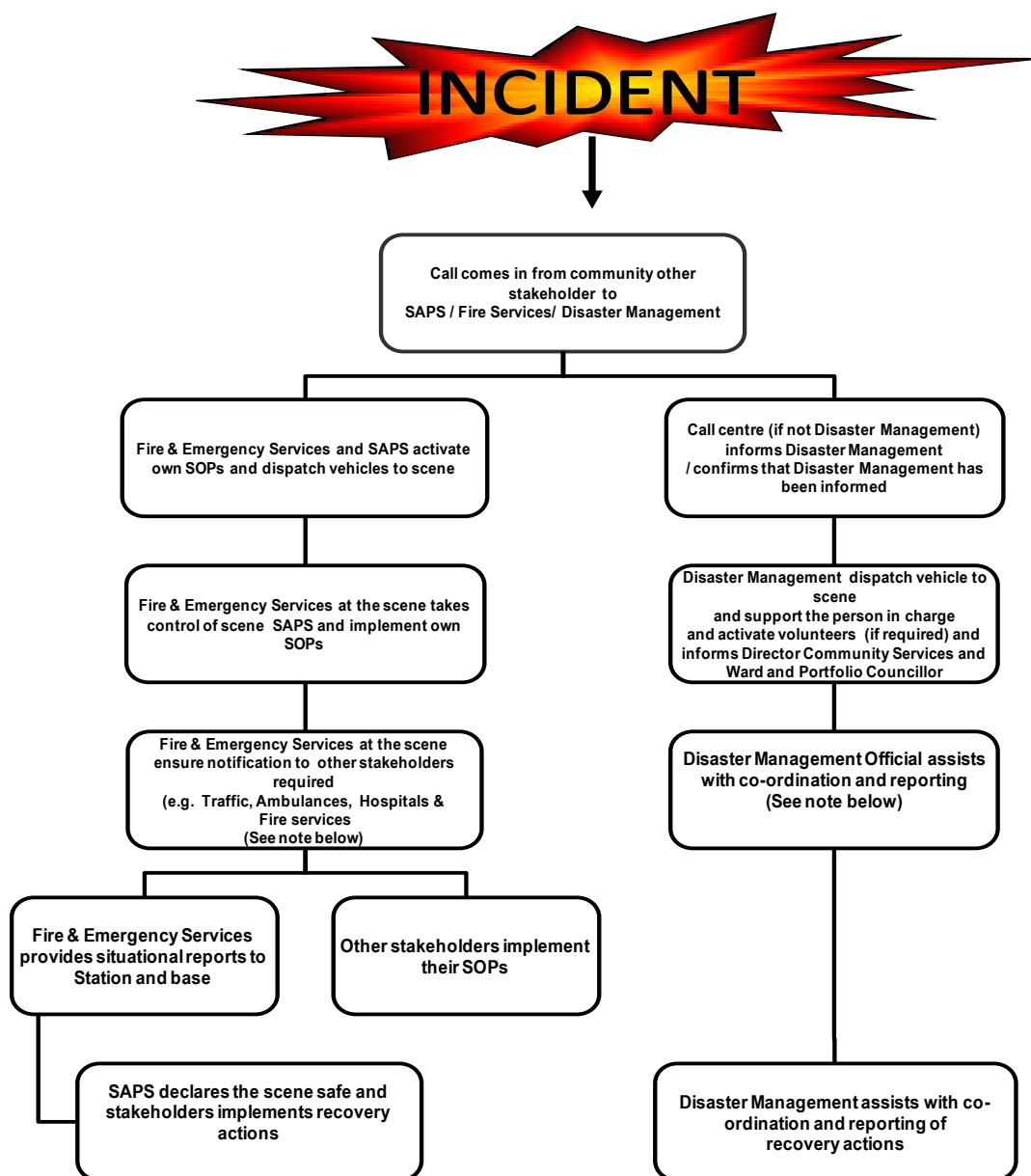
According to section 53(2)(k) of the Act, contingency plans should address:

- the allocation of responsibilities to the various role-players and co-ordination in the carrying out of those responsibilities;
- prompt disaster response and relief;

- the procurement of essential goods and services;
- the establishment of strategic communication links;
- the dissemination of information.

A number of contingency and/or emergency plans has been developed and is available at the Municipal Disaster Management Function. Hazard specific disaster response actions are identified in the contingency plans, but a generic disaster response flowchart is indicated below.

GENERIC RESPONSE AND RECOVERY FLOW CHART



Note: A Joint Operations Centre (JOC) can be established at the scene, depending on the scene's requirements.

7.2. Declaration of a local state of disaster

Section 55 of the Act reads:

55. (1) In the event of a local disaster the council of a municipality having primary responsibility for the co-ordination and management of the disaster may, by notice in the provincial gazette, declare a local state of disaster if-

(a) Existing legislation and contingency arrangements do not adequately provide for that municipality to deal effectively with the disaster;

Or

(b) Other special circumstances warrant the declaration of a local state of disaster.

A local state of disaster is declared by the Municipal Council, following the guidance of the NDMF and National Guidelines.

7.3. Immediate and effective response

In terms of section 55(2) of the Act, the following can immediately be implemented once a local state of disaster has been declared:

(a) The release of any available resources of the municipality, including stores, equipment, vehicles and facilities;

(b) The release of personnel of the municipality for the rendering of emergency services;

(c) the implementation of all or any of the provisions of a municipal disaster management plan that are applicable in the circumstances;

(d) the evacuation to temporary shelters of all or part of the population from the disaster-stricken or threatened area if such action is necessary for the preservation of life;

(e) the regulation of traffic to, from or within the disaster-stricken or threatened area;

- (f) the regulation of the movement of persons and goods to, from or within the disaster-stricken or threatened area;
- (g) the control and occupancy of premises in the disaster-stricken or threatened area;
- (h) the provision, control or use of temporary emergency accommodation;
- (i) the suspension or limiting of the sale, dispensing or transportation of alcoholic beverages in the disaster-stricken or threatened area;
- (j) the maintenance or installation of temporary lines of communication to, from or within the disaster area;
- (k) the dissemination of information required for dealing with the disaster;
- (l) emergency procurement procedures;
- (m) the facilitation of response and post-disaster recovery and rehabilitation; or
- (n) other steps that may be necessary to prevent an escalation of the disaster, or to alleviate, contain and minimise the effects of the disaster.

In reading section 54 of the act, the above will be pro-actively be implemented by the Msinga Local Municipality, as required, depending on the requirements of the incident and availability of resources, irrespective of a local state of disaster has been declared or not.

7.4. Disaster relief

A Disaster Relief Strategy will be furthered, which will inter alia address the following matters:

- The link with SASSA and related legislation (see below**)
- Database of resources
- Manpower & resources contingencies
- Effective needs assessments
- Education as part of relief provision and sustainable relief provision, linking to prevention/mitigation
- Relief protocols, including communication

- 'Emergency kits'
- Venues for relief
- Relief reporting
- Funding & procurement

Mandate for SASSA

The mandate of the Agency is to ensure the provision of comprehensive social security services against vulnerability and poverty within the constitutional and legislative framework.

Legislative Mandate for SASSA

Social Assistance Act, 2004

The Act provides a national legislative framework for the provision of different types of social grants, social relief of distress, and the delivery of social assistance grants by a national Agency and the establishment of an Inspectorate for Social Security.

South African Social Security Agency Act, 2004

The Act provides for the establishment of the South African Social Security Agency as a schedule 3A public entity in terms of the PFMA. The principle aim of the Act is to make provision for the effective management, administration and payment of social assistance and service through the establishment of the South African Social Security Agency. The President signed the Act on the 28th May 2004.

7.5. Post disaster impact assessments

After a disaster the following disaster impact assessment activities will be undertaken, including an impact analysis relating to:

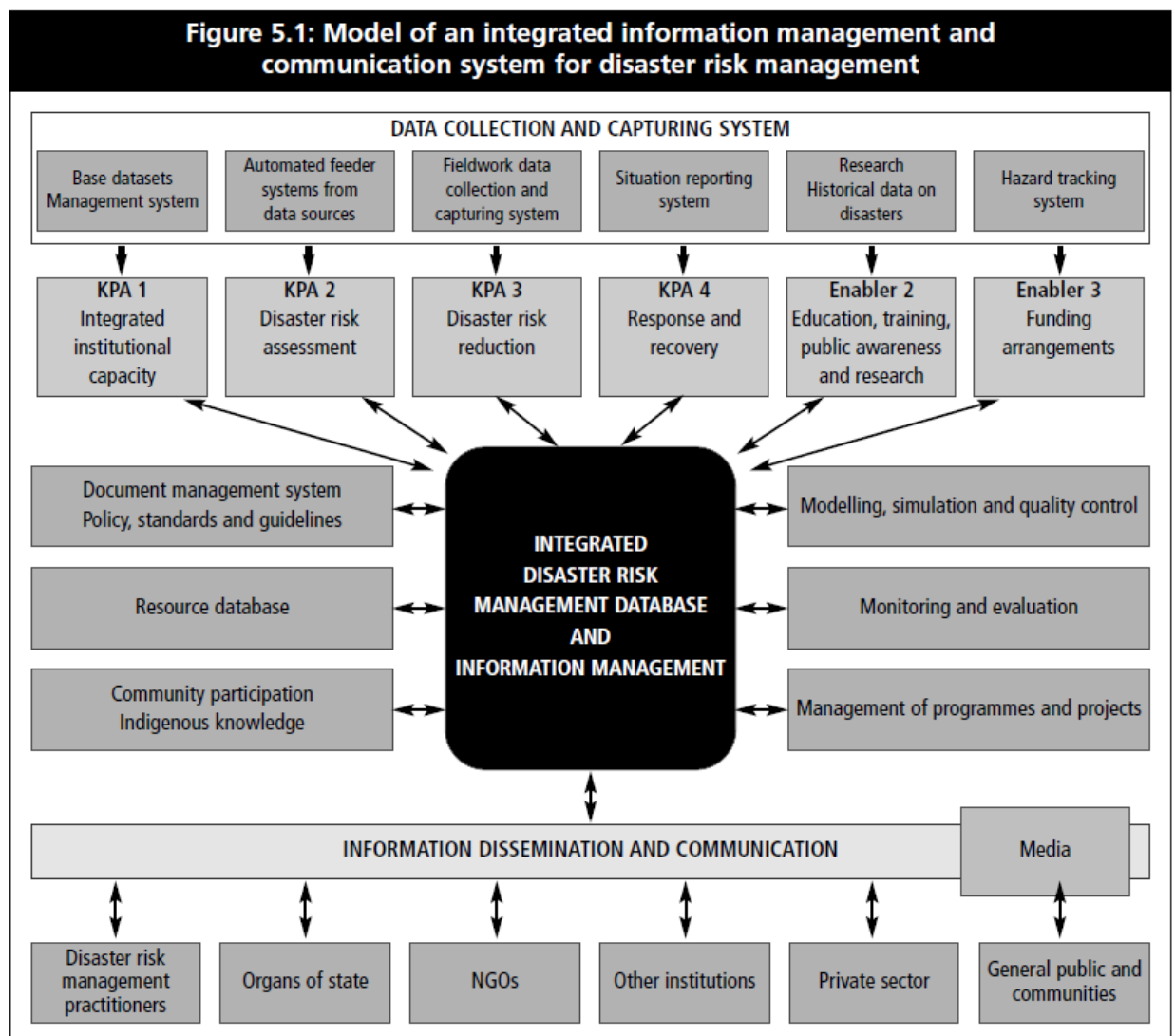
- Direct and indirect impact on communities;
- Social impact;
- Agricultural impact;
- Infrastructural impact, including critical infrastructure;
- Environmental impact; and

- Economic impact.

The assessment will also include an evaluation of the response efforts of the various departments and role-players. The results from the assessment will be used to determine the overall impact of the event on the Municipality, identify gaps in the current disaster contingency plans, and also identify suitable improvements required to increase the resilience of the Municipality to disasters or extreme events.

8. Information Management and Communication

The Msinga Local Municipality will adhere to the Integrated information management and communication model as contained in the NDMF, summarised below:



Effective communication is paramount to effective disaster management planning and implementation. Each stakeholder's communication, dispatching and other procedural arrangements are governed by its functional role and its related standard operating procedures. Details of specific disaster incident communication protocols are contained in the disaster contingency plans, where such details are required.

Communication during a disaster or major incident needs to be fast and require the provisioning of accurate information. Designated resources that would be favourably positioned to convey messages and collect information would be communications officers who would act as a communication and information coordinating hub and municipal representatives who would be familiar with and trusted by Msinga Local community.

The involvement of community is becoming more prominent to ensure resilience and sustainability.

At the heart of participative strategies is the requirement for a sustainable municipal representative that communities will trust and allow should meetings be held for capacity building or information dissemination.

The nature of communication and information management before an incident is largely gathering and making information available regarding the incident. During the incident it is critical to maintain situational awareness and understanding. In order to fulfill this requirement speed of delivery, accessibility and accuracy is very important. SMSs, direct phone calls and even two-way radios are preferred mechanisms. After an incident the coordination of recovery incidents would need to take place. For this purpose emails and meetings would be sufficient.

A stakeholder contacts database has been developed. Specific stakeholder contact details are also contained in the disaster management contingency plans.

9. Education, Training, Public Awareness and Research

Communication and stakeholder participation in disaster risk management in Msinga Local Municipality will be executed through a consultative process, education and public awareness, initiated by the Msinga Local Municipality disaster management

function. These processes will include the development of disaster risk management information leaflets, training programmes, media and local-level meetings with disaster risk management role players, including non-governmental institutions (to be preferably invited / co-opted on the local disaster management committee) and the local traditional and community leaders, schools, clinics and communities.

Although the main responsibility to plan for, ensure budgeting and executing education, training and research (and the publication and communication of the results thereof) lies with the Msinga Local Municipality disaster management function, and Municipal departments, organs of state and municipal entities will also address these elements pro-actively. This will be co-ordinated through to the Msinga Local Municipality disaster management function.

Training on disaster risk management in Msinga Local Municipality will be in accordance with the NDMF and National Guidelines in this regard. Training can be of an accredited or non-accredited nature. Practical, 'hands-on' training of Msinga Local Municipality disaster management officials need to be executed to ensure that at least the following capabilities have been efficiently established in the Msinga Local Municipality disaster management function:

- Public Awareness: Public Awareness is ongoing
- Education: to have brochures for disaster management for primary schools
- Training: training of staff on emergency evacuation
- Integrating all of the above into an effective Msinga Local Municipality Disaster Management operation.

Communication and stakeholder participation in disaster risk management in the Msinga Local Municipality is executed through a consultative process, education and public awareness, initiated by the Msinga Local Municipality disaster management function. These processes includes the development of disaster risk management information leaflets, training programmes, media and local-level meetings with disaster risk management role players, including non-governmental institutions (to be preferably invited / co-opted on the local disaster management committee) and the local traditional and community leaders, schools, clinics and communities.

As part of gathering indigenous knowledge (part of detailed hazard identification), at municipal level, local communities and structures will be orientated on the requirements of the Act and the specific element and information required from them in terms of the Act.

Through the hazard identification and disaster information management dissemination processes, indigenous knowledge via local communities and local structure representatives will consequently be directly acquired and involved.

Cross-border disaster risk management co-operation and co-planning is crucial and will be facilitated through the Msinga Local Municipality disaster management function within the protocols of Government and as made provision for in section 1.4.4 and 1.4.5 of the NDMF. Memoranda of Understanding will be signed with bordering Municipalities, Locals and Provinces (*section 33 (4) of the Act and sections 1.2.4.1, 1.2.5.1, 1.4.4 and 1.4.5 of the NDMF*).

Disaster risk management actions and initiatives, such as result of important meetings and new projects, will be communicated to the communities' via media or otherwise. The Msinga Local Municipality Disaster Management, along with Local, Provincial and Municipal organs of state and municipalities will also formulate and implement appropriate disaster risk management public awareness programmes that are aligned with the national disaster risk management public awareness strategy and will play an active part in engaging schools to ensure a practical approach to education and awareness programmes.

School disaster risk management awareness programmes in Msinga Local Municipality will be conducted, assessed and adapted on an annual basis. Community resilience-building is crucial and a first capacity-building priority is the consultative development of a uniform approach to community-based risk assessment for municipalities and non-governmental and community-based organisations throughout Msinga Local Municipality this will contribute considerably to closer links between disaster risk reduction and development planning in disaster-prone areas and community.

10. Funding Arrangement for Disaster Management

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

Funding arrangements for disaster risk management are specified in the NDMF as indicated below and these guidelines will be followed in the municipality.

Table 7.1: Funding arrangements for disaster risk management		
Activity	Funding source	Funding mechanism
Start-up activities (KPA 1, Enabler 1)	National government	Conditional grant for local government – district and metropolitan municipalities, where necessary
		Conditional grant for provinces with counter-funding component ¹
		Budget of national departments
Disaster risk management ongoing operations (KPAs 2 and 3)	National and provincial government	Own departmental budgets
	New assignment to local government	Increase in the I (Institutional) component of the equitable share of local government
Disaster risk reduction (KPAs 2 and 3)	National departments	Own budgets
	Provincial departments	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	District municipalities	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	In the case of low-capacity, resource-poor municipalities ²	Additional funding released from the NDMC targeted at these categories of municipalities
Response, recovery and rehabilitation and reconstruction efforts (KPA 4)	National government	Own budget for those departments frequently affected by disasters
		Access to central contingency funds
		Reprioritise within capital budgets for infrastructure reconstruction
	Provincial government	Own budget, particularly for those departments frequently affected by disasters
		Conditional infrastructure grants
		Access to central contingency fund once threshold is exceeded on a matching basis
		Reprioritise within capital budget for infrastructure reconstruction
Local government	Access to central contingency fund once threshold is exceeded	
	Conditional infrastructure grant, i.e. Municipal Infrastructure Grant (MIG)	
Education, training and capacity-building programmes (Enabler 2)	All spheres of government	Own budgets and reimbursement through SETAs
		Public awareness programmes and research activities can also be funded through the private sector, research foundations, NGOs and donor funding
Notes:		
1. The suggested ratio for counter-funding is 85:15, i.e. 15 per cent of all start-up costs being funded by provincial government.		
2. Low-capacity, resource-poor municipalities should be identified through the creation of a composite index that takes into account the operating income of municipalities and their capacity classification as determined by National Treasury.		
Source: Partially adapted from FFC, <i>Submission on the Division of Revenue 2003/04</i> , Midrand, p. 96.		

Cost expenditure on routine disaster risk management activities must be funded through the budgets of the relevant organs of state. Preparedness must be funded through the budgets of national, provincial and local organs of state as part of their routine disaster risk management activities”. In light of the above it is evident that the Local municipality and all local municipalities in the Local must fund and implement disaster risk management from their own budgets. The Local municipality must assist from time to time with regard to funding for disaster risk reduction activities, but this does not release the local municipal councils from their responsibilities in this regard.

11. Summary and Conclusion

- The Msinga Disaster Management plan must be reviewed annually and any amendments thereto must be submitted to the DDMC and PDMC.
- A final document will be circulated to the District Disaster Management Centre and Provincial Disaster Management Centre and relevant stakeholders.

12. Recommendations and Implementation Plan

Section 53 of Disaster Management Act (Act No. 57 of 2002) stipulates that a Local disaster management centre must:

- Monitor progress with the preparation and regular updating of disaster management plans and strategies by Local and municipal organs of state involved in disaster management in the Local.
- Monitor formal and informal prevention, mitigation and response initiatives by Local and municipal organs of state, the private sector, non-governmental organizations and communities, including the integration of these initiatives with development plans.
- Monitor the compliance in the province with key performance indicators in respect of the various aspects of disaster management.
- Measure the performance and evaluate such progress and initiatives from time to time.

13. Bibliography

Constitution of the Republic of South Africa 108 of 1996

Disaster Management Act 57 of 2002

Municipal Systems Act 32 of 2000

Msinga Disaster Management Policy Framework

Kwazulu-Natal Provincial Disaster Management Plan

Msinga Municipality IDP 2011/2012

14. Annexures

- A. Disaster Management Advisory Forum (DMAF) Terms of Reference (TOR)
- B. Disaster Management Advisory and Practitioners Forum Reporting Template
- C. Disaster Management Monthly Reporting Template
- D. Disaster/Incidents Assessment Form
- E. Beneficiary List Template
- F. Disaster Management Quarterly and Annual Report Template
- G. Reporting Templates for Stakeholders