

MARCH 2023

# DISASTER MANAGEMENT NEWSLETTER

ISSUE 4

## WATER POLLUTION

Water pollution is a major threat to south africa's economy and environment.

## DISASTERS AND HUMAN RIGHTS

The effects of disasters on human rights.

## DISASTERS IMPACT ON SCHOOLS

Reducing vulnerability and impact of disasters at schools.



cooperative  
governance

Department:  
Cooperative Governance  
REPUBLIC OF SOUTH AFRICA





*Dr Elias Sithole, Head of the NDMC*

The end of the 2022/2023 financial year is upon us, and as we reflect on this era, looking into the highs and lows, the gains, and the losses, we are compelled to evaluate our performances and interventions as we strive to improve our shortfalls, entering the new financial year. That will enable us to acknowledge and honour what we've been through, what we have learnt and how we can take those lessons into the next financial year.

In the current financial year, we have had disaster incidents in the Eastern Cape, Gauteng, KwaZulu-Natal, Mpumalanga and North West.

The April 2022 floods were catastrophic, particularly in KwaZulu-Natal, where more than five hundred people lost their lives, others gone missing and unaccounted for, more than 40 000 people displaced, homes destroyed, infrastructure destroyed (schools and public healthcare facilities), livelihoods changing for the worst, and the list is endless.

In the Western Cape Province, about 300 homes were also destroyed by a devastating fire in Langa, leaving around a thousand people displaced.

Needless to say that anything that destroys livelihoods is disastrous, and as natural as these disasters are, the gains of positive strides made by Government to improve the livelihoods of citizens are regressed.

Be that as it may, we need to continue learning, educating and raising awareness of the different disasters to our communities; ways of avoiding their impact as well as how to better prepare ourselves.

It gives me pleasure to share the last publication of the Disaster Management (DM) Newsletter for the 2022/2023 financial year. This publication comes at a time when the country is recovering from the devastating flood disaster incidents in Eastern Cape, Gauteng, KwaZulu-Natal, Mpumalanga and North West that were experienced as a result of Tropical Cyclone Freddy in early February 2023.

The National Disaster Management Centre (NDMC) continues to coordinate responses towards reducing the impacts of floods. On a continuous basis, the Disaster Operations Centre (DOC) interacts with the Provincial Disaster Management Centres to receive progress updates on activities implemented to curb the impact of vulnerability to floods within communities. The reports compiled by DOC further assist Political Principals and the affected Sectors to make informed decisions towards bringing normality and resilience in the affected provinces.

Our heartfelt condolences to families of those who lost loved ones during the floods. I also encourage all to remain vigilant and alert on the weather warnings issued by the South African Weather Service continuously as they provide updates on the weather patterns. Following her visit to the affected areas in Mpumalanga, the then Deputy Minister of Cooperative Governance and Traditional Affairs, Ms Thembisile Nkadimeng, encouraged communities to be cautious as the risk of flooding still remained high.

The NDMC continues to promote and support initiatives aimed at raising awareness on risk-avoidance behaviour. Through its collaboration with the Department of Basic Education, the NDMC jointly conducted a DRM Training for Educators with the Provincial Department of Education and Provincial Disaster Management Centre at Motheo District Municipality.

This Training was aimed at capacitating Educators with the necessary skills towards implementing Disaster Risk Reduction measures within the school environment. As part of the Training, the Educators were taken through the utilisation of the Disaster Risk Assessment Tool that helps in identifying risk within the school. Once risks are identified, mitigation measures are aligned to a budget where other stakeholders assist with their implementation thereof.

With the country having commemorated Human Rights Day on 21 March, I call on all disaster management role players to provide humanitarian assistance for those affected by disasters within their communities. *Disaster Management is everybody's business.*





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# WATER POLLUTION IS A MAJOR THREAT TO SOUTH AFRICA'S ECONOMY AND THE ENVIRONMENT

The Water you Pollute will Find its way Back to You.

- Bakang Mebalo -

Poor water quality in South Africa is becoming a major crisis across many municipalities in our country, putting at risk our health and economy. In April 2022, the Department of Water and Sanitation revealed that 34% of South Africa's water systems are of high or critical risk.

As the saying goes, water is life, and we need to do everything we can to ensure that we protect this precious resource so that it doesn't become the next biggest crisis in our lifetime.

Rapid urbanisation and growing levels of pollution in our river systems are among the key reasons why South Africa is facing major challenges with its water quality. But some municipalities and districts are also running out of money to pay for basic chemicals to clean wastewater, while others lack sound management and expertise.

Compounding this problem is the fact that South Africa is a water-scarce country, and more prone to shock climate change events such as extreme droughts or floods.

Research has shown that wetlands can act as additional, natural water filters for our man-made water systems. This is because the plants, soils and even microbes in our wetlands can effectively absorb and uptake many harmful pollutants. However, this involves a delicate balance as our wetlands also need to be protected for them to protect us.

In this regard, South Africa should take a closer look at ensuring that industry should be more responsible when emitting discharge into rivers. This might require implementing stricter rules regarding the quality of water that is pumped from industrial processes into the environment.

The Chief Executive Officer of the Water Research Commission for 2018/19, Dr Dhesigen Naidoo, agrees that water pollution is among the top five serious threats to the economy. He says that factories and big businesses have been identified as major polluters of rivers and dams. Naidoo called for municipalities to invoke the National Water Act and to start dealing with businesses that dump chemicals, effluent and waste into water systems.

The former South African Minister of Water and Sanitation, Gugile Nkwinti, revealed that water pollution poses the single biggest threat to the country's water security and quality. The abundance of informal settlements that have been established along South Africa's rivers is a major contributor to this pollution, due to the lack of formalised waste management services at these communities, says Nkwinti. These sentiments were shared at the launch of the Development Cooperation of Partners Platform in commemoration of the World Water Day in 2019.

Nkwinti also called on all South Africans to change their thinking and behaviour around water issues.

Nkwinti further said that communities need to be educated in order to understand the importance of water quality, especially in water-scarce regions of South Africa. These communities also need to be shown the dangers that pollution and plastic waste pose to water sources.

There is of course, plenty you can do to help:

- Stop buying products with too much packaging or recycle.
- Plastic does not biodegrade and poses the biggest threat to our rivers and ocean. Reduce your dependency on it, or recycle.



- Buy organic and free range.
- Stop the use of pesticides and poisons.
- Take your own bags when going shopping.
- Refuse that polystyrene packaging.
- Recycle your tins, paper/cardboard/magazines, glass and soft plastics.
- When buying take-away meals, take your own container and start a trend.
- Cycle more or join a lift club and reduce vehicle exhaust emissions.
- Find environment-friendly alternatives or even go back to the way our grandparents did things before we started using pollutants.
- Save water.
- Compost your food scraps and green waste.
- Buy local and reduce the carbon footprint.
- When taking a walk on the beach, pick up litter before it all ends up in our oceans.
- Fishermen need to be more responsible – pick up discarded nets or fishing gear. Only leave your footprints.

If we are to find solutions, then we have to think about these things. We can no longer ignore the threat to our health.

We only have one planet. Actions speak far louder than words. Respect the planet and lead by example and in so doing, you will teach your children.

Whatever we do today affects the planet we leave behind for our children and for generations to come.

These issues may be out of sight, but we should keep them in our minds. It's up to us to make a difference.

Professor Leslie Petrik from the University of the Western Cape's Chemistry Department had this to say: "What is going out into the ocean is essentially a mixture of your sewage waste, as well as every chemical that you use in the household, or for medicinal purposes, or for cleaning purposes.

These other compounds are far more dangerous than the actual sewage, because the sewage will still probably decomposed over time, but many of these compounds are very persistent and they accumulate within the environment and once they are released you can't recall them back."

The planet has become one large dumping ground where our rubbish and pollutants are killing countless animals, marine life and spreading disease.

It is estimated that around 5 million people die every year from drinking contaminated water which spreads sickness and waterborne diseases such as typhoid and cholera.

Human waste or sewage is one of the problems we face. In areas where there are no sewage treatment plants, raw, untreated sewage is pumped into the ocean. Marine outfall pipes extend deep into the ocean.

*When we see something, we value it.*

*When we value it, we take care of it.*

*Water is the key to human existence; if we value it, it will help both humans and the planetary systems on which we depend to survive and flourish.*



# REDUCING VULNERABILITY AND IMPACT OF DISASTERS AT SCHOOLS

Disaster Risk Reduction begins at school

- Pumeza Tyali -

Schools are densely populated places that may have youths and children, who are among the most vulnerable groups in the society. Some of the schools have inadequate safety and security measures which pose physical threats to learners, teachers, and non-teaching staff.

The reported cases of COVID-19, school roofs ripped off by severe weather conditions, school classrooms affected by floods and fires, to mention a few, are among the incidents that have necessitated the need for Disaster Risk Assessment in schools. Disaster Risk Assessment enables School Safety Committees to identify hazards in and around the school.

South Africa, in line with the global practices, joined the global community in adopting the 2006/2007 bi-annual Theme (Campaign) of the United Nations International Strategy for Disaster Reduction read, '**Disaster Risk Reduction begins at school**'.

In promoting Disaster Risk Reduction in schools, the National Disaster Management Centre has entered into a formal agreement with the Department of Basic Education titled, Implementation Protocol. The purpose of signing the Implementation Protocol is to collaborate on the implementation of Disaster Risk Management in the South African school system, guided by the National Disaster Risk Reduction School Tool Kit.

The purpose of this collaboration is to further enhance the implementation of Disaster Risk Management in the South African school system, with special focus on:

Promotion of disaster risk planning and implementation in the South African school

system which is done through coordinating the development of Disaster Management Plans;

Strengthening integration of Disaster Risk Management education which has led to the reviewing of the Life Orientation textbooks for Grades 4-12 to integrate Disaster Risk Management;

Promotion of implementation of norms and standards for school infrastructure which through the joint Disaster Risk Assessment Project in collaboration with the Department of Basic Education and SANTAM, risk mitigation measures (including infrastructure) are explored and implemented where resources are available;

Promotion of teacher development in the Disaster Risk Management field is currently promoted through the coordination of Workshops for teachers; and

Promotion of Disaster Risk Management Advocacy and Awareness in the South African school system which is coordinated through the implementation of the Integrated Public Awareness Strategy.

Among the initiatives to promote Disaster Risk Reduction in the school environment, the Free State Department of Education in collaboration with the Provincial and National Disaster Management Centres hosted a Disaster Risk Management Training for Educators within the Motheo District Municipality on 23-24 January 2023

**“Disaster Risk Reduction education must be integrated in primary and secondary school curricula. Schools should be regarded as focal points for raising awareness about Disaster Risk Management and Disaster Risk Reduction.”**

**National Disaster Management Framework, 2005.**



**Safety Tips provided in the Training:**

<b>FIRE PREPAREDNESS</b>	<b>LIGHTNING PREPAREDNESS</b>	<b>GUIDELINES FOR EXTINGUISHING FIRE &amp; FIRE INSTIGATORS</b>
✓ Know the sound of the Evacuation Alarm.	▪ It is critical that lightning conductors are installed in vulnerable areas and / or schools.	➤ Water should not be utilized to extinguish a flammable liquid – only carbon dioxide or dry chemical can be used.
✓ Familiarise yourself with the Evacuation Plan.	▪ Avoid powerlines during lightning.	➤ If an electrical equipment catches fire, water can be used, however, the main electrical power should be switched off.
✓ During Evacuation, people are not allowed to use the lifts as smoke and gas move quickly.	▪ Go to the nearest place to find shelter especially in Clinics, Police Stations, etc.	➤ Gas is safe, but it should be used correctly. Only 18 and less Kgs can be kept in the house.
✓ Every institution should have Evacuation chairs to assist people living with disabilities.	▪ You can stay inside a car but do not touch any metal parts of the car.	➤ If you smell gas inside the house, do not switch on the light or take your cell phone with unless it is switched off and ensure that windows are open for vertical and horizontal ventilation.
✓ Remember to roll and drop to the ground in case of some in the building and do not run.	▪ Do not use any metal objects during lightning.	➤ For fire to exist, it needs fuel, oxygen and heat.
	▪ Avoid small structures such as outside toilets during thunder and lightning.	➤ Cooking oil is a fuel in a liquid form and if you live it open in a closed room, it can produce heat. Ensure that it is closed with a lid or put a plate or wet cloth on top of it.
	▪ During lightning, your feet must not be 10cm apart but preferably must touch each other.	
	▪ All electrical appliances must be switched off, especially if there is a severe storm with lightning.	
	▪ If moving in a group, create a space between each other.	
	▪ When building a house, there must be earthing installed for safety.	
	▪ Avoid elevated areas, water i.e. swimming, etc. during lightning.	
	▪ If a person has been struck by lightning, conduct first aid.	



# ROAD SAFETY AWARENESS

## Tips during heavy rains

- Pumeza Tyali -

South Africa is experiencing a rare weather phenomenon that scientists believe has been triggered by climate change, which has thrown the country into its third consecutive year of La Niña. La Niña is a global weather phenomenon that occurs in the Pacific Ocean, and for some countries like South Africa, it brings above-average rainfall.

Forecasts indicate this weather pattern will remain in this state during the early part of 2023. The presence of La Niña event usually has its strongest impact on rainfall during the mid-summer months. With the continued strengthening of the La Niña event, the country can expect above-normal rainfall and below-normal temperatures over the summer rainfall areas.

Following weather alerts from the South African Weather Service towards the end of January 2023, on Tropical Storms leading to flooding, South Africa experienced heavy rains from the beginning of February 2023.

The impacts of this phenomenon are already being felt by South Africa, as the then Deputy Minister of Cooperative Governance and Traditional Affairs, Ms Thembisile Nkadameng saw first-hand the devastation caused by floods in Nkomazi Local Municipality in the Mpumalanga Province on 21 February 2023. Ms Nkadameng noted that across the 33 wards in the municipality, there are over one hundred Footbridges that are connecting communities of the various villages and many of these are totally destroyed by the floods. Some of the local and provincial bridges, roads have also been destroyed.

The Deputy Minister urged for heightened awareness and encouraged communities to be cautious as more rains were still expected and the risk of flooding still remained high.

The Deputy Minister's visit was preceded by the assessment of the disaster-stricken areas in the City of Mbombela and Nkomazi Local Municipality by the Premier of Mpumalanga, Ms Refilwe Mtshweni-Tsipane. Following her visit, Ms Mtshweni-Tsipane highlighted that, "In almost all the bridges that we have assessed, it is clear that they are low, and soon as the water levels rise, water flows through all directions." She further said, "The biggest task is to restore the infrastructure, which includes raising of the levels of the bridges higher. As we restore the infrastructure, we will ensure that the levels of bridges are raised higher, and that we build the drainage system without fail."

The report of the South Weather Service to Cabinet indicated that the cause of the torrential rains was the El Nina effect which was responsible for above normal

rainfall which was to remain with us until the end of the first quarter of 2023.

The MEC of Eastern Cape Cooperative Governance and Traditional Affairs, Zolile Williams, having observed the destructive effects of the recent floods in South Africa, in his statement on 22 February 2023, cited that, "It will cost the Eastern Cape provincial government an estimated 4.5 billion to fix and replace road and bridge infrastructure damaged by floods that battered the province last week". He further echoed that the 2023 disaster was more devastating, saying it had destroyed among others, both proclaimed and access roads, bridges, etc.

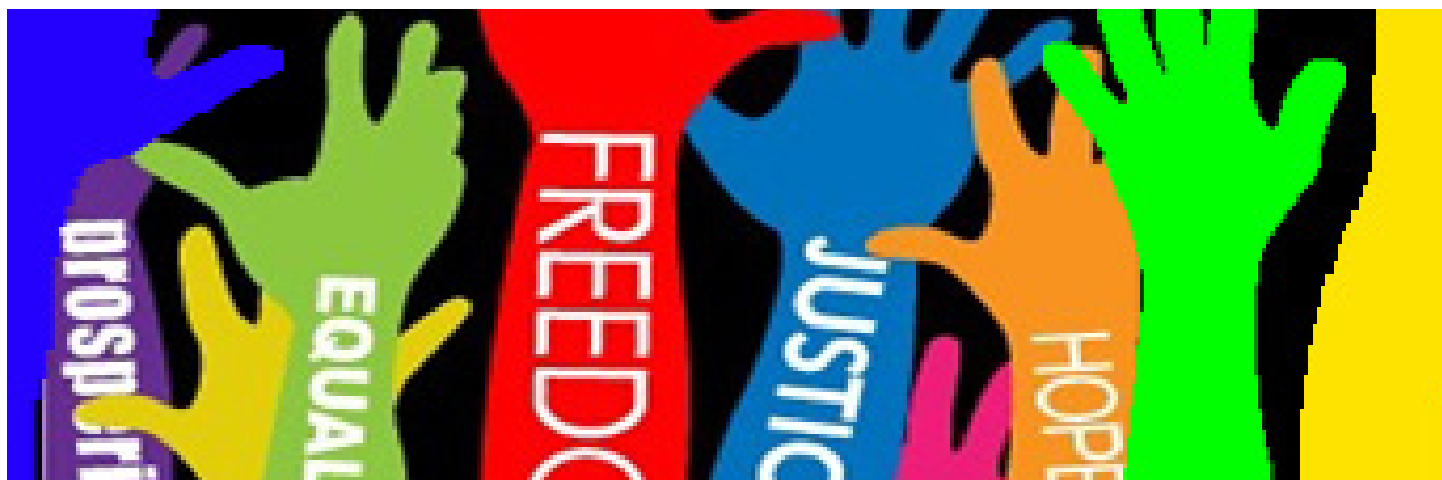
To mitigate this impact, Mr Williams advised that a submission was made to the Inter-Ministerial Committee on Disaster to request involvement of the South African Defence Force to provide temporary bridges in all the affected areas so that communities can be connected to services. To ensure motorists stay safe and in control on the roads during these rains, the Automobile Association advises that:

- **Motorists should check that their windscreen wipers** are working properly (front and back) and that their brakes are sound;
- **Ensure your headlights and brake lights are working.** Switch on your headlights, especially when natural light is low, as this also alerts other drivers to your presence on the road. Only turn your emergency lights on if you are stationary to avoid confusing other drivers about whether you are moving or not;
- **Check that your tyres** are in good shape to avoid aquaplaning. Aquaplaning occurs when the tread on the tyres is no longer able to channel water away, and the tyre lifts off the road surface and starts to skim across the water like a speedboat;
- **Don't speed, and maintain a safe following distance.** Driving 15 to 20km/h below the speed limit is always a good idea in extremely wet conditions;
- **Slow down before entering standing water** on the road, as this may cause the car to "pull" to the side without warning and may be deeper than it looks; and
- Crashes in wet conditions are common, so **always wear your safety belt and ensure all children and passengers are strapped in.**



# THE EFFECTS OF DISASTERS ON HUMAN RIGHTS

- Bakang Mebalo -



South Africa is a country vulnerable to natural disasters, with frequent occurrences of floods, droughts, wildfires, and storms. These disasters can have severe impacts on human rights, exacerbating pre-existing vulnerabilities and inequalities.

The immense devastation of the April 2022 floods that affected areas of KwaZulu-Natal and Eastern Cape provinces left nearly 12,500 homes damaged is one such case of vulnerable populations being the most affected.

One of the most significant effects of natural disasters on human rights in South Africa is the displacement of people from their homes. Forced displacement due to natural disasters violates the right to adequate housing, as well as the right to freedom of movement. Displaced individuals often must endure inadequate living conditions in temporary shelters, without access to basic services such as clean water, sanitation, and healthcare.



During the floods, approximately 66 health centres were disrupted, and a total of 600 schools were damaged which placed over 250 000 learners at risk of not being able to continue accessing the basic right to education.

Natural disasters can also have a severe impact on food security, particularly in rural areas where agriculture is the main source of livelihood. Droughts and floods can destroy crops, leading to food shortages and malnutrition. This affects the right to food, which is a fundamental human right. Disruptions to the food supply chain due to natural disasters can also lead to price hikes, making food unaffordable for vulnerable communities.

As observed in KwaZulu-Natal in the aftermath of floods, natural disasters can also have a significant impact on the right to health.

Furthermore, natural disasters can disproportionately affect vulnerable populations such as women, children, and people with disabilities. Women are often the primary caregivers in households, and when disasters occur, they face additional responsibilities such as caring for children, the sick, and the elderly. This can lead to increased stress and workload and limit their access to education and employment opportunities.

The floods damaged health infrastructure and disrupted the delivery of healthcare services. Floods and stagnant water can create breeding grounds for disease-carrying insects, leading to the spread of waterborne diseases such as cholera and typhoid.

Natural disasters can have severe and lasting effects on human rights in South Africa. Government, through the National Disaster Management Centre (NDMC), continues with efforts to prevent and mitigate the impacts of disasters, particularly for vulnerable communities. This includes ensuring access to adequate housing, food, healthcare, and education, as well as promoting gender equality and social inclusion.

