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DISASTER MANAGEMENT NEWSLETTER

ISSUE 3

DRONE TECH

How can drones save lives and create jobs for the youth?

PREVENTING DROWNING DEATHS

Approximately 43% of deaths by drowning occurred in children under the age of 15

PLANT A TREE

Discover why trees are counted among nature's most valued gifts



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Disaster Management Newsletter (DM)

The National Disaster Management Centre (NDMC) endeavours to publish this newsletter every quarter to share DRM-related information with stakeholders.

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Message by the Acting Head of the NDMC



It brings me great pleasure to present the second quarterly issue of the Disaster Management (DM) Newsletter. This publication is released during the quarter in which South Africans celebrate Women's Day. This is to remind South Africans of the sacrifices made by women to ensure that their voices and issues are heard and addressed.

Furthermore, the publication comes at a time when the country celebrated Heritage Day in recognition of the cultural wealth of our nation. During this period, we recognised the important role of living heritage in promoting cultural diversity, social cohesion, reconciliation, peace and economic development.

Also celebrated in the month of September is National Arbor Day. The day is celebrated by various communities, Non-Governmental Organisations (NGOs), sector departments, and the private sector with the aim of creating sustainable communities by planting indigenous trees to fight the effects of climate change.

Noting the NDMC's responsibility to build capacity and enhance skills in Disaster Risk Management (DRM) through advanced education and training programmes, this publication will be featuring the previous bursary beneficiaries, some of whom have been employed within the disaster fraternity.

The 2022 International Day for Disaster Reduction (IDDR) was commemorated under the theme, *"Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030."*

It was jointly commemorated with the City of Cape Town Disaster Risk Management Centre in the Western Cape.

The NDMC endeavours to publish this Newsletter every quarter to be able to share DRM-related information with stakeholders.

I am looking forward to having stakeholders share their articles with the NDMC through Ms Pumeza Tyali at **PumezaT@ndmc.gov.za** before the end of every quarter.

Ané Bruwer

A drone is shown in flight against a background of a forest fire. The drone is a quadcopter with a camera mounted underneath. The fire is visible as bright orange and red flames rising from a dark green forest. The sky is a mix of blue and grey, suggesting smoke or overcast conditions.

DRONE TECHNOLOGY

A Potential to Save Lives and Create Jobs for Thousands of Young People

UNICEF and CoGTA

With humanitarian disasters wreaking havoc around the world and rampant youth unemployment in South Africa, scaling up disaster and emergency preparedness drone technology in the country will not only help children and young people whose lives have been severely impacted by crises but will also provide learning and employment opportunities for thousands of South African youth.

Drones and the use of other technology, such as robotics, in disaster response, can and are saving lives around the globe. From search and rescue drones in Kazakhstan to vaccine deliveries in Vanuatu, the sky is truly the limit in the application of drone technology in emergency preparedness and disaster management.

In a two-day conference – Incorporating Drones and Robotics into Disaster Management and Humanitarian Aid – hosted by UNICEF South Africa and QP Drones in Cape Town on 20 and 21 October, leading minds and policymakers across government, tech industries, academia, humanitarian agencies and the private sector gathered to chart the way forward for drone technology in South Africa and the wider continent in supporting the most vulnerable children and people who are at risk of – or already affected by – disasters.

Delivering an opening address, UNICEF South Africa deputy representative Muriel Mafico remarked, “Disasters and humanitarian crises are unfortunately increasing in frequency and scale – and South Africa is not exempt. The COVID-19 pandemic, unrest across KZN and Gauteng in July 2021 and the flooding to also hit KZN this year are all reminders– if any were needed – why disaster risk management, including preparedness, is so important.”

In South Africa, a country with an abundance of young creative and tech-savvy minds, the power of technology to support disaster risk management through rapid risk assessments, identifying priority areas of need, and informing emergency preparedness work can be harnessed.

Speakers at the conference included the Deputy Minister of Cooperative Governance and Traditional Affairs, Ms Thembisile Nkadameng, the City of Cape Town Mayoral Committee Member, Mr JP Smith, and the UK Consul General, Mr Ben Boddy, who added their support for expanding drone technology in emergency response and preparedness in South Africa.



In her address, Deputy Minister Nkadimeng said the use of drones in disaster management activities may provide the following benefits:

- * The swiftness of drones in terms of maneuverability has helped track and survey disaster zones and areas competently.
- * High-resolution cameras with sharp focus help drones capture real-time images of the disaster area while also collecting and disseminating relevant and accurate data.
- * The technology allows rapidly providing data to quantify areas affected by the hazard, assisting search and rescue operations by reducing the time required to locate victims.

and the time required for subsequent intervention by searching a large area in a short period of time in addition to providing critical situational awareness information to rescuers about available routes during search and rescue operations.

- * Furthermore, by utilising advanced technologies such as noise sensing capabilities, binary sensing, vibration, and heat sensing, drones can search for victims buried beneath the rubble.

She further said that there is a need for the current Drone Industry regulatory environment to be harmonised and benchmarked against international best practices, and for organisations such as QP Drone Tech and South Africa Flying Labs to be supported to bring the benefits of this sector to South African Communities.



Preventing Deaths by Drowning through Advocacy and Awareness

Bakang Mebalo

According to the United Nations drowning is the 3rd leading cause of unintentional injury worldwide, accounting for 7% of all injury-related deaths. Drowning has a tragic and profound impact on families and communities. Noting the number of deaths caused by drowning during the summer season in our communities is gravely concerning, especially where young children are mostly the victims.

The Western Cape recorded 19 drowning incidents from September 2021 until 23 January 2022, of which Children between the age of (5-19) are more likely to drown. The reasons for drownings vary from lack of public awareness of water safety, swimming skills among children, and lack of municipal by-laws regulating public pools in some municipalities.

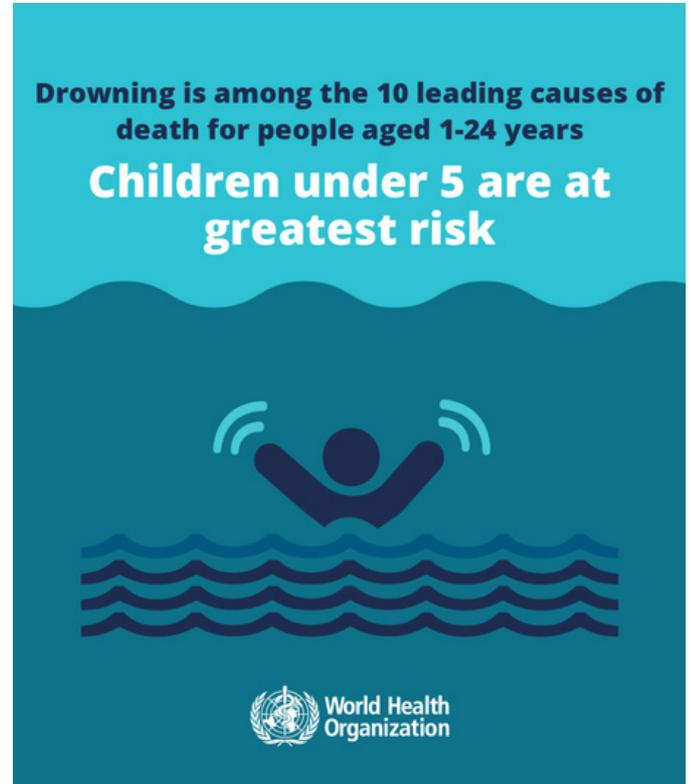
According to Statistics South Africa, a total of 1391 drownings occurred in the Western Cape between 2010 and 2016. Mayoral Committee Member for Community Service and Health, Councillor Patricia van der Ross has lauded lifeguards for their intervention and for saving lives.

A study published in the South African Medical Journal, in 2017, found that:

- Approximately 43% of drowning deaths are in children under the age of 15.
- The highest drowning mortality rate is in children 0 - 4, followed by adults over the age of 65, and then children aged 5 - 14.
- Drowning occurs disproportionately in the summer months of December, January and February.

There is power in number, all stakeholders, civil society organisations, private sectors, academia and individuals should work together to mark World Drowning Prevention Day by raising awareness and implementing proven measures such as:

- Installing barriers controlling access to water.
- Providing safe places away from water such as daycares and childcare centres.
- Teaching swimming, water safety and safe rescue skills in schools.
- Training bystanders in safe rescue and resuscitation.
- Improving flood risk management.



In the end, it is what we do that determines how far we can address drownings by advocating for the safety of our children and communities, especially in the coastal provinces.

To promote the reduction, control or prevention and consequences of drowning and water injuries, the Western Cape Strategic Framework advises on some key action areas:

- Establish provincial information strategy and systems based on existing platforms.
- Strengthen advocacy and enforcement of priority policy measures.
- Promote multi-sectoral partnerships and water safety collaborations.
- Strengthen institutional prevention capacity.
- Strengthen public and specialised education and community awareness.
- Develop priority barrier interventions.
- Develop priority infrastructural interventions.

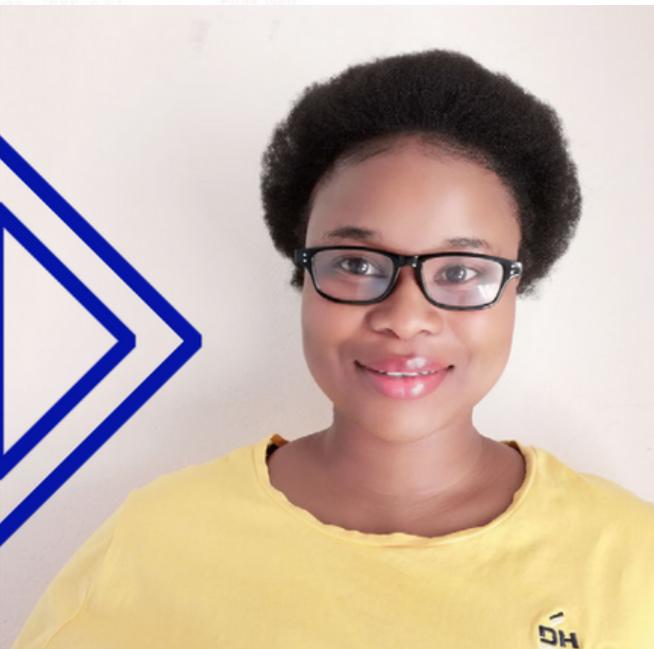
DISASTER RISK MANAGEMENT SKILLS DEVELOPMENT

The NDMC is serious about building capacity and enhancing skills in Disaster Risk Management (DRM) through advanced education and training programmes. Meet some of previous NDMC bursary beneficiaries, a majority of whom have secured employment within the disaster fraternity.

Pumeza Tyali

“The NDMC bursary has helped me to further my studies and offered my family financial relief. I was able to fully participate in extramural activities and the process strengthened the bond I have with the institution.”

Sbongile Mtshweni
BSc Agriculture
University of Mpumalanga



“The Bursary helped me to accomplish my dream of obtaining a degree.”

Dikeledi Molekoa
Bachelor of Earth Science in Hydrology
University of Venda





Lifesaver
Victim
Harness
p.24



ProSeries
Litter
Harness
Bag p.128

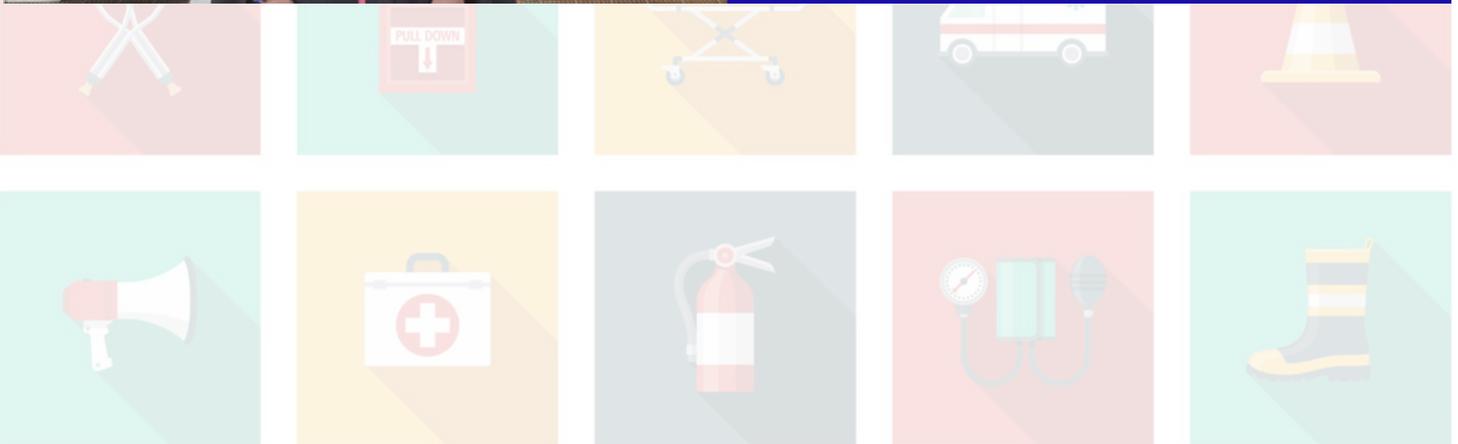
“The Bursary has provided me with an opportunity to further my studies which then translated into an employment opportunity owing to the knowledge and experience acquired from the qualification.”

Shelter Muntswu
Pg Dip in Disaster Management
University of the Free State



“The bursary was a huge financial relief and a great motivation towards completing my qualification.”

Jeshnah Singh
Dip Public Administration (DRM)
Durban University of Technology



TREES ARE NECESSARY FOR HUMAN LIFE

Trees are one of the most important mechanisms in a global ecosystem and have over the years demonstrated why they are among nature's most valued gifts.



Sihle Pokwana

Trees give numerous benefits at multiple scales, including the homestead, nearby fields, and the larger environment. Furthermore, trees provide a variety of ecosystem services, including environmental and agricultural efficiency, biotic protection, water management, and land reclamation. Although trees are claimed to bring these benefits, most rural populations in South Africa are still unaware of them. Trees are one of the most important mechanisms in any global ecosystem and one of nature's most valued gifts.

Multiple ecological benefits

Trees in landscapes dominated by humans are a common feature around the world and are essential for the ecological, spiritual, and livelihood benefits of the people.

Trees are also beneficial through their provision of food, medicine, windbreaks, firewood and as soil ameliorating (fertilizer trees) for crops and fodder to livestock. Trees, therefore, act as safety nets through the alleviation of poverty for small-scale farmers and rural households.

Economical considerations

Trees improve the socio-economic livelihood of mainly rural communities. For instance, trees planted in cultivated gardens and fields can decrease production costs and increase the outputs and profit of farms. The decreased production costs refer to the cost of chemicals, water, energy, labour and provision of natural shelters (Benayas et al., 2008; Lassoie et al., 2009; Raedeke et al., 2003).

Ospina, 2017 argued that introducing trees on farms and gardens can help improve the quality of the soil, which in turn will help farmers and households produce more crops. He further alluded that, introducing trees can further allow more nutrient cycling, which means farms outputs can be more reliable and substantive, this in turn improves the socio-economic livelihoods of rural people.

“

**A tree has roots in the soil
yet reaches to the sky.
It tells us that in order to aspire
we need to be grounded
and that no matter how high we go
it is from our roots
that we draw
sustenance.**

Wangari Maathai

Communities should be trained on setting up and running cooperatives to make sure that they meet the set objectives and needs of the people.

The people should be capacitated in tree planting so they can integrate crops, trees, and livestock production in a more complementary manner.

The lack of trees in rural homesteads means they have to meet their needs for food by buying from the local markets. It further means their livestock are not protected during hot and cold periods, as trees can serve as shelter.

Without trees, houses are also vulnerable to heavy winds because there are no windbreaks to protect them. It is also important to note that the availability of especially leguminous trees in the homesteads could help minimize the amount of fertilizer they need for crop growth as leaves from trees can play the role of fertilizer; the lack thereof means they must buy everything.



UNDRR's THEORY OF CHANGE

The world is changing.

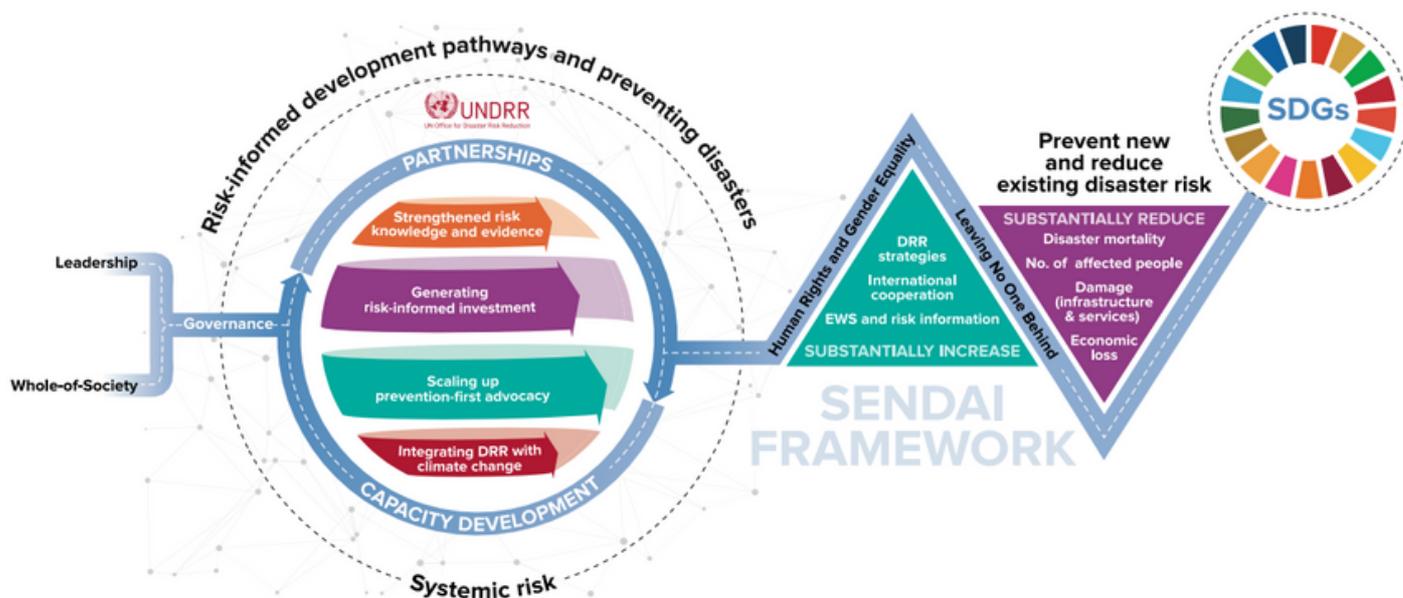
The interactions between climate change trends, ecosystem fragility, disease outbreaks, rapid unplanned urbanization, mass displacement and geo-political instability, fuelled by the interconnectivity of communications, trade, financial systems and politics, mean that shocks, stresses, and crises reverberate globally.

The COVID-19 pandemic has reminded the world what the Sendai Framework for Disaster Risk Reduction 2015-2030 is all about: risk is systemic, interconnected

and cascading. Climate change is driving increased risk across all countries, and unpredictable hazards can have devastating cascading impacts on all sectors, with long-lasting, debilitating socio-economic and environmental consequences.

We are trapped in a vicious and self-fulfilling cycle of disaster > respond > recover > repeat.

The people hit hardest are those who have done the least to cause these significant changes.



There is no denying that disasters of any kind are expensive: in the cost to human life and economies.

Sadly, despite all the evidence that abounds, prevention is not yet prioritized, and therefore, humanitarian needs continue to multiply, jeopardizing development gains. Poverty, inequity, and insecurity continue to drive disaster risk, compounding vulnerabilities and increasing its impact.

The world is not on track to achieve the Sustainable Development Goals (SDGs). As UN Member States move forward with Agenda 2030, more focused, accelerated action is required to help countries identify and analyse the broad range of risks they face, put in place appropriate measures to mitigate existing risks and to prevent the creation of new risks.

We believe that risk can be reduced and that disasters don't have to devastate.

Improvements in disaster risk management along with rising living standards have reduced mortality rates from natural hazards significantly. But these gains can easily be reversed.

But we must act now. We are facing more intense, frequent and compounding disasters, which are outpacing our efforts in resilience building.

If we persist with a 'business as usual' approach we will not meet the goal and global targets of the Sendai Framework and the inter-dependent goals of Agenda 2030. We will condemn generations to continue living with increased risk and ever more devastating consequences to their lives and livelihoods.

We must commit to accelerating and transforming.

Reducing existing risk, preventing the creation of new risk and building resilience take a whole-of-society approach. And they all take committed leadership and governance.

The global community requires leadership to meet the scale of the challenge. Political momentum and commitment to action must be secured beyond election terms.

We have persisted in our silos for too long, compartmentalizing knowledge and resources, focusing on immediate short-term 'fixes' rather than on funded, national and local level strategies, which build resilience in the medium to long-term when implemented.



Vision

UNDRR's vision is of a world where disaster risks no longer threaten the well-being of people and the future of the planet.

Mission

Our mission is to provide leadership and support to accelerate global efforts in disaster risk reduction to achieve inclusive sustainable development and the goal of the Sendai Framework.

We believe that radical transformation is needed. Over the next four years, UNDRR will concentrate on providing enhanced support to Member States to reduce risk, and accelerate risk-informed development pathways, against multiple complex risks in order to prevent disasters and ensure sustainable development.

LEAVING NO ONE BEHIND:

**INTEGRATING HUMAN RIGHTS, GENDER EQUALITY
AND THE RIGHTS OF PERSONS WITH DISABILITIES
INTO DISASTER RISK REDUCTION**

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