

DISASTER MANAGEMENT

Official Journal: Disaster Management Institute of Southern Africa



Volume 2 No 6



GLOBAL ASSESSMENT REPORT ON DISASTER RISK REDUCTION 2019





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Mduduzi Lancelot Nxumalo

Dear Reader

It is a great privilege for me to present my second message as the President of DMISA. It is a privilege that I am making this soon after the national and provincial Government elections. I wish to start by congratulating our country for having peacefully and fair elections.

I wish to extend our warm welcome to the appointment of the Minister Dr N Dlamini-Zuma, the two Deputy Ministers Messrs P Tau and O Bapela for the Department of Cooperative Governance and Traditional Affairs respectively. We wish them well on daunting tasks. I commit full support of the DMISA Board to the leadership of Government who have been assigned to provide political direction and we are also relying on our leadership support in pushing the interests of the practitioners.

In this message I want to share information of the Annual Conference of the South African Qualifications Authority (SAQA) registered Professional Body for Disaster Management in South Africa, the Disaster Management Institute of South Africa (DMISA). Our conference will be held on 18 and 19 September 2019, at the ATKV Resort in Hartenbos situated in the Western Cape.

We are expecting support from municipalities, exhibitors and potential sponsors, namely the National Disaster Management Centre (NDMC), the South African Weather Service (SAWS) and Sanlam insurance company.

The conference theme is 'Adapting to extremes and limiting disaster loss: Pathways to integrated resilience and sustainability for basic services, critical infrastructure and thriving communities.'

The conference will be focusing on the following points:

1. Adaptation and extremes and pathways link to climate change.
2. Limiting disaster losses and impact on basic services and critical infrastructure link to the IDDR 2019 theme as well as the Sendai 7.
3. Integrated links to integrated development planning.
4. Pathways can be linked to 'Send me' where we can discuss our commitment to make a difference, where we want to be going with disaster risk reduction and how we will get there. We can discuss what pathways there are and how to choose a pathway and how to measure progress down the pathway.
5. Thriving communities link to resilience not just by bouncing back after a shock but actually bouncing forward, improving and thriving. It also talks to the ultimate social upliftment and improvement we want to achieve for our citizens and society in general.
6. Critical infrastructure can include discussions about the new critical infrastructure protection legislation but also how critical ecological or natural and social infrastructure is.

I am now officially extending my invitation to all critical role-players and stakeholder as well as practitioners to attend our conference aimed at empowering one another.

In terms of partnerships, International Relations, Public Relations and Media Liaison and I am proud to share the progress made thus far with the National Disaster Management Centre as there is now a draft memorandum of cooperation in place that will be signed soon.

I wish to highlight some milestones on Regional Matters, Equity and Recruitment Portfolio:

- DMISA has seen a tremendous change, with improvement on equity matters. Regions such as Limpopo, North West, Western-Cape and Southern Gauteng are chaired by women and the number of women on the Executive Committee of the Board and regions has improved. We applaud the hard work done by DMISA to ensure that equity issues are addressed at all levels of the institution.
- DMISA is continuously trying to capacitate practitioners and those in



DMISA COUNCILLOR: JOURNAL AND MARKETING SHADI TSEBE



The year is certainly passing quickly. Summer passed by within a wink of an eye but it left with it devastating impacts of fire and floods around southern Africa. On 5 March 2019 about 80 shacks caught fire in in Stjwetla in Alexandra, Johannesburg, when a pylon and overhead line, carrying about 88 kilovolts of electricity, fell on the shacks. Fire fighters in Alexandra have managed to extinguish the massive fire but those who were affected were scrambling to save as many belongings as possible.

Whilst in KwaZulu-Natal a devastating storm hit on Thursday night, 23 April 2019, leaving a trail of destruction and mayhem in its wake, wreaking havoc with hail the size of a golf balls. Trees and street lights came down, with flooding taking place in many areas including restaurants. Winds in KwaZulu-Natal were gusting between 64km/h to 83km/h and the South African Weather Services (SAWS) rated those as “damaging” and “gale force”.

On 24 April 2019, flooding in Welkom affected Thabong, Virginia, Allenridge and Ventersburg, where more than 500 people were evacuated to places of safety in Bronville in Welkom. Many children could not go to school as roads were also flooded.

It also left our neighbouring countries in turmoil; with Mozambique experiencing two cyclones Idai and Kenneth. Over 1 000 people were killed and more than three million people were affected after Cyclone Idai tore through Mozambique, Madagascar, Malawi and Zimbabwe from 4 to 21 March 2019, destroying roads, houses, schools, bridges and farm-land wiping away maize and other vital crops and leaving communities without food, water, shelter and critical infrastructure across the four countries. Just five weeks later, on 25 April 2019, Mozambique was also hit by Cyclone Kenneth, marking the first time in recorded history that two strong tropical cyclones have hit Mozambique during the same season. Huge numbers of people are still homeless, with many

living in makeshift tents and still without proper shelter, food, water and sanitation.

As winter has already arrived, with the cold spells together with the numerous fires in informal settlements, we need to be preparing our communities and encouraging them to live in safe environments and not to put themselves and their families at risk.

Climate change is deeply affecting the region and bringing the strongest effects to poor communities, around southern Africa.

The upcoming Disaster Management Institute of Southern Africa (DMISA) Conference will be held from 18 to 19 September 2019 at the ATKV Resort Hartenbos in the Mossel Bay Municipality, Garden Route District in the Western Cape Province. The theme for the conference is ‘Adapting to extremes and limiting disaster loss: Pathways to integrated resilience and sustainability for basic services, critical infrastructure and thriving communities’. It hopes to address the reduction of disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, through developing their resilience, aligning with the United Nations International Strategy for Disaster

Reduction (UNISDR) Sendai 7 Campaign’s 2019 Target 4 priority towards 2030.

The conference provides an annual opportunity for a diverse range of stakeholders in disaster management from across Africa to gather and share skills, knowledge and experience.

In conclusion I would like to say, we have countless challenges and countless opportunities and with your help, we will meet them and make the best out of this year. What choice will you make? Will you be the change you want to see in the world or will you go about your normal routine?

God bless you all.
Thank you

Ms Shadi Tsebe
DMISA Councillor: Journal and marketing



the disaster management fraternity; this is seen by the number of learning workshops, seminars, summits etc coordinated in partnership with different agencies such as Sanlam, Award held in different regions.

In closing, I believe we are rapidly moving into exciting and somewhat uncharted territory, things that we have hoped for, for a long time have happened and we need to take the opportunity, take the initiative and keep focused on our core

business ie supporting the profession and the professionals to have a positive influence on disaster risk reduction.

Mr ML Nxumalo
DMISA President

UPDATES AND NEWS

FROM THE NATIONAL DISASTER MANAGEMENT CENTRE



Dr Mmaphaka Tau

South Africa continues to be at the cutting edge thought leadership position on disaster risk reduction discourse. This is done through the continuous shaping of the narrative and provision of thought leadership on global disaster risk reduction measures. In the year characterised by concerted efforts towards renewal, hope, economic growth and job creation, South Africa continues to use its intellectual capacity to contribute to inculcating global wisdom on disaster risk reduction discourses in pursuit of realising sustainable

development objectives. This is informed by the country's realisation that our ability to sustain the hard-earned developmental gains and assuring future development services all hinges on the extent to which natural and man-made shocks are prevented or mitigated and how quick and sustainably all role players and stakeholders are able to recover from those shocks.

It against this background that the special representative of the Secretary-General for Disaster Risk Reduction, Ms Mami Mizutori, stated that, "If it is not risk-informed, it is not sustainable and if it is not sustainable, it has a human cost. Reducing economic losses from disasters has the power to transform lives."

The statement is relevant for South Africa where hazards and disasters, if not managed developmentally, will continue to reverse the development gains made and any future development endeavours. South Africa, however, remains well positioned legally through a robust constitutional jurisprudence that advocates for robust, integrated and sustainable development efforts. The Disaster Management Act 2002 (Act No 57 of 2002) remains as a cutting edge piece of legislation meant to infuse this development enabler.

The year 2019 marks the year of the occasion of the Sixth Global Platform for Disaster Risk Reduction. The Sixth

Session of the Global Platform for Disaster Risk Reduction (GP2019) took place in Geneva, Switzerland from 13 to 17 May 2019, convened under the theme, "Resilience dividend: towards sustainable and inclusive societies".

This important platform was convened and organised by the United Nations Office for Disaster Risk Reduction (UNISDR) and hosted by the Government of Switzerland. The 2019 meeting of the biennial Global Platform for Disaster Risk Reduction (DRR) discussed, among other issues, the 2019 edition of the Global Assessment Report on DRR.

Each of the three official days focused on:

- Taking stock of progress made since the last Global Platform
- Risk-informed public and private investments, including investments in infrastructure and innovative investment modalities
- Action on climate and disaster risk, including integrated national policies, strategies and planning, innovative financial and social instruments and early warning awareness raising, disaster preparedness and community resilience.

The session represented the next important opportunity for the international community to boost the implementation of the Sendai Framework and related Sustainable Development Goals of the 2030 Agenda, as well as commitments of the Paris Climate Agreement. It truly served as the last global gathering for all stakeholders before the deadline for the achievement of Target E of the Sendai Framework, "Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020".

South Africa participated actively through various stakeholders drawn from various spheres of government led by Head of the National Disaster Management Centre, Dr Mmaphaka Tau. These included some universities, The Department of Health, the South African Weather Service, the City of Johannesburg and private individuals active in the field of disaster risk management.

The country's statement was delivered by Dr Mmaphaka Tau supported by the Office of the High Commissioner for South Africa in Geneva as depicted hereunder.



South African national statement to the Global Platform for Disaster Risk Reduction, delivered by Dr Mmaphaka Tau, deputy director general (head): National Disaster Management Centre, South Africa, May 2019 Geneva, Switzerland

As with other countries across the globe, South Africa is already experiencing significant effects of climate change, as evidenced through increased temperatures and climate variability. This manifest through a wide range of hazards, including drought, fires, floods, cyclones and severe storms that often trigger widespread hardship and devastation, which threaten livelihoods, increase vulnerability and undermine hard-earned development gains. South Africa has, over the past three years, been battling against the effects of the worst drought recorded since 1926. We are also currently dealing with the consequences of devastating floods that affected three provinces in recent weeks.

To prevent and mitigate the effects of these phenomena, the country is putting measures in place to strengthen resilience and adaptive capacity to climate-related hazards and disasters, the current and anticipated impacts of climate change, and the protection of critical ecosystem services and natural resources as well as measures to prevent and mitigate anthropogenic risks. The work of the security cluster also reinforces the disaster risk management efforts through sustained humanitarian support as well as safety and security measures.

In our efforts towards risk informed and risk averse communities, our South African Weather Services (SAWS) continues to issue different weather alerts to the National Disaster Management Centre and the wider South African public, including to the media on a daily basis. The NDMC also has a geographic information system (GIS) web portal platform that is able to ingest the Common Alert Protocol (CAP) for severe weather warnings.

The GIS portal is aimed at furthering the dissemination of the comprehensive risk profiles that we developed. The NDMC and SAWS have also collaborated to implement Impact Based Forecasting, which is a new component of the SA-Multi Hazard Early Warning System (MHEWS) and this is bearing fruit.

The disaster management legislative and policy framework in South Africa aligns well with the objectives of the Sendai Framework for Disaster Risk Reduction (SFDRR). Emerging from an assessment in 2018, there is general compliance with the Act in areas such as institutional capacity, risk assessment, risk reduction, education, training and research with areas for improvement ranging from risk quantification, risk reduction through compliance with bylaws, funding for risk reduction and recording of disaster losses.

Aligned to the Sendai Framework, South Africa has made provision in recent legislative amendments, to expand the existing national institutional structure ie the National Disaster Management Advisory Forum, to serve as the South African National Platform for Disaster Risk Reduction thereby emphasising the multi sectoral nature of disaster risk reduction and the responsibility of stakeholders to take collaborative action to reduce risk.

Notwithstanding the substantial gains that have been made in implementing many aspects of the SFDRR, applying the data collection architecture in the SA context to establish and maintain a reliable report on the achievement of the SFDRR targets, is proving more cumbersome and complex than anticipated. We therefore continue to engage stakeholders across multiple sectors towards the enhancement of systems to adequately record and report disaster losses.

Progress in achieving the Target (E):

In South Africa, organs of state are required to develop and implement comprehensive disaster risk management plans, which include performing risk assessments, mapping exposure and vulnerability, providing details of disaster risk reduction and management strategies including particulars of how the needs of vulnerable groups such as women, children, the elderly and disabled are to be addressed.

The NDMC has reviewed 11 sector plans over the past two years. Several contingency plans have also been developed including the national drought and flood operational plans. Through implementation of these plans, the South Africa National Department of Health for instance, ensured timely response to those needing emergency care for life threatening conditions as well as continued chronic care for victims of the recent flood disasters in the country. In addition, through effective management plans, health access to displaced victims was significantly improved through the national coordination with lead government departments such as the South African National Defence Force and Department of Public Works.

The Government has put measures in place to support communities affected by disasters through disaster relief and recovery grant funding to address immediate needs as well as long-term intervention measures to enable proper planning and 'building-back better'. R3,2 billion has thus far been allocated for drought and flood damages in various provinces. R65 million was also made available to implement DRR measures within the agricultural sector.

South Africa is committed to accelerating the implementation of risk-informed sustainable development through focused and inclusive programmes across the spheres of government to ensure that we "leave no one behind". Accordingly, the Global Platform (GP) will provide impetus to our ongoing national efforts to entrench disaster risk reduction within our national development agenda.

In conclusion, the South African delegation is delighted to be part of the discussions at this global platform and undertakes to continue to contribute to the advancement of the 2019GP theme, "Resilience dividend: towards sustainable and inclusive societies" across the globe.



The Global Platform for Disaster Risk Reduction (GP2019) took place in Geneva, Switzerland in May 2019



Dr Mmaphaka Tau delivering his address



South Africa representatives at the 'Words into Action' Guideline launch in Geneva, Switzerland



Dr Mmaphaka Tau addressing members at the 'Words into Action' Guideline launch

The National Disaster Management Centre is currently working on an action driven 'Back to Office Report' that will be presented to the National Disaster Management Advisory Forum (NDMAF), other relevant technical structures as well as the political structures in a quest to ensure the institutionalisation of the outcomes of the Global Platform in the planning, budgeting and implementation of service delivery and disaster risk management discourses in South Africa. The country is proud about the community-based disaster risk reduction work done by the City of Johannesburg in collaboration with OXFAM as showcased during the Global Platform. We are aware that there are various community based initiatives of this nature nationally and we call for heightened efforts to ensure that our communities are better capacitated to deal with hazards and disasters they face in their localities as this goes to the heart of resilience building.

In conclusion, the National Disaster Management Centre will remain resolute and focused on providing thought leadership in pursuit of advancing disaster risk reduction and management discourses in pursuit of its legislative mandate drawn from the Disaster Management Act 2002 (Act 57 of 2002). As head of the NDMC, I will continue to provide strategic leadership and champion critical decisions under the guidance of my immediate leadership supported by our political leadership.

Yours sincerely

Dr Mmaphaka Tau (PhD)
 Deputy Director-General (Head):
 National Disaster Management
 Centre (NDMC)
 Department of Cooperative
 Governance (DCoG)



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MEET OWEN BECKER,

DMISA'S DEPUTY PRESIDENT FOR 2018 TO 2020



Owen Becker, DMISA's deputy president for 2018 to 2020

Owen Becker, DMISA's deputy president for 2018 to 2020 is currently the manager for Disaster Management at Buffalo City Metropolitan Municipality, situated on the east coast of Eastern Cape Province, South Africa. It includes the towns of East London, Bhisho and King William's Town, as well as the large townships of Mdantsane and Zwelitsha.

Disaster Management Journal spoke to Becker to find out what made him choose this particular career field. "I was interested in the medical field and provided voluntary first-aid at soccer matches and in the casualty unit at the Frere Hospital on weekends and during school holidays. During National Service I underwent further training as an infantry medic, joining the East London Ambulance Service was a natural career path to follow", said Becker.

He completed various courses in ambulance emergency care, fire services, safety, leadership and management in the ambulance service and was promoted to leading ambulanceman, ambulance officer and training officer within a short period of time. "The almost five years as a training officer was fulfilling as it allowed you to develop the capacity of others so that they could reach their potential," added Becker.

He elaborated, saying, "Exposure to large incidents and simulations made me question the 'silo approach' and the lack of coordination and resulted in me applying for the first full time Civil Defence officer post in the East London Municipality in July 1987.

The biggest influence on his career thus far was the extent of loss and suffering that occurs because people lack knowledge and skills and his desire to help them to overcome this disadvantage is his greatest motivator. "The fact that the local level is where the potential to make a difference is the greatest, attracted me to the local government sphere and has kept me there for more than four decades," stated Becker.

We asked him about the mentors that helped shaped his career to which he answered, "The unconditional love of God inspires me every day. My father taught me integrity and to stand for what I believe in, the fire and ambulance chief, Captain 'Bill' Kenny and the ambulance head, Theunis Barry, encouraged me to further develop my passion to motivate others to reach their potential.

When asked what motivated him, Becker said, "My growth in the disaster management field has come from hundreds of colleagues and academics, who are too many to name without

fear of failing to mention significant contributions, who have unselfishly shared their knowledge, advice and encouragement and continue to do so."

He continued, "I joined the Civil Defence Association of South Africa in 1987 and have been honoured to share in its transformation to a professional body, known as the Disaster Management Institute of Southern Africa. I have held posts on the Algoa Regional structure and have served as a national councillor from 1995 to 2004 and again from 2008 to present. I was elected to the Executive Committee in 2012 to present with the portfolio for Training, Skills Development, Standardisation and Tours and in 2018, I was elected as Deputy President for the 2018 to 2020 term of office."

"DMISA has played a huge role in providing knowledge and direction that has equipped me for the task. The Management Course in Civil Defence was developed by members of the association in conjunction with the University of South Africa and provided a solid base in the 1980s."

"DMISA was again instrumental in the partnership of Technikon SA, Wisconsin and Cranfield Universities that presented the United Nations course that brought South Africa in line with the International approach to managing disaster, in the late 1990s."



Owen Becker, DMISA deputy president and DMISA president Mduduzi Lancelot Nxumalo

GLOBAL ASSESSMENT REPORT

ON DISASTER RISK REDUCTION 2019

A GUIDED TOUR

The Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) emphasises that risk is everyone’s business – explicitly identifying the need for all-of-society and all-of-State institutions’ engagement. Past Global Assessment Reports (GARs) presented the now-accepted wisdom that managing risk does not equate to fire fighters, first responders and civil protection authorities managing the consequences of realised risk. Risk must be understood in much broader terms – contextually and temporally. Previous GARs also emphasised that risk is a function of more than simply hazard, that disasters are not natural but a product of the interaction of often naturally occurring events and human agency. We define these events as disasters when people suffer and things we care about are damaged or lost.

Risk and the context of hazard, exposure and vulnerability

This puts the onus on all of us to understand the nature of risk – that death, loss or damage (impacts that define a disaster – that are the disaster) are a function of the context of hazard, vulnerability and exposure. The Sendai Framework exhorts us to reduce risk by avoiding decisions that create risk, by reducing existing risk and by building resilience.

The Sendai Framework translates those messages into ones that can be used in the real world:

- Risk is everyone’s business: “While the enabling, guiding and coordinating

role of national and federal State Governments remain essential, it is necessary to empower local authorities and local communities to reduce disaster risk, including through resources, incentives and decision-making responsibilities, as appropriate.” (Para. 19f)

- Disasters are not natural: “The present Framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors.” (Para. 15)
- Risk is a function of the decisions we take and how we consume, which then shape the world around us: “Business, professional associations and private sector financial institutions, including financial regulators and accounting bodies ... to integrate disaster risk management, including business continuity, into business models and practices through disaster-risk-informed investments.” (Para. 36c)
- Understanding and managing risk is everyone’s business and integral to the success of all 2015 agendas: “Disaster risk reduction requires

The annual conference and journal provide disaster practitioners with current information on the trends, case studies and best practice in the field of disaster management.

“I see DMISA playing an ever-increasing role in ensuring that personnel in the field of disaster management have the knowledge, skills and experience to reduce the exposure to loss and suffering from disasters by building resilient and sustainable households and communities.”

“This must be based on the following pillars:

1. The development of partnerships with the National Disaster Management Centre (NDMC), South African Local

Government Association (SALGA), academic institutions and other professional bodies

2. A dynamic scope of practice that informs the capacitation of disaster management personnel
3. A Code of Conduct that protects the vulnerable that we serve
4. A Continuing Professional Development (CPD) programme that ensures that the skills of personnel are in line with ‘best practice’.

“All indications are that climate change will result in more frequent and more severe disasters. Mitigating this risk can only be achieved when everybody takes responsibility for what they have control over.



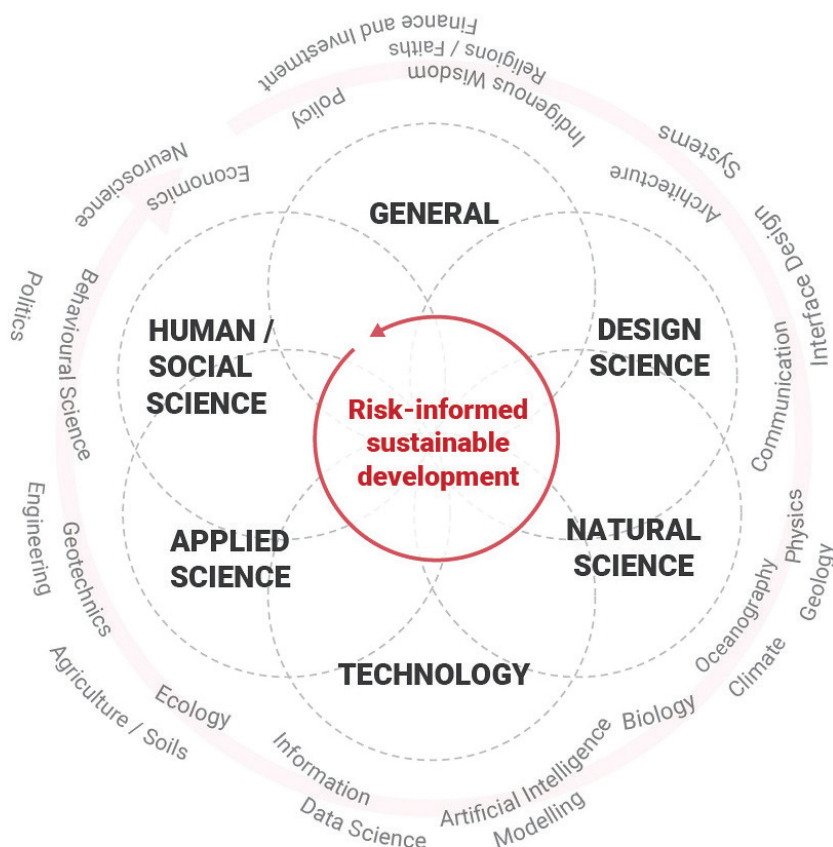
an all-of-society engagement and partnership” and “Civil society, volunteers, organised voluntary work organisations and community-based organisations to participate, in collaboration with public institutions, to, inter alia,....advocate for resilient communities and an inclusive and all-of-society disaster risk management that strengthen synergies across groups.” (Paras. 19d and 36a)

The Sendai Framework tells us that the risk landscape has changed, that it is complex, that we have perhaps been slow to realise this, and that we have a lot of catching up to do. In calling for engagement of all stakeholders and integration with policy on climate change, development and risk financing, the Sendai Framework identifies that risk and disasters are part of a complex set of human systems that operate at different scales and along

Disaster managers must provide leadership and coordination. We must ensure that they have the capacity to achieve this.”

“At the age of 61 years, I completed a Post Graduate Diploma in Disaster Management and am currently working on my Masters that seeks to answer, “What are the competency requirements of a disaster management practitioner at Local Government level?”

“With the grace of God, I intend to teach and mentor for many years after I officially stop working. I challenge everybody to learn something new every day and don’t give up until you are satisfied with the answer,” concluded Becker. 🇳🇷



▶ different time frames. Failure to manage these systems will reverse development gains for most people in the world, and place the functioning of our global society in jeopardy.

This GAR is about understanding better the systemic nature of risk, how we are able to recognise, measure and model risk, and about strategies to enhance the scientific, social and political cooperation needed to move towards systemic risk governance. It reinforces the message that we need to reduce vulnerability and build resilience if we are to reduce risk. It looks at what countries and regional and international organisations have been doing according to formal reporting under the Sendai Framework Monitor (SFM). It also considers country practices in developing national and local plans to enhance risk reduction capacity, to integrate disaster risk reduction (DRR) with development planning and climate change adaptation (CCA) and to pay special attention to risk in rapidly growing cities and fragile/complex contexts.

This GAR demonstrates the urgency of the action and ambition required, reinforced by current climate science. We can expect non-linear changes in the intensity and frequency of hazards. We know that many of the ways in which human activity will be affected are, as

yet, unforeseeable and that we are fast approaching the point where we may not be able to mitigate or repair impacts from cascading and systemic risk in our global systems. In propelling systems-based thinking and approaches to the fore, this GAR adds to the call for urgent action to deal with simultaneous systemic change around land, ecosystems, energy, industrial and urban systems, and the social and economic transformations that these infer.

Setting the scene

The introduction, Chapter 1: How we got to now, provides background on a decades-long shift that has brought us to the Sendai Framework. It traces how a shared global policy commitment has emerged from the idea of managing disasters and seeking to mainstream DRR, to an approach of managing the wider risks embedded in our social, economic and environmental activity. The Sendai Framework is about transitioning towards resilient and sustainable, even regenerative, societies in a way that is informed by a deeper understanding of risk and its drivers.

Chapter 1 also introduces the wider context of the Sendai Framework as one of a group of key international agreements adopted in 2015 and 2016 that look towards a better future for people and societies around the globe.

These include:

- Transforming our World: 2030 Agenda for Sustainable Development (2030 Agenda), which provides a plan of action for people, planet and prosperity that envisages a world free of poverty, hunger, disease and want, where all life can thrive
- Paris Agreement on climate change, which provides the foundation for sustainable, low-carbon and resilient development in a changing climate
- Addis Ababa Action Agenda, which outlines fiscally sustainable and nationally appropriate measures to realign financial flows with public goals and reduce structural risks to inclusive growth
- New Urban Agenda, which introduces a new model of urban development that promotes equity, welfare and prosperity
- Agenda for Humanity, which addresses conflict-related risk drivers and seeks to reduce future vulnerability through investment in humanitarian response that builds local capacities

These are reference points for implementation of the Sendai Framework’s concept of integrated risk governance, at all scales.

The substantive elements of this GAR begin with Chapter 2: Systemic risks, the Sendai Framework and the 2030 Agenda, which is an examination of the nature of systemic risk and the systems-based approaches that the Sendai Framework invokes. There are profound implications in making the shift from a hazard-by-hazard view of risk, to a holistic understanding of disaster risk as a dynamic three-dimensional topography that changes through time. This chapter introduces and elaborates the concept of systemic risk. It delves into this field to explore what we need to understand and how it might be possible to change the ways we think, learn and act.

The chapter discusses how current approaches measure and model holistic representations of disaster risk in light of the concept of systemic risk. It describes different types of systemic risks that vary with respect to temporal patterns, the ways in which feedback works in systems and the ways in which the scales used to view the system are related. It then considers the issue of governance of systemic risks and how it might be possible to change the ways we think about risk and behaviour. It examines combinations of theory, human ingenuity and uses of technology that may help to tackle risk reduction in systems, and to

interrogate the complicated and complex nature of the dynamic interactions of social, economic, political and ecological dimensions.

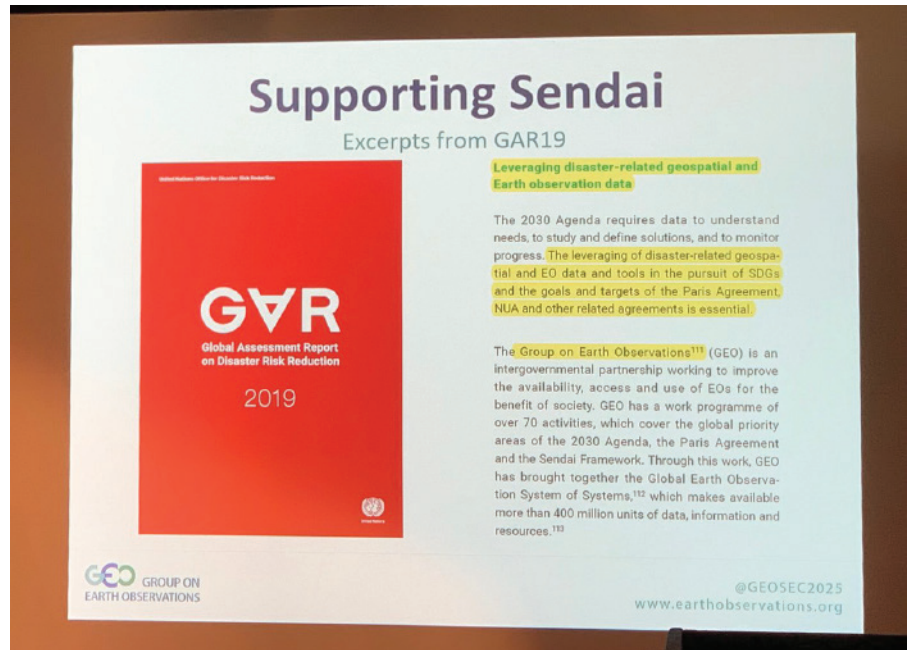
Chapter 2 also tackles the topic of collective intelligence, the issue that data can change as a function of context, and considers the collaboration necessary to advance our understanding of systemic risks. It introduces the Global Risk Assessment Framework, which is an open and collaborative initiative called for, designed and developed by experts and facilitated by the United Nations Office for Disaster Risk Reduction. This framework seeks to help the world deal with complexity, uncertainty and inefficiencies in risk assessment and to provide decision makers at different scales with enhanced risk information and actionable insights, tools and demonstrations that are open, inclusive, collaborative and recognisant of the systemic nature of risk.

The Sendai Framework's broadened view of the world's risk (Part 1, Chapters 3 to 6)

Part I highlights how risk science is changing. Hazards interact with each other in increasingly complex ways, and our understanding of this is expanding. Vulnerability can have myriad dimensions. Calculating the exposure to a virus is different to calculating the exposure to a landslide.

Representation of risk in this GAR is therefore not as elegant as it has been in the past. Risk is messy. The production of calculations to represent the risk a country faces is a highly complicated task that relies on complex equations and the inputs of multiple data sets. This produces an elegant series of metrics and graphics: multi-hazard average annual loss, probable maximum loss and hybrid loss exceedance curves. All are impressive scientific ways to inform a community about how to reduce risk. However, in practice, they do not actually do that.

Such metrics may be multi-hazard, but they rely on hazards being probabilistically measurable. Some hazards can be measured this way but with others, it is harder. Return periods for seismic risk are well understood but flooding is more complicated because there are many more drivers of floods ie coastal and riverine floods, human infrastructure and settlements, etc. It is harder still for droughts and insect infestations. And when hazards are no longer natural hazards only, but include industrial accidents, epidemics or agricultural blights, those elegant calculations become untenable. The



GAR19 moves beyond disaster risk considering the pluralistic nature of risk: in multiple dimensions, at multiple scales and with multiple impacts

metrics usually rely on measuring exposure and vulnerability of the built environment. This is an important part of the cost of disasters and the nature of risk, but it does not take into account the human cost in terms of lives lost, health and livelihoods affected, or the differential impacts of hazards on vulnerable people.

With this recognition of uncertainty at the fore, Chapter 3: Risk, investigates how we currently monitor and model a range of hazards, including tsunamis, landslides, floods and fires. Other hazards are less familiar as they were not part of the Hyogo Framework for Action. However, they are part of the Sendai Framework and include: biological, nuclear/radiological, chemical/industrial, NATECH (natural hazards triggering technological disasters) and environmental hazards. Chapter 3 looks at our understanding of how these hazards interact with exposure and vulnerability.

Chapter 4: Opportunities and enablers of change highlights that the technological, policy, regulatory and scientific context has changed to enable new kinds of analysis, new understanding and new ways of communicating risk. It also informs us that disaster risk science has new partners. Thousands of people have realised they have a role to play in reducing risk since the Sendai Framework was adopted. Epidemiologists, nuclear safety experts, climate researchers, utility companies, financial regulators, zoning officials and farmers can all see themselves reflected in the Sendai Framework. People

interested in protecting life, assets and the environment have been interlinking their knowledge and energy.

However, new opportunities unveil new challenges. Chapter 5: Challenges to change outlines some issues such as changing our mindsets, political factors, and technological and resource challenges. To succeed, the technical enablers of improved data science, risk assessment and risk modelling rely on the willingness of people to work with other disciplines, across cultural, language and political boundaries and to create the right regulatory environment for new and urgent work to proceed.

Chapter 6: Special section on drought links all these themes. Drought risk contains elements of meteorology, climate change, agriculture, power politics, food security, commodity markets, soil science, hydrology, hydraulics, etc. Drought is highly destructive and is projected to become more frequent and more severe in many parts of the world due to climate change. This chapter lays the groundwork for the GAR 2020 special report on drought, but in this GAR, it provides a detailed example of complex, systemic risk that can be reduced and managed only through a systems response.

Implementation of the Sendai Framework and disaster risk-informed sustainable development (Part II, Chapters 7 to 9)

The United Nations General Assembly endorsed the 2017 recommendations of the Open-ended Intergovernmental



The 2019 GAR offers an update on progress made in implementing the outcome, goal, targets and priorities of the Sendai Framework and disaster-related Sustainable Development Goals

► Expert Working Group on indicators and terminology relating to DRR, which was established to develop indicators for monitoring implementation of the Sendai Framework. The reporting period for Member States has thus been short. Consequently, the data available for inferring trends in terms of the targets is limited and does not yet offer statistical confidence. However, we can observe with confidence certain patterns in terms of the magnitude and the geographic and socioeconomic distribution of disaster impacts and abstract several points of departure for where and how countries have managed to reduce disaster risk. Nevertheless, we note that the observed period is still too short to reach definitive conclusions on a global scale.

Part II introduces the global disaster risk landscape with emphasis on the globally agreed goals and targets of the Sendai Framework and the 2030 Agenda. It takes stock of experiences so far, with a comparative analysis of country-specific evidence on national reporting, including roll out of the new SFM.

Chapter 7: Risk reduction across the 2030 Agenda sets out the targets and agreed indicators of the Sendai Framework and the disaster-related Sustainable Development Goals (SDGs) of the 2030 Agenda, now that integrated and common reporting by Member States has been established. Since 2015, significant efforts have been made to implement the Sendai Framework, by an increasingly diverse spectrum of stakeholders, reaching across different geographies, sectors and scales. This chapter concludes with a discussion of the type of data needed for effective monitoring and also recognises that the current gaps in data and knowledge limit

governments' ability to act and effectively communicate with the public on reducing risk.

Chapter 8: Progress in achieving the global targets of the Sendai Framework presents the latest data available, including those presented by the ninety-six countries using SFM since it went live on 1 March 2018 and infers early lessons on the status of the global disaster risk landscape. There has been growing awareness since 2015 of the need for better data. SFM represents a unique opportunity to streamline interoperable data on disaster losses. This chapter recognises that national disaster loss databases may use different methodologies, and that reporting data in a comparable manner to the SFM system remains a challenge for many countries, not just developing countries.

Chapter 8 also reviews the contribution of SFM to reporting on relevant SDGs, by underlining the cross benefits of integrated reporting across the global frameworks. Recognising that extra efforts are required to optimise these interactions to the mutual benefit of different frameworks, Part II offers some insights on improved opportunities for cross reporting through different SDGs.

Chapter 9: Review of efforts made by Member States to implement the Sendai Framework looks at successes and challenges as they emerge from the first years of reporting, including in terms of data, statistics and monitoring capability and provides recommendations for further improvements. It also highlights best practices in capacity-building, monitoring and reporting and discusses engagement of a broad spectrum of State institutions and non-State actors.

Creating the national and local conditions to manage risk (Part III, Chapters 10 to 15)

The Sendai Framework calls on governments to adopt and implement national and local DRR strategies and plans that meet its essential elements and which are thereby aligned with its goal and principles (Target E).

Fulfilment of Target E is a foundational step for governments to: (a) achieve the ultimate targets of the Sendai Framework by 2030 and (b) move towards risk governance that incorporates the broadened risk scope of the Sendai Framework in the context of the 2030 Agenda, and which incorporates systems-based approaches. It requires integration across different sectors and levels of government, engagement with civil society and the private sector, and contemplation of different time frames to address current and emerging risks. This is why Member States agreed that Target E should be achieved by 2020. National and local DRR strategies and plans are a necessary foundation for broader implementation of the Sendai Framework and for risk-informed sustainable development.

Part III discusses the enabling environment for Member States to develop and effectively implement national and local plans and strategies, including the technical support systems and resources available around the Sendai Framework and the other post-2015 agendas mentioned above. Chapter 10: Regional support and national enabling environments for integrated risk reduction discusses important aspects of the enabling environment, including the mutual support and resources that Member States access through their regional organisations and agreements. These can be formal intergovernmental mechanisms or innovative multi-stakeholder partnerships, and the governance framework of laws, policies, institutions and financing in place within Member States at national and local levels.

Part III then moves onto the evidentiary chapters on national and local practices, extending the Sendai Framework Monitoring data reported in Part II with qualitative analysis. Chapters 11 to 13 provide research and analysis on current practices in developing national and local DRR strategies and plans that align with the Sendai Framework, integration of DRR into development planning, and integration of DRR with national climate adaptation strategies and plans. Taking Sendai Framework Target E as the starting point, these chapters aim to provide a picture of the challenges, good practices and lessons learned in using a systems-based approach to risk reduction at national and local levels

GLOBAL PLATFORM FOR DISASTER RISK REDUCTION 2019

RESILIENCE DIVIDEND: TOWARDS SUSTAINABLE AND INCLUSIVE SOCIETIES



Ms. Mami Mizutori

Special Representative of the
UN Secretary-General for Disaster Risk Reduction

“ The Global Platform is an opportunity for us to come together to renew and accelerate our efforts to implement the Sendai Framework for Disaster Risk Reduction. Achieving its targets for reducing disaster losses is a challenge and an opportunity to make the world a safer and more resilient place for future generations. ”



The sixth session of the Global Platform for Disaster Risk Reduction took place from 13 to 17 May 2019 in Geneva, Switzerland. It was co-chaired by Mr Manuel

Sager, state secretary, Government of Switzerland and Ms Mami Mizutori, the United Nations Special Representative of the Secretary-General for Disaster Risk Reduction. Participants attended

from 182 countries. The Global Platform built on the Regional and Sub-Regional Platforms for Disaster Risk Reduction hosted by the Governments of Armenia, Colombia, Italy, Mongolia and Tunisia ▶

when developing and implementing these types of government policy instruments.

Chapter 11: National and local disaster risk reduction strategies and plans shows that while there are many examples of good practices around the world – with case studies highlighting how some countries have overcome resource and capacity challenges – Member States cannot assume that existing arrangements are fit for purpose under the broadened hazard and risk scope of the Sendai Framework. Likewise, Chapter 12: Disaster risk reduction integrated in development planning and budgeting examines the challenges and gathers examples of good practices, notably the opportunities provided during renewal of national socioeconomic development plans. Chapter 13: Integration between disaster risk reduction and national climate adaptation strategies and plans examines the degree of integration between DRR and CCA plans, including in the context of formal reporting to the United Nations Framework Convention on Climate Change and the Paris Agreement, and internationally financed CCA projects. The chapter is couched in terms of the existential threat posed by global warming if it exceeds a temperature of 1.5°C above pre-industrial levels, as presented in the 2018 report of the Intergovernmental Panel on Climate Change.

Part III concludes with two chapters on risk environments that are of concern

due to their complexity and potential for risk creation, including cascading and compounding risks. Rapidly growing urban environments and fragile or complex situations can create new risks as well as compound risks arising from natural hazards, armed conflict, poverty, malnutrition and disease outbreaks, thereby increasing the vulnerability of affected populations and reducing their coping capacity. They exemplify the imperative for systems-based approaches in risk governance, including addressing socioeconomic vulnerability in government policy and the engagement of non-State actors in a wide concept of risk governance.

Chapter 14: Local disaster risk reduction strategies and plans in urban areas considers urban environments, which are growing rapidly in developing countries around the globe and which present challenges for many local governments. These challenges are amplified where the development of urban environments is accompanied by the growth of informal settlements. Chapter 15: Disaster risk reduction strategies in fragile and complex risk contexts tackles the critical and complicated aspects of risk reduction in fragile or complex situations – such as those created by population movements due to armed conflict and famine, in which decision makers need to take account of known threats as well as new and emerging sources of risk that are difficult to foresee.

Conclusions, recommendations and supporting material

Principal Conclusions and recommendations of this GAR19 are consolidated in the above Executive summary, as well as in the accompanying document, GAR19 Distilled. They are drawn from the conclusions and recommendations presented in each chapter and part.

As with previous GARs, this report is underpinned and informed by the extensive research, knowledge and expertise of experts and competent bodies. This GAR continues the tradition of sponsoring and presenting additional, innovative research and evidence to support our understanding of the creation and propagation of disaster risk, as well as the conducive conditions and impediments to its management.

GAR19 introduces a more formal process of generating commissioned research. The online section GAR19 contributing papers presents research selected following a call for papers and which successfully passed external, academic peer review. Additional material is also available in the online bibliography.

This GAR, and the supporting material and data that informed its development, can be accessed online and downloaded from the GAR19 website (www.gar.unisdr.org/2019), which offers readers the opportunity to explore the report interactively. 🌐

Source: UNISDR



Officials celebrate the successful conclusion of the Sixth Global Platform

▶ in 2018. The following is the co-chairs' summary as published post the event.

The Global Platform's focus on 'Resilience Dividend: Toward Sustainable and Inclusive Societies' will provide a critical contribution to the 2019 High-Level Political Forum on Sustainable Development and the Climate Action Summit. The Global Platform called for accelerated action in achieving the seven targets of the Sendai Framework for Disaster Risk Reduction 2015-2030 and highlighted the importance of disaster risk reduction to achieve the 2030 Agenda for Sustainable Development and the contribution of the Sendai Framework towards the Paris Agreement, the Agenda for Humanity, the New Urban Agenda and the Small Island Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway.

The Global Platform was preceded by the Second Multi Hazard Early Warning Conference, the fourth session of the World Reconstruction Conference, the Stakeholder Forum and the Science-Policy Forum.

Progress towards gender parity and accessibility was evident throughout the platform, although further work is needed. Half of the panellists were women and forty percent of participants were women; amplifying the voice of women leaders. The 2019 Global Platform was also the most accessible to-date with more than 120 persons with disabilities in attendance.

Stocktaking of progress

The 2019 Global Platform took stock of the implementation of the Sendai

Framework, based on the data submitted by the Member States to the Sendai Framework Monitor, analysis from the United Nations 2019 Global Assessment Report on Disaster Risk Reduction (GAR 2019) and other recent reports such as the Global Warming of 1.5 degrees Celsius report of the Intergovernmental Panel on Climate Change and the report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. GAR 2019 was launched on the first day of the Global Platform.

Progress has been made in implementing the Sendai Framework. 116 countries are reporting through the Sendai Framework Monitor. This is a crucial step towards a better understanding of risk and the risk-informed implementation of the Sustainable Development Goals (SDGs). New and innovative guidance, tools and instruments have been developed collaboratively, including in the areas of capacity development, health and displacement. Commitment to collaboration was evident, as illustrated by the first common Stakeholder Declaration issued at the Global Platform. Countries showed a strong commitment to multilateralism in pursuit of integrated approaches to disaster risk reduction, climate change mitigation and adaptation and sustainable development.

The Global Platform made the social, environmental and economic case for disaster risk reduction. Examples and research-based evidence provided proof of the multiple dividends of risk-informed decision-making to build resilience and not only to avoid loss. In practice, however, the application of risk-informed investment and development decisions are still the exception rather than the rule.

91 countries have reported the development of disaster risk reduction strategies. However, the current pace of implementation is not fast enough to meet the 2020 deadline for Target (e) and may delay further progress on other targets.

Disaster mortality globally continues on a downward trend; the bulk of the human cost associated with natural hazards occurred in low and middle-income countries. In absolute terms, disaster-related economic losses, which continue to rise, are mostly attributed to high-income nations. However, the world's most at-risk population, particularly in least developed countries, landlocked developing countries and Small Island Developing States, bear the highest toll relative to their economic capacity.

The risk landscape is changing quickly. Diverse risks, ranging from climate and biological to cyber risk have to be accounted for. The addition of new hazards has brought new constituents, including finance, environmental and private sector actors, to the risk conversation. GAR 2019 stresses that risk is complex and non-linear. Expanded understanding of the full impact and the cascading effects of natural and man-made hazards is critical.

Awareness and understanding of imminent, interconnected and rapidly shifting risks is insufficient across the board. A wealth of essential information from new non-traditional data pools is not fully tapped into. Disaggregated data by sex, age and disability are still lacking to a large extent.

Commitments towards an inclusive approach to disaster risk reduction, recognising the indispensable role of disproportionately affected at-risk groups, including women, displaced people, persons with disabilities, elderly and children in disaster risk reduction have not yet sufficiently translated into action.

The current pace and scale of action will not achieve the targets of the Sendai Framework, which in turn will jeopardise the achievement of the SDGs by 2030. The Global Platform recognised these challenges and called for greater ambition, commitment and leadership by all governments and stakeholders.

Taking the Sendai Framework implementation forward

A critical, fundamental and urgent re-examination of how we deal with risk is needed. The past is not a sufficient indicator for the future. An interconnected approach is required to address systemic risks supported by multi-hazard and multidisciplinary risk assessment. The

Global Risk Assessment Framework will facilitate this approach. Experts from science, the United Nations and the private sector launched a new technical working group to develop a definitions' list for the Sendai Framework hazards. These, among others, will contribute to enhancing understanding of the new dimensions of disaster risk. Such efforts will increase our understanding of risk, inform decision-making and transform behaviour.

Comprehensive and disaggregated data harnessed across time and space is crucial to effectively define exposure and vulnerability, particularly for those most at risk. We need to make better use of existing data for information and action.

Availability of and access to data, which serves as the basis for risk disclosure and its pricing, must be ensured. Countries called for enhanced assistance on developing disaster loss databases, which are indispensable for reporting. Increased collaboration between local and central governments and stakeholders, including private sector and civil society, can transform risk data into understandable and usable information.

Achieving the "Resilience Dividend" will require countries, communities, enterprises and individuals to increase capacities to participate in preventing and reducing risks. Addressing the capacity needs of governments and stakeholders to advance Sendai Framework implementation in coherence with other global frameworks requires a more strategic approach to capacity development supported by adequate funding.

Disaster risk reduction policies, strategies and programmes, including risk assessments, should target drivers of inequality and exclusion and be informed by a human rights-based approach. Legislation and governance mechanisms should ensure the needs of the most at risk and marginalised groups are prioritised.

Voices of women, including at the grassroots, should be reflected at all stages of development and implementation of national and local strategies. Gender-sensitive and responsive approaches contribute to stronger disaster risk reduction interventions, reducing the vulnerability of women in times of disaster. Their leadership role must be strengthened. In order to translate commitments to women's inclusion into real progress, increased attention and targeted resources are required.

Children, youth and young professionals are leading the way in disaster risk



View of the room during the High-Level Dialogue on progress made in implementing the Sendai Framework

reduction and climate action. Greater efforts are required to institutionalise their engagement and appropriately draw on their capacities.

The role of media should be strengthened to effectively contribute to disaster risk reduction by ensuring critical communication infrastructure is in place and functions, providing information to help communities reduce risk and how to seek help in a disaster event. Mechanisms need to be developed for better cooperation between national media organisations and United Nations entities dealing with information crucial for disaster risk reduction.

Regional approaches to disaster risk reduction should be promoted not only as a means to address transboundary risks but also to inform national strategies in pursuit of coherent planning and implementation. Regional and sub-regional cooperation and platforms facilitate exchange of experiences and forge networks.

Governments should accelerate efforts to develop and implement disaster risk reduction strategies, aligned with the Sendai Framework to achieve Target (e) by 2020 and in coherence with national adaptation plans, nationally determined contributions and national development plans. Countries must step up systematic reporting to the Sendai Framework Monitor.

Local disaster risk reduction strategies and plans are necessary to ensure the implementation of national strategies. National governments should enable the development and implementation

of local plans and strategies. In turn, the implementation of these local plans should inform the revision of national strategies. Development and implementation of local strategies and plans should be locally-led, guided by community knowledge and built upon local solutions, including city-to-city learning. Current urbanisation patterns require long-term, integrated urban-rural planning, sustainable financing frameworks and the cooperation of all levels of government and other stakeholders to build resilient cities.

Disaster resilient infrastructure is key to achieve the vision of risk-informed development. There is a strong need to capitalise on the co-benefits of ecosystem-based approaches and leverage the complementarity across blue, green and grey infrastructure.

Nature-and ecosystem-based approaches should be promoted to achieve the objectives of resilience dividend and integrated in disaster risk reduction strategies at all levels. The stakeholders committed to engage with the nature-based solutions and resilience and adaptation track of the Climate Action Summit.

Planning and action to manage biological hazards, including epidemics and pandemics needs to be strengthened, while enhancing investments in resilient health facilities.

Governments and the international community must do more to reduce the risk of disaster displacement before disasters strike. Disaster risk reduction strategies and policies should address the drivers and consequences



Panellists at the High-Level Dialogue on risk-informed public and private investments

of disaster displacement and contribute to durable solutions. Climate change mitigation policies are necessary towards this end. Climate and disaster risks also need to be considered as factors of migration.

Budgetary allocation for disaster risk reduction by all sectors at all levels is needed. This can be supported by aligning integrated national financing frameworks for sustainable development with disaster risk reduction strategies. Participants called for greater devolution of financial resources to local authorities to empower them and identify tailored and community-focused approaches to risk reduction, including through forecast-based financing. Countries also called on donors and international financial institutions to integrate disaster risk reduction in their development assistance, with dedicated mechanisms for vulnerable and exposed countries in debt distress.

Disaster risk reduction requires a layered financial strategy bringing to bear all sources of financing. While risk transfer, contingency funds, deferred drawdown options and debt restructuring play important roles, they are not sufficient to incentivise risk reduction and finance building back better. Fiscal policies should integrate prevention as a core element of disaster risk reduction financing in order to build resilience. Financing mechanisms should break the vicious cycle of poverty, inequality and elevated risk-exposure, while reducing aid-dependence for disaster prevention, response and reconstruction. Participants called for further exploration and scaling-up of innovative market-driven products for risk financing.

Ministries of finance and planning should ensure financial and development strategies and plans are risk-informed.

Engaging central banks, regulators and credit rating agencies for disaster risk-informed financial decisions is essential. The private sector is a strategic partner to achieve resilient economies and communities. Public-private partnerships are essential for the scale of innovations and investments needed. Standards must be developed to define the risk reduction responsibilities of private sector investors in public-private partnerships. Furthermore, engaging medium, small and micro enterprises in disaster risk reduction is critical.

The interplay between disasters, climate change, environmental degradation and fragility should be recognised, including in the context of water-related risk. The Global Platform underscored the security implications of climate change and disasters and encouraged more context-specific disaster risk reduction and resilience building strategies in conflict-affected countries and fragile contexts based on risk assessments that integrate disaster, climate risks and conflicts.

Least developed countries, landlocked developing countries and Small Island Developing States should be the focus of increased technical, capacity building and financial support to reduce disaster risk and build resilience. Disaster risk reduction should be considered as a priority in the next phase of implementation of the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway and the Vienna Programme of Action.

‘Building back better’ provides an opportunity to rewrite the story of exclusion and marginalisation that often determines people’s vulnerability and exposure to disasters. Community participation and risk-informed entrepreneurship should be at the centre of recovery, rehabilitation and reconstruction.

Preparedness and reconstruction must be based on disaster loss data and risk assessments. Implementing multi-hazard early warning systems that lead to early action should be improved as part of disaster risk reduction frameworks.

Achieving a more integrated approach to multi-hazard early warning systems requires new ways of thinking about the intergovernmental and cross-sectoral working arrangements and partnerships to deliver end-to-end and people-centred systems.

Final considerations

International cooperation and multilateral action remain essential to manage the global and systemic nature of disaster risk and to provide the necessary support to developing countries. At the same time, inclusive local action is the way to success in managing disaster risk and its cascading effects.

Participants noted the continued critical role of the Global Platform to review progress on the implementation of the Sendai Framework and identify policy recommendations for action and the need for a midterm review of the Sendai Framework. The work of the United Nations system at all levels is pivotal to ensure impact at country level through the reformed United Nations Development System, country teams and resident coordinators.

There was a strong understanding that the deliberations of the Global Platform were a critical contribution that ought to be taken into account in the formulation of the political outcomes and the deliberations by States, including key intergovernmental reviews in 2019.

The overarching message of the Global Platform was that resilience pays off. A strong call was made to leaders at all levels to ensure resilience dividends for all. Risk-informed investments are essential for sustainable development and inclusive societies.

Participants called for the Climate Action Summit 2019 and the conference of the parties of the United Nations Framework Convention on Climate Change to affirm the catalytic role of disaster risk reduction in scaling up action on climate adaptation and resilience. Participants also reaffirmed that the Sendai Framework is an integral part of the 2030 Agenda for Sustainable Development and called for greater political commitment to fully integrate disaster risk reduction in the implementation of the Sustainable Development Goals. 🌍

UFS DIMTEC STALWART, PROFESSOR ANDRIES JORDAAN, RETIRES



Prof Andries Jordaan

Professor Andries Jordaan retired after heading up the University of the Free State (UFS) Disaster Management Training and Education Centre for Africa (DiMTEC) in Bloemfontein for 15 years, leaving behind quite the legacy. His farewell function was held on 21 November 2018 at The Terrace in Oliewenhuis situated in Bloemfontein, which was attended by about 80 people hailing from not only the national disaster management fraternity and his family but also internationally. Prof Jordaan was the head of department for UFS DiMTEC.

During his farewell function, Prof Jordaan shared his biography in a personal message with those in attendance and was kind enough to let us have some of the information to share with our readers.

“Life is about choices and the choices we made determine the path we follow. Both good and bad things do happen at one or another stage with us and the important thing is not what happened but what we learn from our experiences and what we do about it. I joined the University of the Free State through Prof Herman van Schalkwyk, with whom I completed a number of agricultural development projects prior to my time at UFS. I joined UFS with my children after 20 years as farmer and entrepreneur. It was a

new challenge and opportunity that I grabbed with both hands. I am forever indebted to Prof van Schalkwyk and the UFS where I had the opportunity to work with wonderful people from all over the world.”

“DiMTEC was initially established by Dr Anton du Plessis as a sub programme in the Department of Agricultural Economics. I took over the programme in 2003 with only nine students. In 2005, we were 32 students and I convinced the dean and top management that DiMTEC is strong enough to be registered as a centre within the Faculty of Natural and Agricultural Sciences. Since then, we graduated more than 100 Master students and more than 150 Post Graduate students.”

“I was fortunate enough to have a strong team who could build DiMTEC to the centre who assisted the majority of disaster managers in South Africa to graduate with a Post Graduate qualification. Initially, it was only myself and Annelene van Straaten who managed DiMTEC. Olivia Kunguma joined later. She was followed by Alice Ncube and then Johannes Belle. Today, they have all completed their PhDs with Olivia who will hand in within the next few months. After Johannes Belle, Germie van Copenhagen joined us to take control of our finances and

marketing. Prof Dusan Sakulski was also part of our team and associate professor. Whatever DiMTEC is today, it is the result of excellent team work where each and every staff member had the opportunity to work according to individual strengths, build own capacity and use initiative to improve our service to our students.”

“I must also thank all the external lecturers who shared their knowledge and experiences with our students. I have to mention Schalk Carstens and Anthony Keston who completed their Masters with DiMTEC and who continued as part time lecturers until my retirement. Their knowledge about disaster management was extremely valuable to our students. Lecturers from other departments and faculties at the university also played an important role in building DiMTEC as the disaster management programme of choice in South Africa. Here, I think of Dr Mercia ▶



Prof Jordaan at his farewell held at The Terrace in Oliewenhuis, Bloemfontein



Dr Mmaphaka Tau, Head of the National Disaster Management Centre, Prof Andries Jordaan and Dr Elias Sithole, Head of the Gauteng Provincial Disaster Management Centre



Prof Jordaan with his wife, Moira and family



*Prof Danie Vermeulen
(Dean of Agriculture Faculty)*



*UFS DiMTEC's Olivia Kunguma
was master of ceremonies*



*Prof Jordaan, his wife, Moira with Dr Alfonso Niemand and Mrs Niemand.
Dr Nieman was one of UFS DiMTEC's first PhD students*

▶ Coetzee, Prof Robert Bragg, Prof Bennie Grove, Dr Abiouden Ogondjuji, Dr Delson Chikovu and others. I would like to thank all of these people.”

“Through DiMTEC I met wonderful people from all over the world. Our students originated from more than 17 African countries and even Israel and Lebanon. I had the opportunity to work in far-away countries such as Sudan, Uganda, Ghana, Burkina Faso, Congo Brazzaville, Kenya as well as most Southern African Development Community (SADC) countries. I met wonderful people with different cultures and beliefs.”

“DiMTEC’s linkage with the United Nations University (UNU) was very special and I hope that DiMTEC in future will nurture this linkage. Prof Sakulski

was instrumental in the establishment of the linkages with the United Nations family. Colleagues from UNU such as Professors Jakob Rheiner, Joerg Szarzynski and Fabrice Renaud became esteemed friends. Prof Alexandru Ozuno from Romania and Prof Agoston Restas from Hungary are today also some of the special DiMTEC friends. There are many more colleagues from other countries who contributed to my experiences at DiMTEC and to the international profile of DiMTEC.”

“I also have to mention the annual Disaster Management Institute of Southern Africa (DMISA) conferences as special occasions. DiMTEC attended in our university blazers and annually presented the most academic papers. We had long night discussions with friends and colleagues. I will hopefully

continue to meet with friends at DMISA.” “The University of the Free State and DiMTEC are special organisations and I am forever indebted to the opportunities I received at DiMTEC. My family and especially my wife Moira, played an important role in supporting me. She was alone at home for weeks while I travelled the world. All the glory to Father God who gave me the opportunity and talent and put me in a position to lead DiMTEC for 15 years.”

“I want to close with a slogan I always share with the DiMTEC staff. ‘Winners never blame fate to failures or luck to successes. Through hard work, dedication and the right attitude anything is possible. May DiMTEC continue to grow as a centre of excellence and may God bless all who is part of the DiMTEC family.’” ▶

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AIMS TO REDUCE RISK IN COMMUNITIES



CWDM's Executive Mayor, Ald (Dr) Elna von Schlicht and Santam's John Lomberg, all smiles after the signing of the agreement



Mayor Von Schlicht and John Lomberg

“When we address the risks in communities, we also make our communities safer”, stated Executive Mayor Ald (Dr) Elna von Schlicht of the Cape Winelands District Municipality (CWDM) at a recent event that celebrated the signing of the memorandum of understanding (MOU) between Santam and the district municipality.

The partnership referred to as the Partnership for Risk and Resilience, aims to increase safety in communities by mitigating risk factors. “This is the sixth MOU that we are signing”, stated John Lomberg, head of Stakeholder Relations and CSI at Santam during his address at the event. “The agreement is based on a three year cycle. During the first

year we look at key challenges, in the second year we see how we can make the solutions sustainable and during the final year, we start the exit process, which allows for skills development.”

This approach to the partnership makes sure that more municipalities and thus more people can benefit from this project. Santam also brought their co-partners, South African Special Risk Insurance Association (SASRIA) along who will co-assist in rolling out some of the identified projects.

The area identified by the CWDM for this project is the support of disaster management projects. “One only needs to listen to the news to know that we live

in a dangerous world, climate change is wreaking havoc, crime and related activities are on the increase, to mention a few,” stated Mayor Von Schlicht. “We are really thrilled that Santam has recognised the value of partnering with us (the CWDM) to help us address how we can work together to help make our communities safer in these difficult times.”

The Cape Winelands District Municipality's Disaster Management unit has identified a number of areas for this project. These include projects that promote marketing and awareness of the dangers of water such as rivers in flood, swimming in dams/ rivers etc, fire prevention and safety for people living in informal settlements and the development of educational materials. 🇿🇦

► Professor Andries J Jordaan

Prof Andries Jordaan is an agricultural economist who distinguished himself as an expert with multi and trans-disciplinary expertise in rural and agricultural development, disaster risk and vulnerability assessment. He is currently a leading scientist on drought and drought risks in Africa with experience from a large number of African countries. Prof Jordaan is an internationally renowned scientist who participated in United Nations missions to numerous African countries as an advisor and expert on disaster management issues. He was also a scientific advisor to an expert group advising the Office of the Secretary

General, United Nations on a Climate Resilience strategy.

Prof Jordaan has practical experience in agriculture as an agricultural extension officer and an entrepreneur with 23 years' experience as a commercial farmer and 10 years' experience in agri business management before he joined the academic environment. As a researcher and academic, Prof Jordaan published widely and presented papers at more than 100 national and international conferences.

Prof Andries Jordaan was the Director of the Disaster Management Training and Education Centre (DiMTEC) at the

University of the Free State from 2003 to 2018. Under his leadership DiMTEC is today regarded as the largest post graduate centre in disaster risk science in Africa with a representative footprint from 17 African countries. More than 80 Master students and 11 PhDs from all over Africa already qualified under his mentorship. He is currently executive director at Résilience Globale, a consultancy firm and also Research Fellow at the University of the Free State.

Dr Johannes Belle has been appointed as acting head of department at the University of the Free State (UFS) Disaster Management Training and Education Centre for Africa (DiMTEC). 🇿🇦

- **R15 million** invested in municipalities.
- More than **16 000 lives** protected.
- More than **4 000 smoke alarms** installed in vulnerable communities.
- **200 Firefighters** trained to prevent and fight fires.
- **10 emergency services** coordinated to improve relief response.

Santam supports 43 municipalities to increase their capacity, skills and competence to manage disasters and save lives.

ETHICS IN DISASTER SITUATIONS

WORKSHOP TO BE HELD AT RHODES UNIVERSITY

By Professor Roman Tandlich, Faculty of Pharmacy, Rhodes University and Faculty of Health Sciences, Technical University of Liberec, Czech Republic and regional director for Africa, The International Emergency Management Society, Brussels, Belgium

Disaster situations change the way that social and ecological systems function. They lead disruptions of normal services delivery such as water and sanitation provision, interruptions in communications and operation of lifelines and to breakdown in other essential elements of modern

human societies. These interruptions often have major knock-on effects on the most vulnerable segments of the disaster-affected population. In addition, non-human components of the environment are also impacted by disasters eg decimation of livestock and the potential for human contact with carcasses and

GREEN INFRASTRUCTURE NATURE'S BEST DEFENCE AGAINST DISASTERS

During the Global Platform for Disaster Risk Reduction, held in Geneva, Switzerland from 13 to 17 May 2019, UN Member States called for increased investments in ecosystem-based solutions for disaster prevention. Healthy ecosystems play a crucial role in preventing environmental disasters and mitigate climate change as well as reducing their harmful impacts.

Extreme weather patterns such as prolonged drought, flash floods and cyclones contribute to food insecurity, instability and migration. The latest devastating cyclones Idai and Kenneth, which hit Mozambique last spring, are cases in point. According to the UN Development Programme, “more than 100 million people could fall back into extreme poverty due to climate change [by 2030], while over 200 million people could be displaced due to more frequent and severe climatic disasters.”

Ecosystems play a vital role in reducing the impacts of natural hazards and climate change and ecosystem-based approaches should be an integral part of disaster preparedness, emergency response, post-disaster recovery and reconstruction.

UN Environment is a co-founder of the Partnership for Environment and Disaster Risk Reduction, a global alliance of 24 organisations that promotes ecosystem-based solutions to disaster risk reduction. The alliance calls for increased investments in ecosystem restoration and protection, with particular attention to lakes, swamps and peatlands to reduce the impacts of water-related disasters. Member States and the private sector should increase investments in ecosystem restoration and protection, particularly water-related ecosystems, to reduce the disaster risk and impacts of climate change.

“Water is life but water can also be a threat to life,” said Dr Han Seung-Soo, former Prime Minister of South Korea, during his keynote speech. Water-related disasters account for almost 90 percent of the 1 000 most disastrous events that have taken place since 1990.

As part of the Global Platform, UN Environment and the Partnership for Environment and Disaster Risk Reduction co-organised a high-level working session on integrating risk management of ecosystems and water-related risks, where participants identified key areas for substantial policy improvements and investments. UN Environment also

launched Opportunity Mapping, a geospatial tool that helps Member States identify areas where large-scale ecosystem restoration and protection initiatives could take place. The tool also helps with reporting on green infrastructure, in compliance with international agreements such as the Sendai Monitor.

Another session focused on the role of green, blue and grey infrastructure in reducing disaster risk. A concrete measure put forward by the global disaster risk reduction community is the investment in resilient infrastructure, including meadows and forests (green infrastructure) and lakes, swamps and peatlands (blue infrastructure), which can be combined with dykes and seawalls (grey infrastructure) for cost-effectiveness and greater protection.

“Seventy percent of the world we imagine in 2050 is yet to be built. We have a tremendous opportunity to build infrastructure that goes hand in hand with protecting nature. When we achieve this balance, we will reduce the risk of disasters and increase the resilience of communities,” said Joyce Msuya, Acting Executive Director of UN Environment.

According to the Intergovernmental Panel on Climate Change, “integrated coastal zone management should recognise the importance and economic expediency of using natural ecosystems such as mangroves and tropical coral reefs to protect coastal human communities.” Time and again, these natural buffer zones have proved invaluable to reduce the impacts of rising seas and intensifying storms.

Driving finance to ecosystem restoration and conservation is another important, much-needed pathway to reduce disaster risk. Innovative financial instruments for climate and disaster risk reduction were one of this year’s key topics at the Global Platform. Through its Principles for Sustainable Insurance Initiative, UN Environment has been promoting innovative insurance schemes such as the Restoration Insurance Service Company for Coastal Risk Reduction, a social enterprise that finances the restoration and conservation of mangrove habitats in vulnerable coastal areas in the Philippines.

UN Environment encourages Members States to recognise green and blue infrastructure as critical infrastructure, by enhancing national reporting in economic loss (Sendai Monitor target C) and critical infrastructure and services (target D). 🌍

the spread of disease. As disaster (risk) management practitioners (DMPs) spearhead the execution of the activities during the disaster management cycle, they are commonly faced with many challenges in the scope of their professional practice. Balancing needs of various stakeholders, the time-sensitive nature of the unit operations of disaster management activities and other considerations demand that DMPs commonly make difficult choices and take decisions with wide-reaching implications.

Landscape of a disaster (risk) management as a professional discipline is therefore complex. Disaster risk reduction and related activities are focused on the reduction of the impacts of disasters and the reduction/prevention of harm to people, non-human elements of the environment, lifelines and so on. As a result, actions by DMPs are by nature aimed at the increasing of the “common good” and the improvement of the human condition. DMPs always must ensure that they act with a strong sense of right and wrong in the execution of their professional duties. Considerations such as these set out the ethical scope of the practice of DMPs.

Ethical considerations for a disaster management practitioner

All activities that DMPs carry out during the disaster management cycle must be ethical in nature, ie they must lead to minimising harm and elimination or limiting of human suffering. Unit operations, in this context, include damage assessment, needs analysis and aid requirements, protection of the affected populations and disaster management personnel. To ensure ethical behaviour and provide recourse in the case of any (perceived) misconduct by DMPs in the execution of their duties and functions, ethical standards have been formulated that govern the professional conduct of all DMPs. Such standards can be applicable in the context of a particular organisation and/or country. Examples include the Professional Conduct of Disaster Management Institute of Southern Africa (DMISA, 2019) and Standards of Conduct for International Civil Service (UN/UNESCO, undated). Other standards have been and continue to be developed that cut across sectors, countries and organisations eg such as the Sphere Handbook (Sphere, 2018).

DMPs aim to decrease the probability of negative impacts of disasters through collaboration with the community at risk and through development of preventive measures that stimulate participatory approach to disaster (risk) management. Special attention must be paid by DMPs to guaranteeing and preserving basic human rights of population(s) that are at risk or that have been negatively affected by disasters. Minimising harm and acting with a strong sense of right and wrong, that are culturally-appropriate for a given disaster context, places immense ethical challenges on the DMPs. In addition, complex cultural circumstances, communication challenges and other factors create an ethical reality that is ever-evolving and shifting, requiring the DMPs to continuously develop their soft skills and knowledge of ethics in the scope of their practice.

In this context, it is critical to create platforms for continuous professional development (CPD) in the field of disaster management ethics in South Africa and internationally. Many stakeholders have been involved in activities in this domain for many years and many excellent opportunities already exist. However, some challenges in disaster risk management on the African continent and internationally transcend national border and/or require multi-national approach and exchange of best practices/experiences. One such platform is provided by the International Emergency Management Society (TIEMS), which is an international non-governmental organisation registered in Belgium (TIEMS, 2019). It has been working on disaster and emergency management projects worldwide since 1993.

Currently, TIEMS is in the process to establish an international platform for certification of emergency managers and DMPs.



One of the elements of this strategy is the establishment of the courses on ethics in disaster situations. These courses will be spearheaded by the TIEMS chapters and stakeholders across Africa. The process of course development is currently underway and its first pinnacle will be the Workshop on Ethics in Disaster situations. It will be held immediately following the 2019 Annual DMISA conference between 20 and 21 September 2019 at Rhodes University in Makhanda, Eastern Cape Province. The author of this article can be contacted for further details.

Looking forward to seeing you all at the DMISA annual conference and possibly in the Eastern Cape right after that! 🌍



RHODES UNIVERSITY
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You are invited to participate or join us at

The 1st Eastern Cape workshop
on Ethics in Disaster Situations
to take place in Makhanda from
20 - 21 September 2019

Contact Dr. Roman Tandlich for more information
Email: r.tandlich@ru.ac.za



A CONSEQUENCE MANAGEMENT APPROACH TO DISASTER MANAGEMENT: COORDINATING RESPONSE MANAGEMENT

By Dr Johan Minnie and Schalk Carstens

PART 5

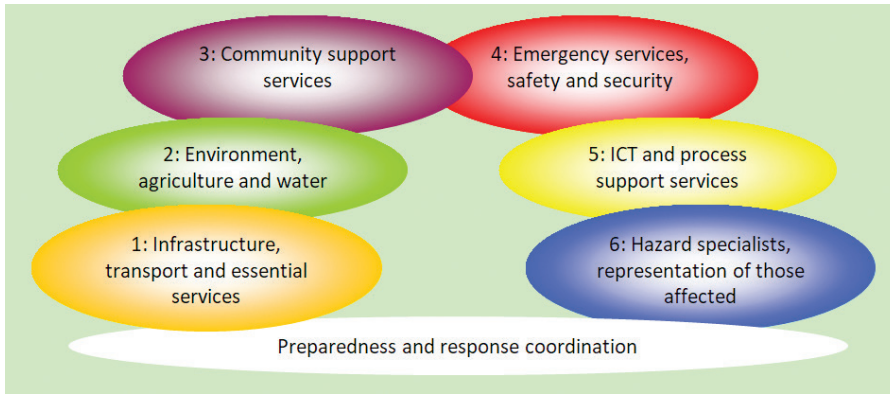


Figure 1: Preparedness and response management clusters

In the previous article we described response management and introduced the topic of coordination. This article continues the discussion of response coordination and will focus on the need and mechanisms for response coordination. As mentioned in the previous article, an example of a clustering approach to promote coordination is that provided in a disaster preparedness, response and relief plan developed for the Western Cape Government in South Africa. This clustering approach is illustrated in Figure 1.

The need for coordination is clear when one considers that the procedures adopted by each of the services in response to a major incident would understandably be devoted to the role of the service concerned. The purpose of coordinated plans is to describe the agreed procedures and arrangements for the effective coordination of joint efforts. Effective coordination during planning can ensure the overall response of the responding agencies will be greater than the sum of their individual efforts, to the benefit of the public (LESLP Major Incident Manual, 8th Edition).

The success of consequence management and an all-hazard preparedness and response is totally dependent on well-structured and efficient cooperation between multiple agencies. Such cooperation can be achieved through a joint management structure and a combined approach, which does not require a change of the structures of individual participating entities but rather enables them through providing horizontal cooperation mechanisms that cuts across organisational boundaries.

Coordination is a word more easily said than done. Each hazard will require different lead and supporting agencies to develop preparedness and response plans. The same agency will lead in certain cases and support in other cases. Such a situation is fertile ground for clashes in approach and methodology because each agency may try to force its methodology onto other agencies. If no shared methodology exists, conflict will result. Such a shared methodology must be able to accommodate the different approaches of different agencies and existing coordination structures.

The following table indicates the cluster members assigned to each cluster.

Cluster number	Cluster Name	Possible cluster members (Summary)
C1	Infrastructure, transport and essential services	Water / Electricity / Sewerage / Transport / Roads / Stormwater / Housing / Building control / Public amenities
C2	Environment, agriculture and water	Environmental Management / Environmental Affairs / Nature Conservation / Agriculture / Water Affairs / Forestry / Land use planning and management / Development management
C3	Community support services	Home Affairs / Education / Health / NGO's / Social services / Community development workers / Tourism / Economic development
C4	Emergency services, safety and security	Fire and Rescue / Emergency Medical Services / Police / Law Enforcement / Traffic / Municipal Police / Defence Force / Sea Rescue (NSRI) / Disaster Management Volunteers
C5	Support services, information and communication technology	Telecommunications (Telkom) / Radio technical services / ICT Department / Finance / Logistics / Human resources / Audit / Fleet management / Communication (Media / Public)
C6	Hazard specialists, representation of those affected	Depends on hazard impacting, could include: Regulatory bodies or councils / Commerce and Industry / Parastatal / Academic Institutions / Economic development / Facility / Installation Representation / Community Representatives

Table 1: Example of role-player clustering for the purpose of coordination

A good example is the coordination responsibilities for safety and security as opposed to disaster management as it is practiced in South Africa and illustrated in Figure 2.

There is a substantial difference between what is security related ie war, crime, terrorism etc and what is disaster management related such as natural and human-induced disasters. Each of the above-mentioned entities have their own official coordinating structures, the security forces are coordinated through the National Security Council and Disaster Management through the Intergovernmental Committee on Disaster Management as illustrated in Figure 3.

Each of the above structures has distinct working procedures and methodology developed over time and within their own scope of practice. Depending on the hazard impact, the two coordination structures may work independently, parallel to each other or in close support of each other. In the absence of a single internal management system used by both parties, a joint management system that accommodates both without dictating internal procedures is necessary to achieve effective coordination.

In circumstances such as widespread violent social conflict, the Safety and Security structures would take the lead but will be supported by the disaster management structures when it comes to humanitarian support or the coordination of essential services in support thereof. In case of a natural hazard impact such as flooding, the disaster management structures would necessarily take the lead but with support from the safety and security

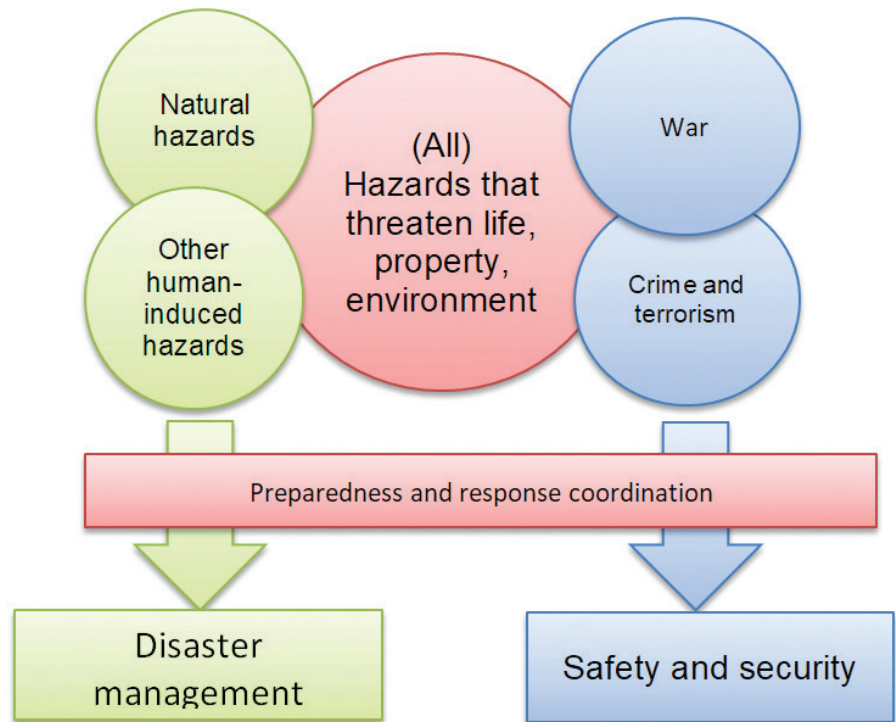


Figure 2: Coordination responsibilities for disaster management and safety and security linked to mandates for hazards

structures to ensure the maintenance of law and order.

Based on the one example above, it is clear that coordinated preparedness and response planning is complex due to the differing mandates related to different hazards for different organisations. All-hazard preparedness and response would, however, require many more stakeholders that just the two mentioned in the above example, with a resultant increase in complexity. A further complication is the levels at which preparedness and response must be coordinated.

There is disparity in command and control of the safety and security structures, disaster management structures and other line functions' command and control structures. The following matrix illustrates the difference between the mentioned command structures, especially at which level different stakeholders' decision-making powers peak. The matrix also indicates the different levels of decision making where coordination is required.

The complexity of preparedness and response planning and coordination is clear if one considers the combination of contrasting levels of decision-making, the many possible stakeholders that may be involved, each with their own internal peculiarities and command systems and the wide variety of hazards that may need to be addressed.

A further complicating factor that points to the need for coordination is the way in which risks manifesting at micro level interacts with the macro-level disaster risk profile and therefore preparedness and response planning requirements at the macro level. The converse is also true, as macro level risk profiles and risk dynamics will also influence and determine risks and therefore preparedness requirements at a micro level. In the example below the interaction between safety and security management and the risks identified through disaster

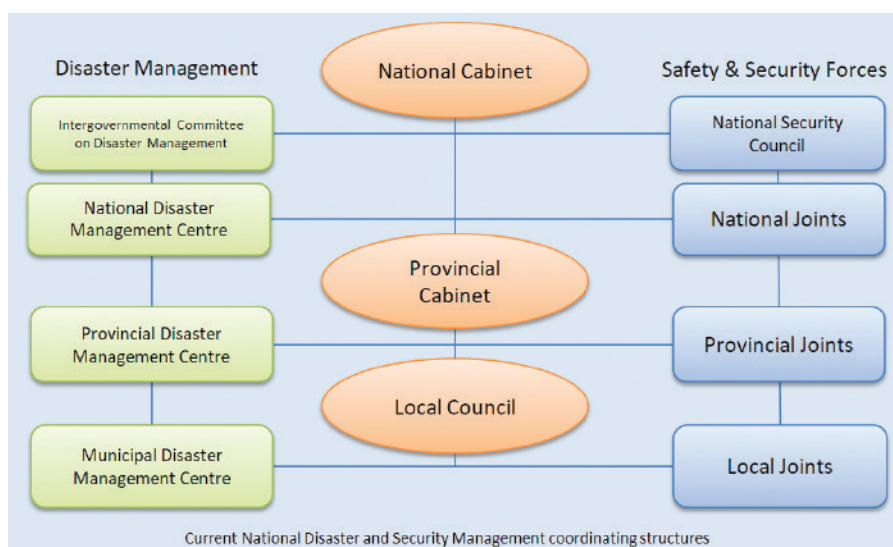


Figure 3: Disaster Management and Safety and Security Coordination Structures (PGWC, 2013)

Levels of decision-making	Disaster and Emergency Management				Safety and Security Management		
	Disaster Management	Emergency Medical Services	Fire Brigade Services	Other Services	SANDF (Defence)	SAPS (Police)	Traffic Law Enforcement
National Sphere – Strategic	☐			Depends on hazard	☐	☐	
Provincial Sphere – Strategic / Tactical	☐	☐	☐		☐	☐	☐
Metro/District Areas – Strategic / Tactical	☐	☐	☐			☐	☐
Municipal Sphere – Tactical / Operational	☐	☐	☐			☐	☐
Incident/ Event Scene - Operational	☐	☐	☐			☐	☐
Key:	☐	Level of decision-making					

Table 2: Stakeholders and levels of decision-making

- management at a macro level is illustrated in Figure 4.

The complexities explained in the preceding paragraphs reinforces the previously stated need for a joint management structure and a combined approach ie joint response management system, which does not require a change of the structures of individual participating entities but rather enables them to coordinate their combined preparedness and response planning and operations through a single horizontal cooperation mechanism that cuts across organisational boundaries.

One attempt at such a cooperation mechanism is the Unified Command methodology contained within the

well-known Incident Command System (ICS) developed in the United States. The Unified Command system within ICS assumes that all participating organisations will adopt the ICS methodology for their individual command systems and will agree to follow the prescripts of ICS to the letter. This assumption has been proven to be ambitious, as different agencies have followed their own paths of development and invested significant resources in their own approaches, which they feel are appropriate for them. There is a marked hesitation among especially military and security forces to change their operating standards to comply with the needs of other agencies. The solution to this problem has been suggested through the experience of the collective development of joint

multidisciplinary incident management plans. It has become obvious that high levels of cooperation can be achieved at tactical and strategic level by establishing a joint response management structure and system that does not intrude on the line function procedures and lines of authority but allows peer-to-peer communication, decision-making and relationship building. The real goal with such a system is simply to get the appropriate level of leadership of participating agencies into one cooperative coordinating structure and enable rapid joint decision making. In this way different organisations, management levels and spheres of government can work together in a way that accepts and understands their individual uniqueness and works off their individual strengths.

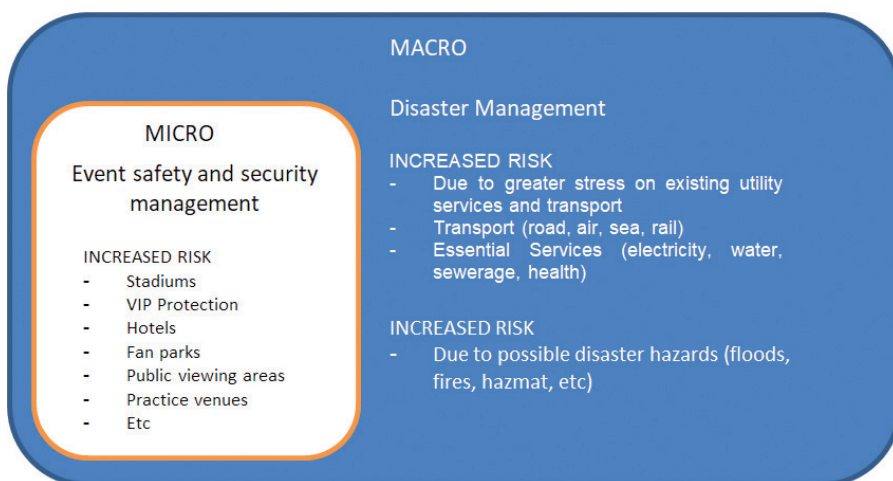


Figure 4: The interrelationship between event- and disaster management results in complexity

Figure 5 provides an example of one such system that establishes multidisciplinary coordination structures ie joint operations centres (JOCs) and venue/on-site operations centres (VOCs) at a national, provincial, municipal and venue/incident level. The red blocks indicate line functions, while the green blocks represent coordinating structures.

The example is the unified command structure from municipal to national level adopted by the National Disaster Management Advisory Forum for the 2010 FIFA World Cup in South Africa. This system was developed due to the absence of a comprehensive coordination system at the time. In the structure drawing, 'A, B, C, D, E'

NEW BUILDING FOR GAUTENG PROVINCIAL DISASTER MANAGEMENT CENTRE LAUNCHED



The Gauteng Cooperative Governance and Traditional Affairs, in partnership with the Department of Infrastructure Development, launched the new Provincial Disaster Management Centre (PDMC) building situated in Midrand on 25 April 2019. MEC for the Department of Infrastructure Development (DID) Jacob Mamabolo handed the keys over to MEC of Cooperative Governance and Traditional Affairs (CoGTA) Uhuru Moiloa.

Head of the PDMC, Dr Elias Sithole, opened the event saying, “Disaster management is everybody’s business and that the focus of disaster management is to be proactive and reactive. Dr Sithole mentioned recent disasters faced in the province and said that while the new building was being launched, many people were facing floods in Mozambique and Malawi.

Thandeka Mbassa, head of department for Gauteng CoGTA, welcomed the VIPs

and expressed her appreciation for the attendance of the MECs, traditional leaders, SAPS representatives and colleague from various provinces.

MEC Jacob Mamabolo said that the DID bought the building on behalf of COGTA in 2016 and modernised it, using the latest green technology to make it adaptable to different weather. He added that R11 million has been spent to date.

denotes the different line functions, ie police, defence force, fire services, traffic services, ambulance service, utilities, etc that would be represented in the joint operations centres (JOCs) at national (Nat), provincial (Prov), municipal (Mun) and venue or incident level ie venue operations centre (VOC), essentially an on-site JOC.

The above structure developed informally over time due to experience in various previous major incidents and disasters but was not officially documented and approved at the time. During preparations for the Soccer World Cup, a national emergency plan was a legislative requirement and a hybrid unified command and multi-agency coordination system was subsequently developed to be included in the plan. The plan was adopted by the National Disaster Management Advisory Forum and included in the official Soccer World Cup emergency plan.

This concludes the discussion of the need for coordination and potential coordination mechanisms. There is a large body of additional research that refers to the development of multi-agency coordination systems (MACS) and joint

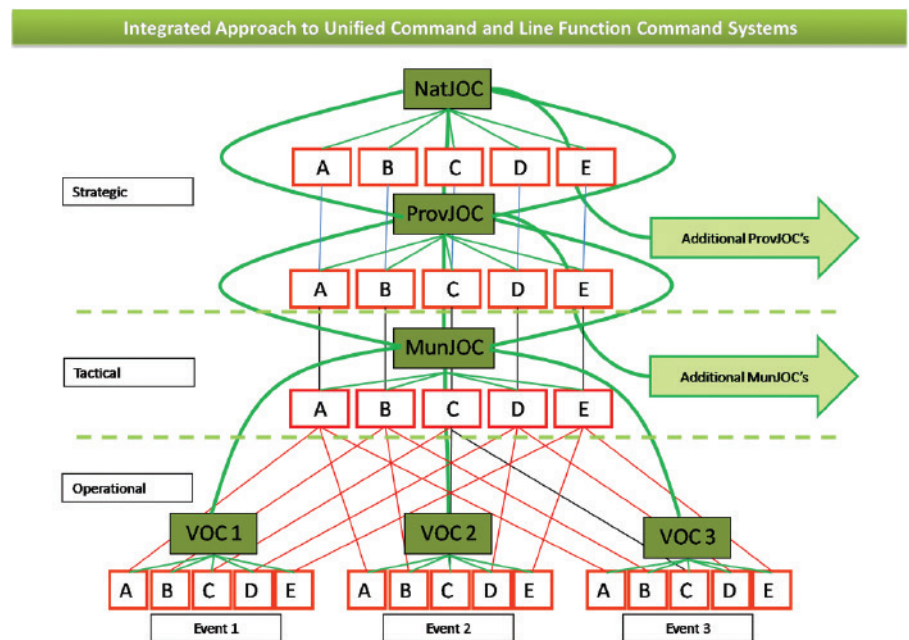


Figure 5: An example of a joint response management structure used for the 2010 FIFA World Cup (Carstens and Minnie, 2009)

response management systems such as ICS, MIMMS and others. To better understand how coordination is effected in disaster preparedness and response, the reader would be well advised to conduct further reading on these topics.

Moving forward from the need for coordination in preparedness and response, the discussion in the next article will focus on the assignment of responsibility within response coordination and the wider consequence management ecosystem.

Provincial Disaster Management Centre

▶ CoGTA MEC Uhuru Moilola said that the recent disasters in Gauteng exposed the provinces weaknesses and that all municipalities should budget to build resilient communities. He added that it is of the utmost importance that budgets must include service and maintenance of infrastructure. “Today we are launching not only a building but a legacy. A legacy born out of necessity; a vision and the commitment created by the current administration of the province. The centre is designed to enable the province to fulfil its legislative mandate and support disaster management stakeholders, including municipalities,” said MEC Moilola.

The brand new, fully equipped Gauteng Disaster Management Centre has the capacity to fulfil the ongoing and imperative responsibilities of the PDMC across the province and assist National Disaster Management Centre in time of complex emergencies. The building is designed to accommodate over 80 people with facilities including a joint operations centre, communications centre, media briefing facilities and work spaces. The modern facility will house a HydroNET system from the South African Weather Services, which enables live access and monitoring of

weather information including access to weather stations, rain maps, the weather forecast, and the seasonal forecast. The building is equipped with a backup generator and is fitted with motion detecting LED lights.

The previous PDMC was decommissioned in 2012. There was no physical Disaster Management Centre in the province, however, the function was operating, hence the need to establish one.

Dr Sithole thanked Lindokuhle Ngubane for managing the project. 🇷🇷



DISASTER SYMPOSIUM 2019

HELD IN CAPE TOWN



The Disaster Symposium 2019 provided an integrated platform for various stakeholders to discuss not only recent disasters faced but also mitigation of future disasters with the emphasis on building resilience

The Disaster Management Institute of Southern Africa's (DMISA) Western Cape Branch together with the City of Cape Town Disaster Management Centre and Santam held a symposium focusing on disaster management at Sanlam's head office in Bellville, Cape Town on 12 March 2019. The Disaster Symposium 2019 was themed 'Investing in disaster risk reduction for resilience' and provided an integrated platform for various stakeholders to discuss not only recent disasters faced but also mitigation of future disasters with the emphasis on building resilience.

Dr Johan Minnie of DMISA set the scene with a brief overview of recent disasters followed by John Lomborg of Santam who reiterated the importance of businesses partnering with Government to strengthen service delivery and build resilience. Lomborg reinforced Santam's commitment in preventing disasters, mentioning recent major international and local disasters. 'We are actively involved with the National Disaster Management Centre to increase service capacity in municipalities', said Lomborg.

The keynote address delivered by Alderman JP Smith of the City of Cape Town highlighted that the City of Cape Town has worked hard to build disaster resilience especially in informal

settlements in order to reduce the loss of life during incidents such as fires and floods. He added that the City of Cape Town made international news headlines because of the recent drought and was lauded for their achievement of the 50 percent reduction in water usage within just a few months. This was only possible with the partnerships created between all stakeholders including provincial and local Government, businesses and the community. "Cape Town is now a case study for water scarcity internationally", said Alderman Smith.

The symposium was divided into three sessions. The first session focussed on tourism and investment and was facilitated by Julien Rumblof of the Western Cape Environmental Affairs and Planning.

Helen Davies of Western Cape Government spoke about strengthening economic resilience, highlighting the economic impacts of a water crisis, the role businesses to reduce their own and collective risk, tools of engagement, communications, engagements and other support tools. She also highlighted the importance of energy ▶



Dr Johan Minnie of DMISA, John Lomborg of Santam and Alderman JP Smith, City of Cape Town



Disaster Symposium 2019 speakers

► efficiency in Government buildings. “Water and energy security will increasingly be a challenge”, said Davies.

Cornelis van der Waal of Wesgro provided insight into the essential timeline of the major water crises events, saying that the Western Cape water crises highlighted how irresponsible we have been using water. Van der Waal discussed the major role of tourism in Cape Town and the Western Cape and added the importance of partnerships and collaborations. “The collective plays a very important role”, he said.

Sarah Rushmere of the City of Cape Town provided information on Cape Town’s draft water strategy, the reliability of Cape Town’s water supply and the types and use of alternative water installations, amongst others, saying that level of cooperation and stakeholder engagement was of an unprecedented level. She added that the silver lining of dealing with Day Zero was learning how to work together as a whole society.

The second session focussed on Government and the business sector and was facilitated by head of disaster medicine at Western Cape Department of Health, Dr Wayne Smith, who provided insight into the challenges experienced at Tygerberg Hospital and other private hospitals. Dr Smith added, the three S’ are of the utmost importance, which are staff, stuff and systems.

Advocate Gavin Kode, deputy director general of the Western Cape Government, discussed water resilience strategies for critical infrastructure and provided an overview of the province’s recent journey to resilience, citing their strategies in building resilience for now and for the future.

Gareth Morgan, director, resilience of the City of Cape Town, looked at what the building blocks are for resilience for

Cape Town, providing lessons learnt from the drought such as the investment in partnerships beyond the city, sharing information to build public trust, increase redundancies in the system, embrace the realities of climate risk and strengthening adaptive leadership capabilities.

Dr Arthur Linke of the University of Stellenbosch presented on risk maturity, citing the Institute of Risk Management South Africa (IRMSA) Risk Maturity Initiative to improve the effectiveness of risk management, quoting ISO 31 000:2018 and ISO 22301:2012 standards and updates. Dr Linke also discussed the critical success factors of risk maturity models linked to business continuity management and disaster planning/resilience.

The last session featured media and communications facilitated by Murray Williams, special advisor to the Premier, who provided an overview of the strategic leadership process to mobilise, organise and communicate the Day Zero message to all communities, businesses and organisations and on all levels. “The

message was not about water but about families, neighbourhoods, communities, partners and leaders”, said Williams.

James-Brent Styan, spokesperson for MEC Anton Bredell, shared how to communicate in a crisis. He debated the pros and cons of modern communications such as social media and provided some communication strategies for use during a disaster/crisis and also proactively outside of disaster periods and longer term. “Have a simple message that hits home”, said Styan, adding that communications during disasters should be fast, accurate, continuously and that you should be very responsive and available all the time. He highlighted the benefits of building support structures including a chain of command for communication matters.

Priya Reddy, director of communications, City of Cape Town, discussed the key players and communication channels, external engagement and work streams and stakeholder engagement strategies used during the drought.

Andrew Borraine of the Western Cape Economic Development Partnership (EDP) shared valuable communication techniques looking at how to improve the relationship between the top-down authorising environment and bottom-up mobilising environment. He discussed ways of mobilising citizens for collective action relating across all sectors. “It is important to understand human behaviour. People fight, flight or freeze. Communication and its message cannot have a one size fits all approach. Relationships are at the epicentre of survival”, concluded Borraine.

Dr Minnie summarised the presentations and discussions of the day highlighting the strong take home message of the importance of continuous communication strategies during both short- and long term disasters. 🇷🇺



DMISA’s Dr Johan Minnie and Dr Wayne Smith of the Western Cape Department of Health



UPCOMING EVENTS

JULY 2019 - DECEMBER 2019

18 - 19 September 2019

Disaster Management Institute of Southern Africa (DMISA) Annual Conference

The annual conference of the institute is the biggest annual disaster management conference in Africa and routinely attracts more than 300 delegates. The institute is recognised as the mouthpiece of the disaster management profession in Southern Africa. The conference provides an annual opportunity for a diverse range of stakeholders in disaster management from across Africa to gather and share skills, knowledge and experience.

Venue: ATKV Resort Hartenbos in the Mossel Bay Municipality, Garden Route District

For more information contact: Karin Muller

Tel: 011 822 1634

Email: Karin@disaster.co.za

20 - 21 September 2019

1st Eastern Cape workshop on Ethics in Disaster Situations

Rhodes University, Makhanda, South Africa, in collaboration with The International Emergency Management Society, Stenden South Africa and the South African Department of Rural Development and Land Reform, hosts the first Eastern Cape workshop on Ethics in Disaster Situations

Venue: Rhodes University, Makhanda, Eastern Cape

For more information email: roman.tandlich@gmail.com

25 - 27 September 2019

6th International Conference on Disaster Management and Human Health Risk: Reducing Risk, Improving Outcomes

The conference provides a forum for the exchange of information between academics and practitioners, and a venue for presentation of the latest developments

Venue: Ancona, Italy

For further information visit:

www.wessex.ac.uk/conferences/2019/disaster-management-2019

1 - 3 October 2019

National Geoscience Conference 2019

The technical programme of NGC 2019 consists of oral and poster presentations on all aspects of geoscience, environment and technology related to the theme. This year's theme is 'Geosciences for the Earth Sustainability'

Venue: Sabah, Malaysia

For further information visit:

<https://nationalgeoscience.wixsite.com/ngc2019>

13 October 2019

International Day for Disaster Reduction

The UN General Assembly sees International Day for Disaster Reduction as a way to promote a global culture of risk-awareness and disaster reduction. That includes disaster prevention, mitigation and preparedness

16 - 18 October 2019

Integrated Disaster Risk Management (IDRIM) 2019 Conference

The 2019 annual event for researchers and practitioners in integrated disaster risk management (IDRIM) will focus on the issues of knowledge-based disaster risk management: Broadening the scope by smart territories for sustainable and resilient cities and organisations

Venue: Nice, France

For further information visit: www.idrim.org

23 - 24 October 2019

3rd International Conference on Natural Hazards and Disaster Management

natural hazards and disaster management is playing an important role to create awareness and providing a platform to share and discuss on different types of natural hazards, significance of early warning systems and risk management strategies

Venue: Tokyo, Japan

For more information visit:

www.naturalhazards.conferenceseries.com

6 - 10 November 2019

3rd International Water Congress

The aim of the 3rd International Water Congress is to gather academicians, policy makers, independent scholars and researchers to share their knowledge, new ideas as well as to discuss future development in water policies

Venue: Sarajevo, Bosnia and Herzegovina

For more information visit: www.iwc.web.tr

9 - 12 November 2019

World Bosai Forum 2019

World Bosai Forum is an international forum on disaster risk reduction held in partnership with the International Disaster and Risk Conference. Officials and experts from Japan and overseas, including international organisations, governments, private sector, academia and media, as well as local citizen participate in the forum

Venue: Sendai, Japan

For more information visit: www.worldbosaiforum.com/2019

9 - 10 December 2019

International Conference on Global Warming and Natural Disasters

The conference deals with several features of the assessment of hazard and risk of land sliding and presents a summary review and a classification of the main approaches that have been developed world-wide. The first step is the part between qualitative and quantitative methods

Venue: Bangkok, Thailand

For more information visit: <https://globalwarming-naturaldisaster.environmentalconferences.org/>

THE DISASTER MANAGEMENT INSTITUTE OF SOUTHERN AFRICA (DMISA)

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Institute administrator

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DISASTER RISK REDUCTION 2019

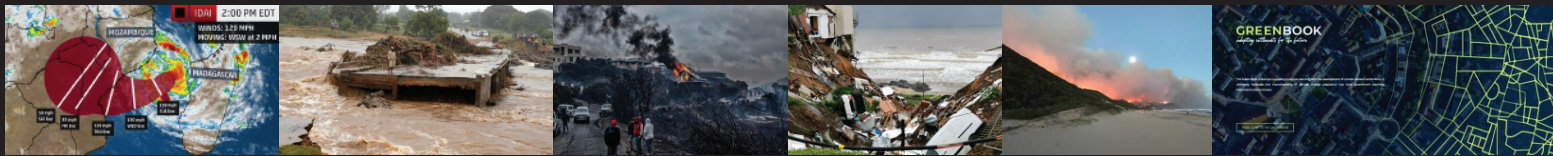
The internationally recognised annual Disaster Management Conference for Southern Africa.

Proudly presented in the scenic Garden Route District by the Disaster Management Institute of Southern Africa (DMISA), supported by Santam, the SA Weather Service (SAWS) and the South African National Disaster Management Centre (NDMC).



ADAPTING TO EXTREMES AND LIMITING DISASTER LOSS

PATHWAYS TO INTEGRATED RESILIENCE AND SUSTAINABILITY FOR BASIC SERVICES, CRITICAL INFRASTRUCTURE, AND THRIVING COMMUNITIES



Pictures from top left: Twitter/Weather Channel; ; Zimfact/REUTERS/Philimon Bulawayo; Knysna-Plett Herald/Jan Venter; Facebook/News24; East Coast Radio/WhatsApp; CSIR; and below: GCN.COM/Metamorworks/Shutterstock.

DMISA, the voice of the Disaster Management Profession and the SAQA approved professional body for Disaster Management proudly presents:

conference

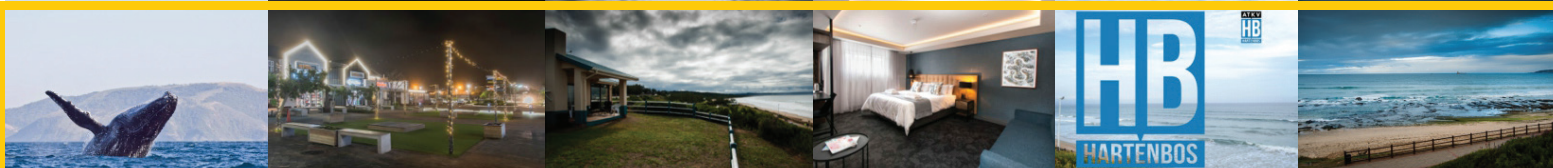
2019

18 - 19 September

DRR 2019 will focus on reducing disaster damage to critical infrastructure and disruption of basic services aligning with the UNISDR Sendai 7 Campaign's Target 4 priority.



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