



**cooperative
governance**

Department:
Cooperative Governance
REPUBLIC OF SOUTH AFRICA

National Disaster Risk Management Research

Agenda



**Directorate: Education, Training, Awareness, and
Research**

2023-2030

1. PURPOSE

The Department of Cooperative Governance (COGTA) through its branch: the National Disaster Management Centre (NDMC) seeks to guide and coordinate research undertaken within the Disaster Risk Management (DRM) sector during the period: 2023-2030.

The agenda sets out the **priority thematic areas** within the DRM sector as a whole in the next seven years (2023-2030) and will be updated bi-annually.

DRM researchers, academics, undergraduate and postgraduate students, individual research organisations, non-government organisations etc., are encouraged to consider, and engage with the **priority thematic areas** and provide high quality, internationally competitive research, and contribute to the dissemination of ground-breaking knowledge in the pursuit of excellence in the field of Disaster Risk Management.

2. PRIORITY RESEARCH TOPICS

THEMATIC AREAS	KEY PERFORMANCE AREA (KPA)s ENABLERS/ INTERNATIONAL & NATIONAL PRESCRIPTS	POSSIBLE RESEARCH AREAS	CATEGORY
1. HAZARDS (i) Natural Hazards (ii) Human Induced Hazards	<u>KPAs</u> All KPAs <u>ENABLERS</u> All enablers	(a) Inadequate consultation of Hazard scientists (b) Need for earthquake related community awareness programmes in seismic active regions. (c) Lack of relevant protective legislation for the public in dolomite affected areas. (d) HIV/AIDS (Epidemiological hazards) (e) Need for earthquake related community awareness programmes in seismic active regions. (f) The role of Disaster Management in dealing with attacks on foreign nationals. (g) Agricultural disaster risk management and its impact on the	Geological Biological Hydrometeorological Technological Environmental Anthropogenic

		<p>promotion of food security strategies.</p> <p>(h) Mining accidents</p> <p>(i) Urban disaster risk issues</p> <p>(j) Poverty</p> <p>(k) Increase in difficulties responding to informal settlement fire due to extreme weather conditions.</p>	
<p>2. VULNERABILITIES / CAPITALS AND KEY DRIVERS</p>	<p><u>KPAs</u> All KPAs</p> <p><u>ENABLERS</u> All Enablers</p>	<p>(a) Climate change and adaptation to reduce vulnerability.</p> <p>(b) Agricultural disaster risk management and its impact on the promotion of food security strategies.</p> <p>(c) Mining accidents</p> <p>(d) Urban disaster risk issues.</p> <p>(e) Poverty</p>	<p>Social</p> <p>Human</p> <p>Political</p> <p>Institutional</p> <p>Legal</p> <p>Economic</p> <p>Physical</p> <p>Infrastructure & Services</p> <p>Spatial</p> <p>Technological</p> <p>Environmental</p> <p>Vulnerable Groups</p>
<p>3. GOVERNANCE FOR DRR</p> <p>I. Legislations</p>	<p><u>KPAs</u> All KPAs</p>	<p>(a) Inadequate political backing of DRM at Ministerial level.</p> <p>(b) Need for a mechanism for conveying the “best” scientific information to the policy and decision makers.</p>	<p>Disaster Management Act</p> <p>National Disaster</p>

<p>and Policies</p> <p>II. Structures and Strategies.</p> <p>III. Sectoral-Specific</p>	<p><u>ENABLERS</u></p> <p>All enablers</p>	<p>(c) Hazard scientists not consulted widely.</p> <p>(d) There is lack of relevant protective legislation for the public in dolomite affected areas.</p> <p>(e) Roles and responsibilities of districts vs. local municipalities are not clear or understood by all parties.</p> <p>(f) The need for a uniform approach to the placement of the disaster management at both local and provincial spheres of government.</p> <p>(g) Lack of coordination between All sectors of Government and across all spheres.</p> <p>(h) Allowing municipalities to manage their own contingency reserve.</p> <p>(i) Registration of disaster risk management as a profession/ occupation.</p> <p>(j) No uniform relief policy, fund, guidelines.</p> <p>(k) The limited influence of disaster risk reduction principles and policy on integrated development planning and service delivery.</p> <p>(l) The role of Disaster Management in dealing with attacks on foreign nationals.</p> <p>(m) Lack of communication between various spheres of government.</p>	<p>Management Framework</p> <p>Political Oversight</p> <p>Technical Task Teams</p> <p>Ward / Community Based Structures</p> <p>Sector Legislation</p> <p>Integrated Development Plan (IDP)</p>
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		<ul style="list-style-type: none"> (n) Lack of political will and public support for disaster risk management. (o) Lack of standardised systems for disaster management. (p) Mainstreaming disaster risk reduction into other disciplines and sectors. (q) Lack of harmony and standardisation in risk reduction initiatives amongst the role -players at the different levels of government-sub regions of Southern Africa i.e. Africa Regional Strategy for Disaster Reduction ISDR. (r) The need for more effective governance of Disaster Risk Management Advisory Forums. (s) Lack of strong leadership in disaster risk management. (t) The limited private sector involvement in disaster management. (u) Lack of DRM capacity at all tiers of Government especially at local level. (v) The need for flexible supply chain management systems in a disaster risk management environment to allow more effective relief and reconstruction efforts. (w) Agricultural disaster risk management and its impact on the promotion of food security strategies. 	
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<p>4. CAPACITY BUILDING</p> <p>(i) Communication & Information</p> <p>(a) Informal</p> <p>(b) Formal</p>	<p><u>KPAs</u></p> <p>All KPAs</p> <p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>(a) Urgent need for DRM officials to develop understanding, skills, and competencies of development planning to ensure that the disaster management function has its intended statutory impact.</p> <p>(b) More evidence needed of cost-effectiveness of risk reduction initiatives.</p> <p>(c) Lack of funding and resources for risk reduction projects (i.e. awareness and marketing, research, infrastructure projects at municipalities level, etc).</p>	<p>Political</p> <p>Technical</p> <p>Disaster Practitioners</p> <p>Competency</p> <p>Professionalism</p> <p>Ethics</p> <p>Sector Practitioners</p> <p>Community Based</p> <p>Education</p> <p>Training</p> <p>Awareness</p> <p>Research.</p>
<p>5. DEVELOPMENT OF TOOLS, SYSTEMS & APPROACHES FOR EARLY WARNINGS MANAGEMENT</p>	<p><u>KPAs</u></p> <p>Integrated institutional capacity for disaster risk management.</p> <p>Disaster risk</p>	<p>(a) Need for earthquake related community awareness programmes in seismic active regions.</p> <p>(b) The need for a more permanent strategy for the annual flood risks of informal settlements across the country.</p> <p>(c) Lack of standardised systems for Disaster Management.</p> <p>(d) No national disaster risk database and geographical</p>	<p>Data Collection</p> <p>Remote Sensing</p> <p>Indicators</p> <p>Geographic Information Systems</p>

<p>(i) Communication & Information</p>	<p>assessments</p> <p>Disaster risk reduction</p> <p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>information systems.</p> <p>(e) Continued absence of a standardised ICT system across all provinces.</p> <p>(f) The limited private sector involvement in disaster management.</p> <p>(g) The need for more trans-disciplinary research to reduce the fragmented and reductionist approach to disaster risk management.</p>	<p>Impact Based Forecasting</p> <p>Impact Based Community Preparedness</p> <p>Information Processing and Management</p>
<p>6. INNOVATION & TECHNOLOGY</p>	<p><u>KPA'S</u></p> <p>Integrated institutional capacity for disaster risk management.</p> <p>Disaster risk reduction</p> <p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>(a) There is a need for an IT research and development programme specifically focused on disaster risk reduction.</p> <p>(b) Continued absence of a standardised ICT system across all provinces.</p> <p>(c) The need for more trans-disciplinary research to reduce the fragmented and reductionist approach to disaster risk management.</p>	<p>Data Collection</p> <p>Data Processing</p> <p>Information Dissemination</p> <p>Communication Systems</p> <p>Cyber Security</p> <p>Social Media</p> <p>Fake News</p> <p>Simulations.</p>
<p>7. INDIGENOUS KNOWLEDGE</p> <p>(i) Language</p>	<p><u>KPAs</u></p> <p>Integrated institutional capacity for disaster risk</p>	<p>(a) There is a need for an integrated knowledge management system in all local authorities that can assist in monitoring any changes to the risk profile of each ward.</p> <p>(b) The need for more trans-disciplinary research to reduce the</p>	<p>Data Collection</p> <p>Qualification and Quantification</p> <p>Geospatial</p>

<p>development and communication</p>	<p>management. Disaster risk assessments Disaster risk reduction <u>ENABLERS</u> All Enablers.</p>	<p>fragmented and reductionist approach to disaster risk management. (c) Active and meaningful community participation in risk reduction programmes (Indigenous knowledge)</p>	<p>Context</p>
<p>8. CLIMATE CHANGE AND ADAPTATION (I) DRR (II) Hydrometric (III) Food Security</p>	<p><u>KPAs</u> Integrated institutional capacity for disaster risk management. Disaster risk assessments Disaster risk reduction. <u>ENABLERS</u> All Enablers</p>	<p>(a) Climate change and adaptation to reduce vulnerability. (b) Agricultural disaster risk management and its impact on the promotion of food security strategies.</p>	<p>Aspects are covered in other sections</p>
<p>9. INNOVATIVE AND NATURE-BASED SOLUTIONS</p>	<p><u>KPAs</u> Integrated institutional capacity</p>	<p>(a) There is a need for an IT research and development programme specifically focused on disaster risk reduction. (b) Continued absence of a standardised ICT system across all</p>	<p>Indigenous Coping Mechanisms</p>

	<p>for disaster risk management.</p> <p>Disaster risk reduction</p> <p><u>ENABLERS</u></p> <p>All Enablers.</p>	<p>provinces.</p> <p>(c) Natural resource management for disaster risk reduction purposes.</p>	<p>Rainwater Harvesting</p> <p>Rooftop Gardens</p> <p>Water Gardens</p> <p>Stormwater Management.</p>
<p>10. RISK INFORMED DEVELOPMENTS AND BUILDING OF LONG-TERM RESILIENCE</p>	<p><u>KPAs</u></p> <p>All KPA's</p> <p><u>ENABLERS</u></p> <p>All Enablers.</p>	<p>(a) Need for national baseline information and sharing on the SA risk profile.</p> <p>(b) No national disaster risk database and geographical information systems.</p> <p>(c) Urgent need for DRM officials to develop understanding, skills, and competencies of development planning to ensure that the disaster management function has its intended statutory impact.</p> <p>(d) Unknown and new hazards e.g. swine flu.</p> <p>(e) Disaster Risk assessment of seismic active areas.</p> <p>(f) Urban disaster risk issues.</p> <p>(g) Poverty</p>	<p>Pre - Development Risk Assessment</p> <p>Indigenous Coping Mechanisms</p> <p>Rainwater Harvesting</p> <p>Rooftop Gardens</p> <p>Water Gardens</p> <p>Stormwater Management</p> <p>Geotechnical</p> <p>Hydrological</p> <p>Slopes Stability</p>

			<p>Flood line Calculations</p> <p>Integrated Human Settlements.</p> <p>In-situ upgrading</p> <p>Availability of Services</p> <p>Socio - economic Infrastructure</p>
<p>11. URBAN RISKS</p>	<p><u>KPAs</u></p> <p>All KPA's</p> <p><u>ENABLERS</u></p> <p>All Enablers.</p>	<p>(a) Natural resource management for disaster risk reduction purposes.</p> <p>(b) Urban disaster risk issues.</p> <p>(c) Increase in difficulties responding to informal settlement fire due to extreme weather conditions.</p>	<p>Spatial Layout</p> <p>Excessive Hardening</p> <p>Storm Water Run Off</p> <p>Urban Heat Islands</p> <p>High Density</p> <p>Informal Settlements.</p>
<p>12. STREAMLINE RESPONSE</p>	<p><u>KPAs</u></p> <p>Integrated</p>	<p>(a) No uniform incident/response management system/standard for SA.</p>	<p>Pre-Planning</p> <p>Simulations and</p>

	<p>institutional capacity for disaster risk management.</p> <p>Response and recovery</p> <p><u>ENABLERS</u></p> <p>All Enablers.</p>	<p>(b) There is an urgent need for closer external and internal controls with respect to ensuring that relief funding is utilised for what it was allocated.</p> <p>(c) The need for flexible supply chain management systems in a disaster risk management environment to allow more effective relief and reconstruction efforts.</p>	<p>Audits</p> <p>Command</p> <p>Coordination</p> <p>Communication</p> <p>Capitals (Resources)</p> <p>Consequence Management</p>
<p>13. MONITORING & EVALUATION</p>	<p><u>KPAs</u></p> <p>All KPA's</p> <p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>(a) Effective monitoring and evaluation system with proper management information.</p> <p>(b) There is a need for more effective monitoring and evaluation of the impact of training and education initiatives on risk reduction.</p> <p>(c) There is an urgent need for closer external and internal controls with respect to ensuring that relief funding is utilised for what it was allocated.</p> <p>(d) There is a need for an integrated knowledge management system in all local authorities that can assist in monitoring any changes to the risk profile of each ward.</p>	<p>Develop Standards</p> <p>Measure Performance</p> <p>Evaluate Performance</p> <p>Correct Performance</p> <p>Reward Performance</p>
<p>14. FUNDING AND FINANCING OF DRR</p>	<p><u>KPAs</u></p> <p>All KPAs</p>	<p>(a) No uniform relief policy, fund, guidelines.</p> <p>(b) Need for one central disaster contingency reserve.</p>	<p>Financial Legislation</p>

	<p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>(c) Lack of standardised system for disaster management.</p> <p>(d) The need for a funding model for the disaster management functions of municipalities.</p> <p>(e) The Skills Development Fund is underutilised for the training of volunteers(unemployed).</p> <p>(f) There is an urgent need for closer external and internal controls with respect to ensuring that relief funding is utilised for what it was allocated.</p> <p>(g) The need for flexible supply chain management systems in a disaster risk management environment to allow more effective relief and reconstruction efforts.</p> <p>(h) More evidence needed of cost -effectiveness of risk reduction initiatives.</p> <p>(i) Lack of funding and resources for risk reduction projects (i.e. awareness and marketing, research, infrastructure projects at municipalities level, etc).</p>	<p>Procurement</p> <p>Funding Models</p>
<p>15. STRATEGIC RESOURCES</p>	<p><u>KPAs</u></p> <p>All KPAs</p> <p><u>ENABLERS</u></p> <p>All Enablers</p>	<p>(a) Inadequate political backing of DRM at Ministerial level.</p> <p>(b) Need for national baseline information and sharing on the SA risk profile.</p> <p>(c) Need for a mechanism for conveying the ‘best’ scientific information to the policy and decision makers.</p>	<p>Food Security</p> <p>Water Security</p> <p>Power</p> <p>Energy</p>

		<ul style="list-style-type: none"> (d) There is a lack of relevant protective legislation for the public in dolomite affected areas. (e) Lack of coordination between ALL sectors of Government and across all spheres. (f) The need for proper information and education of the population starting at school level. (g) The limited influence of disaster risk reduction principles and policy on integrated development planning and service delivery. (h) Climate change and adaptation to reduce vulnerability. (i) No standardised disaster risk assessment methodology has been established for the country. (j) Mainstreaming disaster risk reduction into other disciplines and sectors. (k) The need for more effective governance of Disaster Risk Management Advisory Forums. (l) Lack of strong leadership in disaster risk management. (m) The limited private sector involvement in disaster management. (n) Lack of DRM capacity at all tiers of Government especially at local level. (o) There is a need for an integrated knowledge management system in all municipalities that can assist in monitoring any 	<p>Communications Transport</p>
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		<p>changes to the risk profile of each ward.</p> <p>(p) Natural resource management for disaster risk reduction purposes.</p> <p>(q) More evidence needed of cost-effectiveness of risk reduction initiatives.</p> <p>(r) Lack of funding and resources for risk reduction projects (i.e awareness and marketing, research, infrastructure projects at municipalities level, etc).</p> <p>(s) Increase in difficulties responding to informal settlement fire due to extreme weather conditions.</p>	
<p>16. EVENT SAFETY</p>	<p><u>KPA'S</u> All KPA's <u>ENABLERS</u> All Enablers</p>	<p>(a) Lack of coordination between ALL sectors of Government and across all spheres.</p> <p>(b) There is a need for more effective monitoring and evaluation of the impact of training and education initiatives on risk reduction.</p> <p>(c) Lack of communication between various spheres of government.</p> <p>(d) Mainstreaming disaster risk reduction into other disciplines and sectors.</p> <p>(e) Need for mainstreaming DRM into other disciplines and sectors.</p> <p>(f) Lack of strong leadership in disaster risk management.</p>	<p>Safety at Sports and Recreational Events Act SANS 10366 Event Planning Event Management</p>

3. CONCLUSION

Research serves as an important tool in the sharing of experiences and finding solutions on disaster risk issues. Existing experiences of development planning are an important resource for strategic government institutions tasked with huge infrastructure development, human settlement, and other related fields. Such information, based on tested experiences of other similar programmes around the world, assists with the development of best practices for risk avoidance and reduction.

To develop risk profile for different forms of disaster risks, and the communities that may be affected, NDMC should facilitate research in various forms of disasters together with the sharing of resultant knowledge with communities. Communities on the other hand have developed various coping mechanisms for dealing with disasters. These mechanisms can serve as a source of information that can prove significant for disaster avoidance and reduction.