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REPUBLIC OF SOUTH AFRICA



# Integrating climate risk assessment/management/DRR into national policies, programmes and sectoral planning

**G Midgley, South Africa**



# The national policy framework

- South Africa's Disaster Management Act, promulgated 2003
- Dept Provincial and Local Government (DPLG)
- National Disaster Management Centre (NDMC)



the dplg

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**National Disaster Management Centre**

The NDMC has been constituted with the objective to promote an integrated and co-ordinated system of Disaster Management, with a special emphasis on prevention and mitigation, by National, Provincial, and Municipal organs of state, statutory functionaries, other role players and communities. The NDMC currently resides within the Department of Provincial and Local Government



News:



# LEGISLATIVE REQUIREMENTS

1. In Terms of Section 24 of the Disaster Management Act;
2. The National Disaster Management Centre (NDMC) must submit a report annually to the Minister reporting on -
  - a. The NDMC's activities during the year;
  - b. The results of its monitoring of prevention and mitigation initiatives;
  - c. Disasters that occurred during the year in each province;
  - d. The classification, magnitude and severity of these disasters;
  - e. The effects they had;
  - f. Particular problems that were experienced with these disasters and generally in implementing the Disaster Management Act and the National Disaster Management Framework (NDMF);



# STRUCTURE OF 2008 REPORT

- a. Context.**
- b. Executive Summary.**
- c. The Development of Disaster Management Legislation in South Africa.**
- d. The National Disaster Management Centre (NDMC).**
- e. Overview of DM Activities by Key Disaster Management Stakeholders.**
- f. Overview of DM Activities by Provincial DM Centres.**
- g. Declared Disasters.**
- h. Best Practices.**
- i. Climate Change and Disaster Risk Reduction.**
- j. Indigenous Knowledge.**
- k. The Disaster Management Institute of SA.**
- l. Financial Overview.**
- m. Conclusion.**
- n. Acknowledgements.**



# CLIMATE CHANGE

1. South Africa faces challenges due to climate change.
2. The Act calls for finding effective ways and means for all stakeholders to determine levels of risks, assess the vulnerability of communities and households to disasters that may occur; increasing the capacity of communities and households to minimise the risk and impact of disasters etc.
3. This requires finding effective and implementable ways of enhancing the country's ability to reduce the risks associated with climate variability and change.





# Key strategies – climate risk

- To prevent, mitigate and minimise the impact of disasters, through people-centered early warning systems, integrated development planning and improved communication. Create a culture of risk avoidance behavior through public awareness programmes and general life skills training;
- To create an environment for sustainable development as frequent disasters erode progress in respect of development initiatives;
- To create sustainable communities and livelihoods while reducing vulnerability. The biggest impact following disasters is on the poor communities who typically lose all of their possessions and are typically not insured.
- To fast track recovery. The length of time taken to recover from disastrous events must be as rapid as is feasible to support public confidence.
- To create more resilient infrastructure in respect of housing, schools, roads and bridges.
- To create national disaster management structures such as the Intergovernmental Committee on Disaster Management and the National Disaster Management Advisory Forum

# Disaster management structures /capacities at Provincial and Local Municipal levels

Province	Disaster Management Centre	Fully Functional	Head of Centre Appointed	Forums Established	Disaster Management Plans Finalised
Eastern Cape	Yes	Yes	Yes (Acting)	Yes	Draft
Free State	Yes	Yes	Yes	Yes	Yes
Gauteng	In process	Yes	Yes	Yes	Yes
KZN	Yes	–	–	Yes	In process
Limpopo	Yes	Yes	Yes	Yes	In process
Mpumalanga	In process	–	–	Yes	–
Northern Cape	–	–	–	Yes	–
North West	Yes	–	–	Yes	–
Western Cape	Yes	Yes	Yes	Yes	In process

# BEST PRACTICE EXAMPLES

- The *South African Disaster Risk Management Handbook Series* developed by the National Disaster Management Centre to guide district and metropolitan municipalities and provinces in South Africa in the implementation of the Disaster Management Act and Framework
- A Disaster Management Primary School Guide Pack implemented by the City of Tshwane;
- The Flash Flood Warning System from Nelson Mandela Bay Metropolitan Municipality;
- The Awareness campaigns from Mopani District Municipality;
- The Disaster Management Centre Activation Measurement System from eThekweni Metropolitan Municipality;
- Shared Fire-fighting Services: Project Consolidate in Uthungulu District Municipality; and
- Snow Incident Management in the Thabo Mofutsanyana District Municipality



# OVERVIEW OF PRIORITY GUIDELINES

1. The *South African Disaster Risk Management Handbook Series* has been developed by the National Disaster Management Centre to guide district and metropolitan municipalities and provinces in South Africa in the implementation of the Disaster Management Act and Framework.
2. The series has been divided into ten critical outcomes for the development and implementation of disaster risk management. Each critical outcome is presented as a separate handbook and contains a number of action steps to help you achieve the outcome. By working through each step in a handbook you should be able to put in place the necessary mechanisms to achieve the outcome described in that handbook.
3. Each handbook includes a range of support materials such as guidelines, information documents, templates, minimum criteria and legislation that are essential for the successful implementation of disaster risk management in municipalities and provinces.



# OVERVIEW OF PRIORITY GUIDELINES

Disaster risk management planning levels and their critical outcomes

LEVEL OF PLAN	CRITICAL OUTCOMES		HANDBOOK NO.
<b>I</b>	1	Establish foundational institutional arrangements for disaster risk management	2
	2	Develop the capability to generate a Level 2 Disaster Risk Management Plan	3
	3	Develop and implement contingency plans for known priority risks	4
<b>2</b>	1	Establish processes for comprehensive disaster risk assessments	5
	2	Identify and establish consultative mechanisms for specific priority disaster risk reduction projects	6
	3	Develop a supportive information management system	7
	4	Develop emergency communication capabilities	8
<b>3</b>	1	Establish specific institutional arrangements for coordinating and aligning disaster risk management plans	9
	2	Establish mechanisms to ensure informed and ongoing disaster risk assessments	10



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# Improved access to information

## South African Global Change Risk and Vulnerability Atlas

**Dr. Bob Scholes**

CSIR Natural Resources and Environment

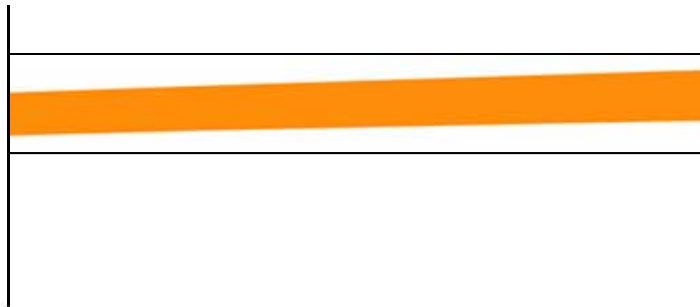
**National Climate Change Summit**

March 4, 2009



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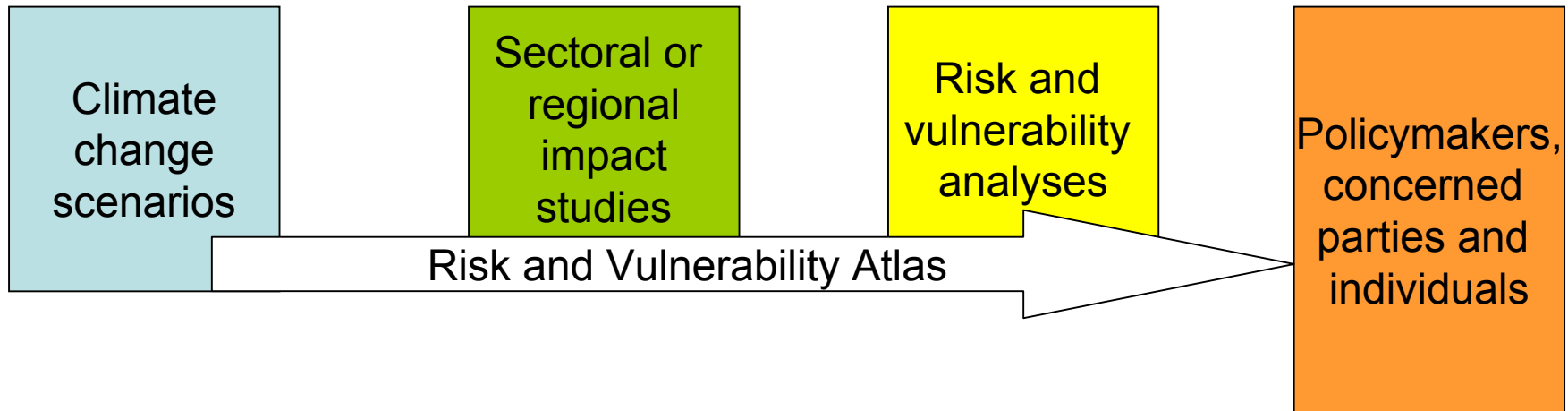
**CSIR**  
*our future through science*

# Why this? Why now?

- There remains a gap between **climate change science** and **climate change policy** in South Africa
- The notions of **risk** and **vulnerability** are emerging as a 'common currency' between the research and application domains
- An 'atlas' suggests an easy-to-navigate **spatial product** at many scales

# Bridging the gaps

a platform for effective science-policy communication



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# Vision:

## South African Risk & Vulnerability Atlas

- A 'one-stop-shop' for relevant climate change findings
  - Especially tax-funded research
  - Outreach, communication and technology transfer platform for the decade-long Global Change 'Grand Challenge'
- Open and easy access
  - Via the internet
  - Hard-copy products will be provided as well
- Based on an interactive electronic spatial database
  - Non-spatial studies will be accessible as well
- Projected impacts will extend 50 years into the future with at least decadal resolution



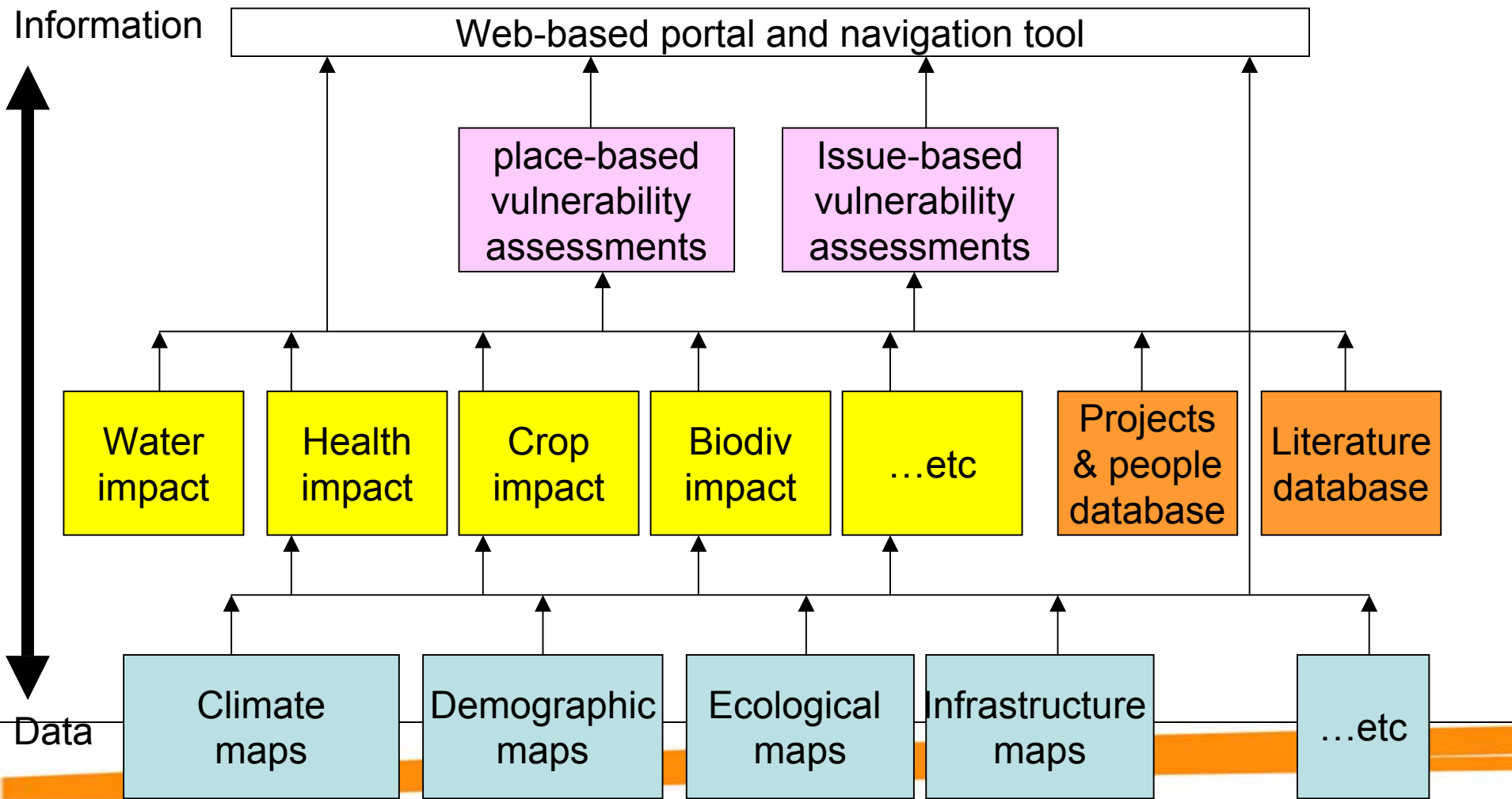
# Expected Outcomes

- Comprehensive database which will map the areas vulnerable to various global change impacts in South Africa and provide access to the relevant studies
- Stimulation of vulnerability and adaptation studies where needed
- Provision of decision support
- Human Capital Development: generation of PhD and MSc students with topics in line with risk and vulnerability studies and bio-informatics

# What sort of information?

- Best available projections of climate change, land cover change and biogeochemical change for southern Africa
- Social, demographic, economic, infrastructural, ecological and topographical data that assist in identifying vulnerable systems
- Studies that quantify and map the risks in key sectors, including (but not limited to):
  - disaster management (including flooding and fire),
  - water supply and quality,
  - forestry and natural resources,
  - agriculture and food security,
  - biodiversity and
  - human health
- Links to non-spatial studies

# A possible structure



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Coastal Management-EThekweni area in Durban – NRE TESTING - Mozilla Firefox

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### Coastal Management-EThekweni area in Durban

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**Demonstration of potential landward shift of storm wave run-up line due to a 2 m rise in sea level**

Green Point

- - - Approx. present storm run-up line
- Potential future storm run-up line due to a 2 m rise in sea level

**NB - Note:**

1. This slide simply illustrates the potential landward transferral up the existing coastal slope of the storm wave run-up line. It does not take account of any other coastal processes/dynamics, such as potential coastal erosion due to SLR or increased storm intensity, etc, as these are dependant on site specific conditions (bathymetry, wave transformation, sediment budget, etc.).
2. A 2 m rise in sea level is a relatively extreme scenario that at present seems unlikely to occur by 2100. However, accelerated climate change effects may increase the probability of such a scenario.

Map Projection: Transverse Mercator  
Central Meridian: 31°E

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# Local Scale example of a vulnerability map: Coastal Management in eThekweni Municipality