



DMISA 2011 CONFERENCE

AN INTEGRATED DISASTER RISK ASSESSMENT
MODEL FOR LOCAL GOVERNMENT IN SOUTH
AFRICA

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Introduction

- Alerted by heightening impact and intensification of disasters, the international disaster reduction community initiated various strategies as a means of counteracting and managing emerging and anticipated disaster situations.

IDNDR

- In this respect the international initiatives could be traced back to the International Decade for Natural Disaster Reduction (IDNDR) declaration (for the period 1990 to 2000)
- which was instrumental in raising the profile of deliberations around the social and economic causes of disaster risk.

ISDR

- The strategic focus of the ISDR was to promote the issues of awareness, assessment and management of disaster risk.

Eight Millennium Development Goals

- proclaimed in 2002
- highlighted disaster risk as a critical component of the development process that needs to be addressed by 2015 (UNDP, 2004)

Hyogo Framework for Action

- with clear milestones towards effective disaster risk reduction (Kobe Report, 2005; ISDR, 2005).
- Time-frames 2005-2015

ISDR Disaster Risk Reduction Model

- that emerged out of the global review of disaster reduction (ISDR, 2002) which provides an international framework for the practice of effective disaster risk reduction.

In South Africa

- the challenge is to identify, review, develop, modify and implement appropriate risk reduction strategies in a co-ordinated, effective, efficient and economical manner



it is critical to acknowledge that the study of disaster risk assessment:

- is identified as the first and most crucial step (according to the National Disaster Management Framework of South Africa) towards risk reduction
- concentrates on the elements of hazard, vulnerability and risk that are dynamically related

In Essence:

- a thorough analysis of disaster risk assessment will provide a complete and comprehensive picture of the society in question by tracing and examining the above factors and dynamics towards effective risk reduction.

In Essence...

- strategies for the reduction and prevention of disasters are universal, their applicability needs to take into account the particular characteristics of the threatened entity in such a way that a better understanding of the hazards, risk and vulnerabilities of that society can lead to the development of appropriate and adequate disaster reduction and prevention strategies.

In Essence...

- the inclusion of disaster risk in the broader perception of risk that people have to face in their daily lives requires a much more integrated and comprehensive approach to disaster risk reduction stemming from a systematic approach to identifying, assessing and reducing of all kinds of risk associated with hazards and human activities.

In Essence...

- understanding and reducing risks and vulnerability is undoubtedly the task of multi-disciplinary and multi-sectoral teams
- therefore it becomes apparent that an integrated model is the ultimate answer in facilitating and promoting effective disaster risk reduction

OVERVIEW OF THE RESEARCH

- part of a Doctoral Degree
- four focus groups
- eThekwinin Metropolitan Municipality, Ekurhuleni Metropolitan Municipality, Bojanala District Municipality and Stellenbosch Local Municipality)
- field surveys, group questionnaires, discussions and interviews

OVERVIEW OF THE RESEARCH

- The research aimed to gather in-depth apprehension of the environment, events and activities
- smaller but focused samples were selected
- Use of focus groups was to introduce informality in the discussion and data collection process so as to encourage true and natural responses

OVERVIEW OF THE RESEARCH

- national and international imperatives of disaster risk assessment and disaster risk reduction were interrogated as the basis for leading the comparative study of the three disaster risk assessment models
 - the Community-Wide Vulnerability and Capacity Assessment (CVCA) Model, Community-Based Risk Reduction Model and the South African Disaster Risk Assessment Framework

DEVELOPMENT OF AN APPROPRIATE MODEL

- primary pillars on which the model is developed is that of a vulnerability-driven, community-based, bottom-up approach as asserted in the legislative requirements promoting disaster risk assessment within South Africa

DEVELOPMENT OF AN APPROPRIATE MODEL

- the legislative parameters (of the Disaster Management Act and the National Disaster Management Framework) are explored
- to further regulate and provide insight to ensure that an appropriate model is developed

DEVELOPMENT OF AN APPROPRIATE MODEL

- The paradigm shift from merely “managing disaster events” to proactive risk reduction initiatives
- The goal is that of conserving development progress and minimising the loss of life, livelihood and destruction to property and infrastructure through effective disaster risk assessment.

DEVELOPMENT OF AN APPROPRIATE MODEL

- *Analysis of the disaster risk assessment requirements for local government in South Africa*
- Key Performance Area 2 of the National Disaster Management Framework the Provincial Disaster Management Framework of the different provinces

DRA Requirements: (i)

- All sectors to undertake disaster risk assessments to identify priority disaster risk, reduce vulnerability and
- develop effective disaster management plans and risk reduction programmes for implementation

DRA Requirements: (ii)

- the active engagement of the vulnerable communities through a community-based disaster risk assessment approach
- this community-driven process, rich in local and indigenous knowledge, is expected to add merit to the scientific and technical risk information of the community

DRA Requirements: (iii)

- disaster risk assessment to be ground-truthed
- as vulnerability factors are often the major catalysts of disaster risk
- emphasis should be on the practical realities that exist within the community.

DRA Requirements: (iv)

- use of specialist and technical experts in undertaking the disaster risk assessment
- with clear terms of reference on the process, methodology and reporting structure to be adhered to by these specialists
- the guiding principles should entail an inclusive process of consultation, skills transfer and capacity-building

DRA Requirements: (v)

- the quality assurance and validation mechanism
- validation process should ratify the methodologies and findings before any action and development plans, strategies and programmes are designed and undertaken

Deductions from Requirements

- (i) disaster risk assessment should be a systematic and planned process which comprises a series of activities within a structured framework
- such formal arrangement of activities requires appropriate planning, backed by political will to consider and secure the various resources and to fulfill the necessary administrative and procedural implications to inform disaster risk reduction plans and strategies

Deductions from Requirements

- (ii) emphasis on community participation alludes to a “bottom-up” approach
- where community involvement is central to the success of the risk assessment process
- and the subsequent risk reduction interventions

Deductions from Requirements

- (iii) the relevance of risk assessment being “ground truthed” is reflective of governments’ commitment to addressing the real disaster risk issues- realities within communities
- enables a thorough review of the root causes of disaster risk by examining the existing social, economic, political, physical and natural conditions and their impact on the community

Deductions from Requirements

- (iv) reference to experts in specialist fields serves to affirm that risk assessment requires an integrated and co-ordinated approach led by a multi-disciplinary and multi-sectoral team
- more holistic and comprehensive perspective to the disaster risk assessment process

Deductions from Requirements

- skills transfer and capacity-building enforces the partnership concept
- risk assessment consultants and specialists are expected to work jointly with the relevant stakeholders, sharing information and their expertise
- collaborative process is meant to strengthen commitment and support of all role-players whilst creating the platform for capacity building and skills transfer

Deductions from Requirements

- (v) external validation process implies that risk assessment be undertaken with rigour, based on accurate and reliable information
- the principles of objectivity and adherence to quality standards must be assured

Proposed Disaster Risk Assessment Model for Local Government in South Africa

- ***Core principles of the proposed disaster risk assessment model***
 - international and national criteria guiding effective disaster risk assessment set the tone to be ascribed to in accomplishing the common agenda towards disaster risk reduction

Core principles...

- the important criteria emanating from the evolution of the disaster risk management practice
- those promoting effective disaster risk assessment models (comparative models)
- the South African legal requirements

Core principles....

Contemporary disaster risk management practice	Guiding criteria for effective disaster risk assessment models	South African legislative stipulations
Partnerships		Community-based disaster risk assessment
Multi-disciplinary approach	Multi-disciplinary and multi-sectoral approach	Experts from specialist fields
Disaster risk reduction		Disaster risk reduction
Planning with communities		“Ground-truthing”
Communicating with communities	Community participation and resilience	Community participation and resilience
	Political commitment	Political will
	Adaptability (monitoring and evaluation)	Quality assurance and validation (monitoring and evaluation)

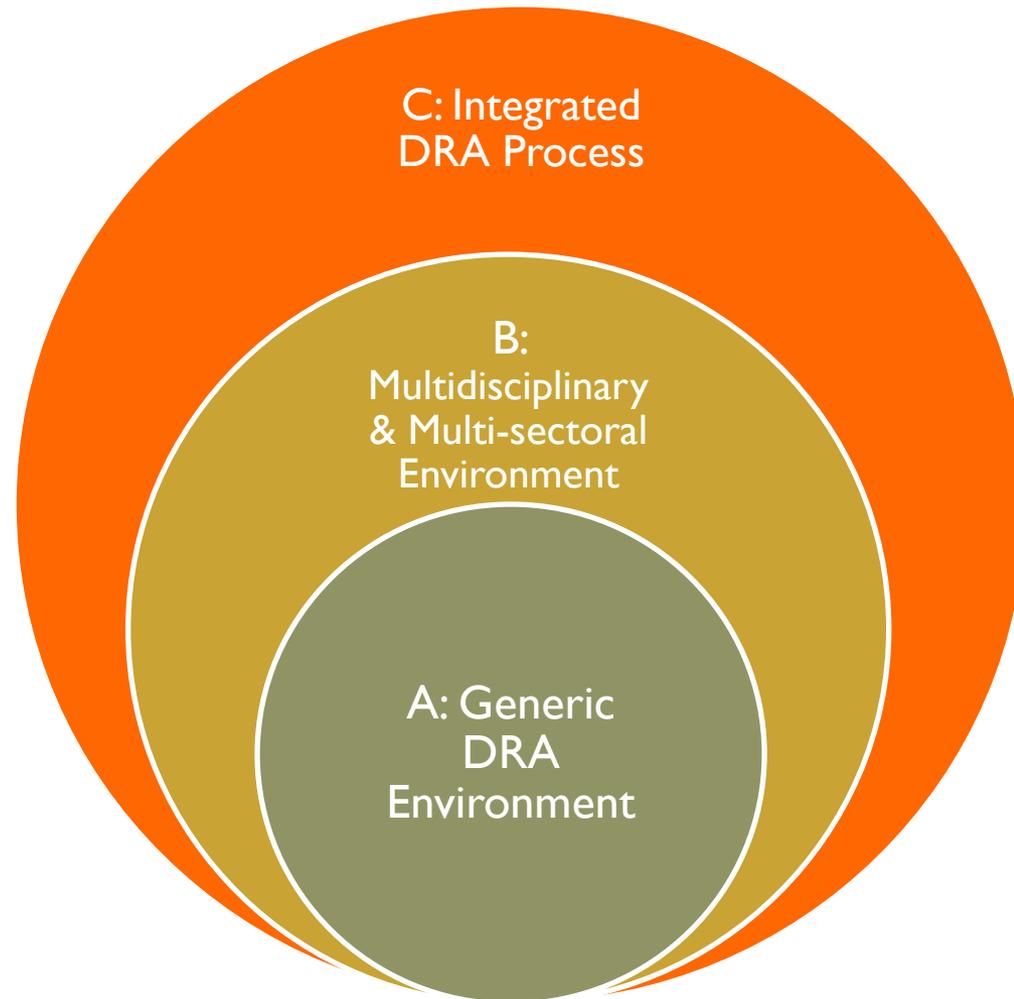
Five core underpinning principles

- **Community participation and resilience**
- **a multi-disciplinary and multi-sectoral disaster risk assessment approach**
- **Ensuring flexibility and adaptability within the disaster risk assessment framework**

Five core underpinning principles

- **Promoting political will and commitment within the realm of disaster risk management**
- **Maintaining an iterative process as a means of promoting completeness to the disaster risk assessment process**

Basis for Integrated DRA Model for LG



Proposed DRA Model

- [Link to Model.....](#)

Operational Guide: Phases of Model

Phase 1

- Community and Government initiate DRA process

Phase 2

- Establish a core planning team

Phase 3

- Planning team- jointly develop a process map of activities

Operational Guide: Phases of Model

Phase 4

- Define and map out profile of the community & environment

Phase 5

- Engage in the community based DRA process

Phase 6

- Identify and map the prevalent disaster risk

Operational Guide: Phases of Model

Phase 7

- Highlight the critical periods when the community is most vulnerable

Phase 8

- Analyse and prioritise the various disaster risk

Phase 9

- Core planning team to develop & implement

Phase 10

- Monitor & Evaluate disaster risk reduction interventions

Recommendations

- the value of a disaster risk assessment model as:
- promoting a co-ordinated, uniformed and standardised approach in undertaking disaster risk assessment
- providing proper guidance, structure and logic to improve disaster risk assessment planning and facilitation processes
- adding value to the process by integrating and co-ordinating the various activities across different disciplines and sectors
- facilitating the sharing and harmonising of resources towards the attainment of common goals; and
- fostering the principles of co-operative governance by encouraging and supporting stakeholder participation

Recommendations...

- reality is that there are certain anticipated challenges that need to be addressed before such a tool is successfully implemented.

Recommendations....

- appropriate structures, systems and processes will have to be developed, improved upon and implemented to support such a mechanism
- relevant procedures should be administered to verify that institutional arrangements are supporting and maintaining the required outcomes

Recommendations....

- Resource planning, provisioning and acquisition need to be completed by means of an integrated and co-ordinated planning process pursued by a multi-disciplinary and multi-sectoral team
- progressive inclusion of disaster risk assessment into development and disaster risk management plans linked to the Integrated Development Plan

Recommendations...

- Sufficient awareness campaigns, training and development of all stakeholders, to advocate and effectively implement such an approach are prerequisite- to implementation
- policy process formally adopting the implementation of the integrated disaster risk assessment model

Concluding comments

- The lack of a uniformed, structured and co-ordinated framework to guide the disaster risk assessment practice provided impetus to engage in the study

Concluding comments

- The model informs and guides coordinated and integrated disaster risk assessment and disaster risk reduction planning and implementation
- by linking and converting the results of the disaster risk assessment process into appropriate disaster risk reduction actions to be applied

Concluding comments

- the comprehensive, yet generic and flexible structure of the model encourages its portability and adaptability
- across all sectors of government nationally, regionally and internationally- to all those engaging in disaster risk assessment and disaster risk reduction activities

Concluding comments

- The effective and successful implementation of the developed model warrants the necessary policy intervention by government to be mandated into practice!!!

Thank you.....

