PACKAGE OF INFORMATION TO NATIONAL PLATFORMS FOR DISASTER REDUCTION

Information on national contact and provider of info:

Name	:	Mr LJ Buys
Position	:	Executive Manager: Disaster Management
Organisation	:	Department of Provincial and Local Government
Address	:	Private Bag X804 Pretoria 0001
Province	:	Gauteng Province
Postal Code	:	0001
Country	:	Republic of South Africa
Phone	:	+27 12 334 0726
Fax	:	+27 12 334 1810
E-mail	:	cd.dm@ndmc.pwv.gov.za
Website	:	http://sandmc.pwv.gov.za
Was the information provided consulted with other institutions?	:	Yes

NATIONAL INFORMATION

(updated 29 June 2004)

Component 1: Political Commitment and Institutional Aspects

1.1 Are there national policy, strategy and legislation addressing disaster risk reduction?

Like many countries in the world, South Africa, is at risk from a wide range of natural, technological and environmental hazards that can lead to disasters. Disasters that we have been exposed to include droughts, floods, major fires, tornadoes, major oil spills and even earthquakes. South Africa in the past has pursued various strategies to counter the effects of these disasters. However, it was realised that the approaches in the past were not adequate and that there was a need for a clear policy on risk reduction and Disaster Management that is pro-active and not reactive.

After the June 1994 floods on the Cape flats, Cabinet resolved that South Africa's ability to deal with risk reduction and Disaster Management should be assessed. This resulted in the review of Disaster Management structures and approaches in government. In 1995, Cabinet also recommended that a formal structure for Disaster Management be established.

A Green Paper on Disaster Management was developed and officially launched on 11 February 1998. The Green Paper provided us with an opportunity to reflect on current approaches to disaster management and risk reduction by all stakeholders and provoked thinking around a future strategy or strategies that would be in keeping with international trends, and more appropriate to current and future needs within the country as well the Southern African Region.

On 19 January 2000 South Africa launched the White Paper on Disaster Management (policy document), which underscores the importance of preventing human, economic and property losses, and avoiding environmental degradation. Flowing from the White Paper process was the promulgation of the Disaster Management Act, 2002 (Act No. 57 of 2002) on 15 January 2003. The said Act provides for –

- an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery;
- the establishment of national, provincial and municipal disaster management centres;
- disaster management volunteers; and
- matters incidental thereto.

The above-mentioned documents can be viewed on the National Disaster Management Centre's (NDMC's) website http://sandmc.pwv.gov.za.

Various departments have developed national policies and supporting frameworks, e.g*:*

- Department of Water Affairs and Forestry
- National Department of Agriculture

1.2 Is there a national body for multi-sectoral coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/land use and planning, health, environment, education, development planning and finance.

The Disaster Management Act, 2002 (Act No. 57 of 2002) provides for the establishment of the following structures within the three spheres of government:

National sphere	**Inter-governmental Committee on Disaster Management (ICDM)** A political forum appointed by the President comprising – • National Ministers holding the following portfolios: o Agriculture and Land Affairs o Defence o Education o Environmental Affairs and Tourism o National Treasury o Foreign Affairs o Health o Home Affairs o Housing o Provincial and Local Government o Public Works o Safety and Security o Social Development o Water Affairs and Forestry • A Member of the Executive Council (MEC) of each province, who is selected by the Premier of the province concerned and is involved in either disaster management or the administration of other national legislation aimed at dealing with an occurrence defined as a disaster. • Organised local government is represented on the ICDM by members of municipal councils who are selected by the South African Local Government Association (SALGA). • The ICDM is chaired by the Cabinet member designated by the President to administer the Act – namely, the Minister for Provincial and Local Government.	**(Section 4)**
	National Disaster Management Advisory Forum (NDMAF) A forum comprising national and provincial officials whose Ministers are members of the ICDM, municipal officials selected by SALGA, disaster management experts and other relevant non-governmental and international organisations and relief agencies, appointed by the Minister.	**(Section 5)**
	National Disaster Management Centre (NDMC) Comprising the Head of the Centre, appointed by the Minister and officials employed in the Department.	**(Section 8(1)) (Sections 10 and 13)**

Provincial sphere	**Provincial Disaster Management Centres (PDMC)** Controlled by the Head of the Centre who is appointed by the MEC.	**(Section 29)**
	Provincial Disaster Management Advisory Forum (PDMAF) A forum established by the MEC responsible for disaster management, comprising provincial officials, the heads of the respective municipal disaster management centres, representatives of organised local government in the province, and other relevant role players.	**(Section 37(1))**

Municipal sphere	**Municipal Disaster Management Centres (MDMC)** Each metropolitan and each district municipality must establish a disaster management centre for its municipal area.	**(Section 43)**
	Municipal Disaster Management Advisory Forum (MDMAF) A forum established by a metropolitan or district municipality, comprising the head of the municipal disaster management centre in the municipality, senior officials and other relevant role players.	**(Section 51)**

1.3 Are there sectoral plans or initiatives that incorporate risk reduction concepts into each respective development area (such as water resource management, poverty alleviation, climate change adaptation, education and development planning)?

Yes. The following are examples of initiatives that incorporate risk reduction concepts into relevant development areas-

1.3.1 Integrated Development Planning – Department of Provincial and Local Government.

Integrated Development Planning is a process by which municipalities prepare a 5-year strategic plan that is reviewed annually in consultation with communities and stakeholders. It is a participatory planning process aimed at integrating sectoral strategies, in order to support the optimal allocation of scarce resources between sectors, geographic areas and the population, in a way that promotes sustainable growth and equitable development and the empowerment of the poor and the marginalized. The Integrated Development Plan (IDP) is a product of the integrated development planning process. It is the written plan that results from the integrated development planning process. The Integrated Development Plan is a principal strategic planning instrument that guides and informs all planning, budgeting, management, investment and development and implementation decisions and actions in the local area. Municipalities are required, in terms of the Act, to incorporate a disaster risk reduction component into each initiative undertaken in terms of their IDPs.

1.3.2 Water Resource Management – Department of Water Affairs and Forestry.

The first edition of the Proposed National Water Resource Strategy was published for public comment in August 2002.

South Africa is a semi-arid country, with an average rainfall for the country of about 450mm per year, well below the world average of about 860mm per year. Our rivers are small by comparison with other countries. The Orange River carries only about 10% of the volume of water flowing annually down the Zambezi River, and about 1% of the flow of the Congo River. Furthermore, many of our larger rivers, such as the Orange/Senqu and the Limpopo, are shared with other countries. Eleven of the nineteen water management areas in the country are facing a water deficit, where the requirements for water exceed its availability.

Not all of our water is of good quality. Across the country, on a daily basis, organisations and individuals impact on the water quality in our rivers and streams, our groundwater and our wetlands. Major water quality problems in South Africa include high salt and nutrient loads, sediments caused by erosion, contamination by bacteria, acid waters and the presence of toxic substances. Other threats to the health of our rivers are over-utilisation of riparian zones, alien species of fauna and flora (terrestrial and aquatic); and regulation of flows and water abstraction.

South Africa shares four major river systems with neighbouring countries:

- The Orange-Senqu system is shared with Lesotho (trans-boundary) and Namibia (contiguous).
- The Limpopo River is shared with Botswana and Zimbabwe (contiguous), and Mozambique (trans-boundary).
- The Inkomati system is shared with Swaziland and Mozambique (trans-boundary).
- The Usutu/Pongola-Maputo system is shared with Mozambique and Swaziland (trans-boundary).

The Protocol on Shared River Courses in the Southern African Development Community provides the framework for the management of these rivers, whilst the National Water Act gives international requirements a priority second only to the basic human needs and ecological Reserve.

Water management is not just about solving problems, it is also about creating opportunities. The Proposed First Edition National Water Resource Strategy, sets out the ways in which we aim to achieve integrated water resources management in South Africa. It is the implementation strategy for the National Water Act and provides the legally-binding framework within which the water resources of South Africa will be managed in the future. It outlines the goals and objectives of water resources management for the country and provides the plans, guidelines and strategies to achieve these goals. It identifies opportunities for social and economic development where water is available, and the developments required to achieve them. Running through each of these plans, guidelines and strategies is the theme of reduction of the risks posed to the country's scarce water resources.

1.3.3 A National Climate Change Response Strategy for South Africa – Department of Science and Technology.

South Africa is one of the four Co-Chairs, with the European Commission, Japan and the United States, of the Group on Earth Observations (GEO), a unique international partnership of more than forty countries and twenty international organisations, committed to optimally harnessing Earth observation as an instrument for sustainable development. The GEO was established at the Earth Observation Summit, held in Washington, D.C., in July 2003 to develop a new comprehensive, coordinated and sustainable global Earth observation system. One of the nine identified priority societal benefit areas of the proposed new system is reducing the loss of life and property from natural and human-induced disasters. The GEO has made significant progress since its inception and is now well placed to attain its objective of finalising, in February 2005, the 10-Year Implementation Plan for the new Global Earth Observation System of Systems (GEOSS).

For the GEO and ultimately the GEOSS to achieve its objectives, it is vital that the membership of countries and the constituency of participating organisations be as globally inclusive as possible. The full and active participation of developing countries in the GEO's preparation of the Implementation Plan and the operationalisation of the GEOSS is, thus, a critical precondition for success. The contributions of developing countries in availing their unique expertise in capturing and analysing Earth observation data will be pivotal in enhancing the utility of Earth observation as a tool for global policy- and decision-making. All African countries should, thus, be encouraged to participate in the GEO process. The following African nations are currently GEO members: Algeria, Cameroon, Republic of Congo, Egypt, Gabon, Morocco, Mozambique, Nigeria and South Africa. Initial discussions have already been held with the NEPAD Secretariat to establish synergy between NEPAD Earth observation activities, as elaborated in the Environment, and Science and Technology programmes of action, and the work of the GEO.

The GEO includes in its work a concerted focus on addressing the capacity building requirements of developing countries, both from a human capital and infrastructure perspective. The GEO is, thus, for example interrogating and attempting to resolve critical issues such as the availability of Earth observation data to developing countries at minimum and affordable costs. These efforts will significantly improve the quality of living of people across the globe, by enhancing the international community's collective ability to utilise Earth observation as tool for informed and scientifically-based policy- and decision-making. For example, the world's ability to predict, monitor and respond to natural and technological hazards is a key factor in reducing the occurrence and severity of disasters. This ability relies heavily on the use of information from well-designed and integrated Earth observations.

The GEO is cognisant that improved monitoring of hazards and means of providing early warnings are critical for preventing hazards from becoming disasters. To best serve these needs, the proposed GEOSS will, thus, develop an integrated approach that includes data from many different sources on both natural environment and human infrastructure: for example from in situ measurements, aerial and satellite remote sensing, and predictive modelling, all integrated into decision support and response systems, which can provide timely and accurate information needed by decision-makers and the public. The compelling rationale for this effort is that better coordinated

observation systems could save lives, protect biota and preserve resources. The future demands predictive systems that could optimally warn and inform decision-makers and the public, and reduce the chance of hazards becoming disasters

In advancing its work, the GEO is and will continue to be guided by global commitments such as the Johannesburg Plan of Implementation and the Millennium Development Goals. Indeed, the creation of GEOSS will be a significant landmark representing one of the first concrete realizations of the commitments made at the World Summit on Sustainable Development in Johannesburg in 2002.

1.3.4 Risk Reduction initiatives for the Agricultural sector – National Department of Agriculture

Agriculture in South Africa is inherently more risky compared with many other countries internationally. The country also experiences a wide range of variability between and within the season. The farmers are confronted with many hazards including drought, floods, hail, snow, fire, pests and animal diseases.

South Africa has develop national policies and national strategies to address the above mentioned hazards and is still developing other plans of disaster risk reduction*:*

Agricultural Pests Act, 1983,
Conservation of Agricultural Resources Act, 1983
Animal Diseases Act, 1984,
Forestry Fire Act,
Aspects of the Disaster Management Act 2002
Draft Drought Management Strategy
Draft Strategy on Agricultural Risk and Disaster Management Schemes
Still developing the Agricultural Risk and Disaster Management Plans as per Disaster Management Act, 2002

1.3.5 The South African National Land-Cover Database – Council for Scientific and Industrial Research (CSIR)

The National Land-Cover Project (NLC) is the first standardised land-cover database produced for the whole of South Africa, Swaziland and Lesotho that provides national baseline information on land-cover.

Accurate, up-to-date information on land-cover / land-use and state of the environment are critical components for environmental planning and management. For large areas, satellite remote-sensing techniques have now become the single most effective method for land-cover / land-use data acquisition. Prior to the implementation of the National Land-Cover (NLC) Database project, no single standardised database existed of current land-cover information for the whole of South Africa. The majority of land-cover / land-use classifications (derived from remote sensing) that did exist had typically been developed around specific user objectives, and had often been influenced by geographical location and actual data capabilities.

The land-cover database was mapped from a series of 1:250 000 scale precision-corrected satellite images referred to as SpaceMaps. The images were captured primarily during 1994/1995. The data is presented as a series of individual files with

the same coverage as the standard 1:250 000 scale Surveyor General national map sheet files. The completed land-cover data set is public domain and available at a nominal cost from the CSIR.

The standard Land-Cover Classification Scheme for Remote Sensing Applications in South Africa is based on known land-cover classes that can be identified on high-resolution satellite imagery. The 31 broad-level thematic land-cover classes in the database can be adapted to suit individual user requirements. A follow-up national land-cover project, aimed at providing both more recent and more detailed information has been initiated and is under development.

1.4 **Is disaster risk reduction incorporated into your national plan for the implementation of the UN Millennium Development Goals (MDGs), Poverty Reduction Strategy Paper (PRSP), National Adaptation Plans of Action, National Environmental Act Plans and WSSD (World Summit on Sustainable Development) Johannesburg Plan of Implementation?**

Please refer to the information contained in the responses to Para's 1.1 – 1.3, above. In terms of the provisions of the Disaster Management Act, 2002, each government department within each of the three spheres of government, is required to formulate and implement a disaster risk reduction component into each development programme that it undertakes, in its sphere of responsibility, in order to ensure that the gains achieved through that development programme are made more sustainable.

In addition, each relevant government department at the national level has been involved in the preparations for, and included in the national delegations participating in, each of the international initiatives that have resulted in the various documents and plans mentioned above and is in the process of taking steps to implement the commitments made in those documents within their respective spheres of responsibility, including oversight of the activities in this regard of the various provincial and municipal authorities. Please refer here to the examples provided in the responses to Para 1.3, above.

1.4.1 WSSD – Johannesburg Plan of Implementation

The Department of Environmental Affairs and Tourism is the lead department in ensuring implementation of the JPOI and co-ordinates with other relevant departments and stakeholders on ensuring the sustainability of development. Thus, during Cycle 1(2004/5) of the implementation process, when the focus is on Water and Sanitation, and Human Settlements, the Departments of Water Affairs and Forestry, and Housing, are involved in the process; while during Cycle 2 (2006/7), when the focus will be on Agriculture, Rural Development, Land, Drought, Desertification and Africa, the Departments of Agriculture and Land Affairs, and Water Affairs and Forestry will be closely involved.

1.4.2 National Climate Change Response Strategy for South Africa – Department of Environmental Affairs and Tourism

Global climate change is possibly the greatest environmental challenge facing the world this century. Although often referred to as 'global warming', global climate change is more about serious disruptions of the entire world's weather and climate patterns, including impacts on rainfall, extreme weather events and sea level rise, rather than just moderate temperature increases. The developing world faces greater challenges than the developed world, both in terms of the impacts of climate change and the capacity to respond to it.

Concerned with the implications of global climate change, several governments came together in 1988 and formed the Intergovernmental Panel on Climate Change. This led to the United Nations Framework Convention on Climate Change (UNFCC), which was tabled in 1992 at the United Nations Conference on Environment and Development. The stated objective of the UNFCCC is to achieve stabilisation of the concentrations of greenhouse gases in the atmosphere at a level that would prevent dangerous anthrpogenic interference with the climate system. The South African Government ratified the UNFCCC in August 1997.

It was soon recognised that the commitments set out in the UNFCCC were inadequate for achieving its ultimate objective and this led to the adoption of the Kyoto Protocol in 1997, after much international negotiation. The South African Government acceded to the Kyoto Protocol in July 2002.

The Department of Environmental Affairs and Tourism has now developed a draft climate change response strategy for South Africa. The strategy provides a comprehensive framework for dealing with climate change issues in South Africa. The approach used in developing this strategy was to ensure, as far as possible, that climate change response actions in South Africa would facilitate sustainable development, and included disaster risk reduction components to protect the gains from development. The strategy is based on the detailed country studies that were undertaken to evaluate a broad range of likely climate change impacts in South Africa.

1.4.2 Poverty Eradication

A number of government departments are involved in the field of poverty eradication in South Africa. The following example indicates part of what is being done in this field by the National Department of Housing

The South African Government's housing assistance programme for persons earning up to R3 500,00 per month (approx. US$555/month at the current exchange rate of US$1 = approx. 6,30 South African Rand) has been designed on the principles of flexibility to ensure that the diversity of needs is addressed and to ensure that locally manufactured products and materials can be used in house construction. However, any product to be used in house construction in terms of the Housing Subsidy Scheme must comply with minimum norms and standards as provided for in the Ministerial National Norms and Standards, the National Building Regulations and the standards imposed by the National Home Builders Registration Council. In regard to non-standard materials and products, such are subject to approved Mantag Certification of the Agrement Board of South Africa.

The Housing Subsidy Scheme furthermore provides for the variation of the subsidy quantum to cater for extraordinary development conditions and climatic requirements. Currently a variation of up to 15% of the Subsidy is available for precautionary measures to ensure the highest quality in producing housing goods and services. In addition, in the Southern Cape Coastal Condensation Area an additional amount of R3 999,00 is available to enhance the thermal performance of the houses to counter problems experienced with condensation.

Through the People's Housing Process, where beneficiaries participate in the construction of their own houses, the on-site manufacturing of material such as cement-based bricks is also allowed.

Finally, all housing development initiatives are planned and prioritised in terms of approved Integrated Development Plans (IDPs) of municipalities and under the guidance of the National Home Builders Registration Council. Under no circumstances will unsuitable land be utilised for township development. Government has recently announced the implementation of a new housing programme to assist persons affected by disasters and/or who are in desperate need of housing assistance. This programme provides a streamlined process for the delivery of emergency services and shelters on a temporary basis as the first step to a more permanent solution.

1.5 **Does your country have building codes of practice and standards in place, which take into account seismic risk?** ***If yes, since when. Which are the main difficulties in keeping with the compliances of the codes.***

Yes.

The Council for Scientific and Industrial Research has developed building codes of practice and standards that have to be strictly adhered to and implemented by all municipalities in South Africa.

1.6 **Do you have an annual budget for disaster risk reduction?**

South Africa has never had an annual budget for disaster risk reduction. The Disaster Management Act, 2002 only provides for funding of post-disaster recovery and rehabilitation. In terms of the Act it is therefore the responsibility of each department within each sphere of government to budget for disaster risk reduction.

The lack of funding for disaster risk reduction is a major constraint. A lack of financial resources for development and the poor socio-economic conditions affecting disaster-prone communities often lead to a spiral of repeat disasters affecting the same communities (e.g. repeat fires or floods affecting communities living in informal settlements). Scarce financial resources mean that disaster risk reduction is not always accorded the priority it deserves, as a means to invest in protecting the gains of development against damage. Efforts are currently being made to obtain regular budgeted funding for disaster risk reduction. In addition, each department at each level of government is required, in terms of the Disaster Management Act, 2002, to incorporate a disaster risk reduction component into each development programme that it undertakes, and to make the necessary financial provision therefor in its budget.

1.7 **Are the private sector, civil society, NGOs, academia and media participating in disaster risk reduction efforts?**

Various academic and training institutions are involved in disaster risk reduction efforts. However, a lack of effective co-ordination between the various institutions is a major constraint at this stage. Since the promulgation of the Disaster Management Act, 2002, the National Disaster Management Centre is endeavouring to co-ordinate and standardise all training, education and capacity building courses and curricula, and to introduce basic educational modules into primary and secondary levels of education. A Working Group on Training, Education and Capacity Building in the field of disaster management, comprising representatives from all the relevant institutions, is presently in the process of working on linking up the efforts of national and local disaster management institutions with the academic, research and civil society communities in South Africa and compiling training, educational and capacity-building policy.

(Also see Paras. 1.1, 1.2 and 1.3 above).

Component 2: Risk Identification

2.1 **Has your country carried out hazard mapping / assessment?** *If yes, please describe for which hazards, when they were updated and for what geographical scale they exist. Do they include characteristics, impacts, historical data, multi-hazards approach? Which institutions are using the results of the hazard assessment? To whom are they available?*

Yes. Various municipalities have been doing hazard mapping / assessments for hazards such as floodlines, sinkholes, wildfires etc. for many years. These maps are localised. The maps are also used by local government planning departments. At national and provincial levels, hazard mapping is currently being developed.

2.2 **Has your country carried out vulnerability and capacity assessments?**

Yes. The following are a few of the vulnerability and capacity assessments that have been done in South Africa –

2.2.1 SASOL/NDMC assessment of preparedness of municipalities along major transport routes.

2.2.2 Audit study by the NDMC on equipment and resources for fire-fighting capacity.

2.2.3 State of environment reports by the Department of Environmental Affairs and Tourism.

2.2.4 In addition, as soon as the National Disaster Management Framework has been finalised, endeavours will be made to carry out other national vulnerability and capacity assessments.

2.3 **Does your country have any mechanisms for risk monitoring and risk mapping?**

The Disaster Management Act, 2002 and the National Disaster Management Framework (currently being finalised) create the mechanisms for risk monitoring and risk mapping. The implementation of these mechanisms is therefore currently a work in progress.

2.4 **Is there a systematic socio-economic and environmental impact and loss analysis in your country after each major disaster?**

South Africa has, until recently, been lacking in this respect. However, the Human Sciences Research Council has been tasked by the Department of Provincial and Local Government to conduct an empirical analysis of the financial and socio-economic impacts of the major disasters that have occurred in South Africa from 1999 to the present, following an in-house assessment of these disasters recently conducted by the Department of Provincial and Local Government.

Due in large measure to the creation of disaster management mechanisms then in progress, which have culminated in the Disaster Management Act and the mechanisms it creates, a thorough analysis was made of the socio-economic and financial impact on South Africa of the 2000 floods. (These floods also severely impacted communities and damaged development in neighbouring Mozambique).

During February / March 2000 abnormally high rainfall levels, driven by cyclonic activity over the eastern and north-eastern parts of the country resulted in major flooding. The effect of high rainfall led to rivers bursting their banks and causing the worst devastation the country had experienced in 50 years. After the havoc caused by Cyclone Eline, close to 80 000 people were left homeless, provincial roads, bridges, agricultural systems as well as national parks were severely damaged and many communities were cut off from their livelihoods, schools, clinics and other services.

Loss of life : *Fifty people lost their lives*

Welfare needs : *Thousands of people destitute*

Damage: :

Roads and bridges:
- *Approximately one hundred and ten drainage structures (including bridges, low-level crossings and culverts) were badly damaged or washed away.*
- *At least 300 km of national and provincial roads were severely damaged. Damage to municipal roads was also extensive.*

Housing: : *A number of houses collapsed leaving* nearly 80 000 *people homeless and emergency shelter had to be provided.*

Health : *A number of hospitals and clinics were affected,* became *inaccessible and ran short of medicine.*

Agriculture : *Damage to irrigation infrastructure, equipment and crops in various government-owned farms. Many subsistence and communal farmers lost crops and livestock.*

Water : *Several water pipes and pumps were washed away leaving communities without fresh water. There was also damage to canals, dam spillways, etc.*

Kruger National : *Estimated damage amounted to approximately* R67m*.*

Park

Declaration of disaster areas

The following areas in Mpumalanga Province and Northern Province were declared disaster areas in terms of the Fund Raising Act, 1978:

- Nelspruit, Nsikazi and Nkomazi
- Malamulele, Mutale, Tshaule, Nzhele, Ritavi, Buysdorp, Vuwani, Mapulaneng and Mhala.

The area of jurisdiction of the Lowveld Escarpment District Council in Mpumalanga was declared a disaster area in terms of the Civil Protection Act, 1977

Long term effects

Disasters such as this impede the growth potential of the country and impact on government's plans to accelerate service delivery through making development gains sustainable.

Government response

It became apparent that an immediate gap needed to be filled in relation to the reconstruction of the affected areas and the provision of relief.

Cabinet approved that funding be made available to –

- Assist Northern Province and Mpumalanga to fund their urgent needs (R15m).
- Assist the SA National Defence Force (SANDF) to fund its emergency-relief operational costs in the affected areas; and
- Support the provision of direct financial assistance to the Kruger National Park, a major source of tourism revenue (R67m).

A special meeting of Cabinet was convened at the request of the State President on 27 March 2000 to discuss the government's response to the floods. This resulted in the establishment of the Command Centre to attend to the emergency reconstruction of the damage caused by the February 2000 floods:

Reported Damage – 2000 Floods: (The following figures are in millions of South African Rands denoted as "R" hereafter)

PROVINCE / INSTITUTION	Health		Education		Local Govt		Agriculture			Housing & Indigent Com	Roads & Bridges			Other		Totals			Total Damage Reported
	B	C	A	C	B	C	A	B	C	C	A	B	C	B	C	A	B	C	
EASTERN CAPE		0.05	1.7	-		3.9			1.9		484.2		-			486	0	6	491.8
FREE STATE			3.5	-		22.1					304.6		-			308	0	22	330.2
GAUTENG			0.2	-						72.3						0	0	72	72.5
KWAZULU-NATAL	18.00	0.04	5.1	7.1		37.4			3.7	98.7	60.5		35.2		1.2	66	18	183	267.0
MPUMALANGA			4.3	-	288.2	-				54.4		306.5	-			4	595	54	653.5
NORTHERN CAPE						5.8		1.0	-	0.4	4.1		3.7			4	1	10	15.1
NORTHERN PROV.	2.13	0.00	13.6	-					15.0	418.4	1,280		468.9			1294	2	902	2198.0
NORTH WEST			0.3	-		5.6				8.0	7.5		34.7			8	0	48	56.1
WESTERN CAPE													-			0	0	0	0.0
AGRICULTURE							299.1	320.0	56.1							299	320	56	675.2
PUBLIC WORKS														25.0		0	25	0	25.0
HEALTH																			
SANDF																0	0	0	0.0
TRANSPORT/ SANRAL											41.2		99.6			41	0	100	140.8
DWAF														196.5	79.4	0	197	79	275.9
WATER & IRRIGATION BOARDS														29.4	5.4	0	29	5	34.8
TOTALS (R'million)	20.1	0.1	28.7	7.1	288.2	74.8	299.1	321.0	76.7	652.2	2,182	306.5	642.2	250.9	86.0	2,510	1,187	1,539	5,236

Classification				
	A	Verification by SANRAL, CSIR & Command Centre	A	2,510
	B	Verification by Department, or Independent Profesionals	A & B	3,697
	C	Damage Reported, not officially verified	A,B,C	5,236

Based on the damage verifications the Command Centre was able to make recommendations to National Treasury for the following Emergency Reconstruction Allocations to provinces: (FY = Financial Year, which for Government departments ends on 31 March of each year):

Institution/ Province	FY 00/01 1st Tranche (Allocated and Spent)	FY 00/01 2nd Tranche (Allocated 91% spent)	FY ½ 3rd Tranche (Allocated 30% spent)	FY 02/03 4th Tranche (50% allocated)	FY ¾ 5th Tranche (Gazetted, not allocated)
Northern Province	R 93 million	R 250 million	R 196 million	R 182 million	R 120 million
Mpumalanga	R 91 million	R 150 million	R 98 million	R 90 million	R 36 million

Institution/ Province	FY 00/01 1st Tranche (Allocated and Spent)	FY 00/01 2nd Tranche (Allocated 91% spent)	FY ½ 3rd Tranche (Allocated 30% spent)	FY 02/03 4th Tranche (50% allocated)	FY ¾ 5th Tranche (Gazetted, not allocated)
KwaZulu Natal	R 76 million	R 66 million	R 12 million		
Eastern Cape	R 40 million	R 50 million	R 130 million	R 70 million	R 23 million
Free State		R 38 million	R 128 million	R 58 million	R 21 million
Northern Cape		R 6 million	R 7 million		
North West		R 25 million	R 11 million		
Gauteng		R 10 million			
Western Cape			R 18 million		
DWAF ((Dept. Water Affairs and Forestry)		R 402 million			
Transport		R 11,9 million			
SANDF		R 53 million			
TOTAL	**R 300 million**	**R 1 061.9 million**	**R 600 million**	**R 400 million**	**R 200 million**

The function of the Command Centre was terminated at the end of March 2002.

Total financial implications of the February 2000 floods amounted to R4,861 bn.

In addition to responses to the needs of communities in South Africa, Government launched an appeal for donations by the public for affected communities in neighbouring Mozambique. Over 2000 Metric Tonnes of food, blankets, medical supplies, water purifier and clothing were collected and Government arranged for the transportation of the consignment to Maputo where it was handed into the care of the World Food Programme's representative in Mozambique for distribution to affected communities as part of the international response to the disaster. The South African Air Force dispatched a team of aircraft, including helicopters, and ground crews, to assist the Mozambican authorities in rescuing members of rural communities trapped by the flood waters, and to deliver food, medical supplies and other requisites to communities that had become isolated by the floodwaters.

2.5 Are there early warning systems in place?

Yes. For example:

2.5.1 Developments in Disaster Risk Reduction : Enhancing the Early Warning System

The South African Weather Service (SAWS) delivers an early warning service to South Africa with respect to high-risk weather and climate events. It is also designated as a Regional Specialised Meteorological Service by the World Meteorological Organization (WMO), with the aim to support national meteorological services (NMSs) in the SADC (Southern African Development Community REC) region when needed.

1. Early Warning Service

The early warning service of the SAWS monitors the likelihood and development of droughts, floods, severe storms, heavy rain, gales, snow, hail, temperature extremes,

wildfire hazards and other similar weather related hazards. It is based on a number of linked processes:

1.1 Weather and Climate Forecasting

The weather and climate forecasting activities are linked into a “seamless” forecasting process. This basically is the integration of forecasting tools for different timescales (from seasonal, month, next two weeks, next day, to next hour) in such a way that the forecasters are increasingly made aware of approaching adverse weather events, and issue advisories or warnings as the event approaches with increasingly more detail as the forecasting timescale shortens. This is particularly useful for severe weather events approaching within the next two weeks.

The SAWS uses various model systems to issue forecasts on the different timescales. Global Climate Models and statistical teleconnection approaches are used for seasonal prediction, numerical ensemble products for month and two-week forecasts, numerical weather prediction models for one to three day forecasts, and weather radars and satellite images for “nowcasts” of severe weather (see Para 2.5.1 hereunder).

1.2 Dissemination

Warnings and advisories are disseminated through the disaster management structures and to the media as and when needed.

1.3 Collaboration

The SAWS collaborates closely on a national basis with the disaster management structures, and this collaboration is in the process of being strengthened through a Memorandum of Agreement. In partnership with other institutions, efforts are also underway to raise the awareness of communities regarding weather and climate warnings. On a regional scale the SAWS is a designated Regional Specialised Meteorological Service (RSMC) of the WMO, and collaborates with various regional institutions and weather services through information sharing, dissemination of model products and training activities, attachments and seminars.

1.4 Research and Training

Research activities are focussed on improving the early warning of adverse weather and climate events. This is done through a number of collaborative partnerships with relevant national and international institutions, including the US National Weather Service and the International Research Institute for Climate Prediction (IRI). These research activities include improving the numerical weather prediction systems, the interpretation of ensemble products, and the development of improved techniques of seasonal forecasts using global and regional climate models.

Capacity building of forecasters and researchers goes hand in hand with these research projects and university courses.

2. Improvement of Observational Network

A number of the automatic weather stations (AWS) developed by the SAWS are deployed in a few other African countries in an effort to extend the observational network. The SAWS also donated a number of barometers to the Mozambique national meteorological service. An important development by the SAWS was a software system called Metcap that is used in the weather observational network. This system is aimed at improving the quality of weather observations.

3. Collaboration

Collaboration with the Agricultural Research Council (ARC) and Department of Water Affairs and Forestry was enhanced through memoranda of understanding with both organizations, and establishment of a steering committee to oversee activities. This will be a major boost for the optimisation of the weather observational networks operated by all three organizations, as well as the service delivery to the water and food sectors. Another memorandum of understanding between the SAWS and the National Disaster Management Centre will streamline the collaboration between the organizations regarding the dissemination and activities due to early weather and climate warnings issued by the SAWS.

4. Hardware and Systems

The SAWS is a participant in the WMO MTAP project aimed at installing ground receiving equipment for the new Meteosat Second Generation (MSG) weather satellite in the national meteorological services of all African countries. Through this project the NMSs will be able to receive state-of-the-art weather information and satellite images from the MSG satellite.

Progress is being made in the establishment of a regional radar network aimed at linking the weather radars of South Africa (10) with those of Botswana (1), Zimbabwe (4) and Mozambique (2) into a regional real-time network. This collaboration will play an important part in the severe weather warning services in the region.

Numerical weather prediction models (NWP) are essential tools for good weather forecasting. The SAWS is currently running the ETA regional model over South Africa, making the products available to various countries. There is a developing need from a number of African countries, including in SADC, that are investigating, in line with the NWP-Africa Strategy of the WMO, the implementation of local models over their countries, nested in the regional models, to improve detailed weather forecasting for their countries. The enhanced use of NWP products, or implementation of local models, according to the NWP-Africa Strategy will contribute significantly to the improvement of early warning services in those countries. These activities, however, need significant external support, particularly in training workshops for forecasters and NWP scientists at the regional centres like the SAWS.

5. Capacity Building of Scientists

The SAWS is designated a regional training centre for forecasters and IT specialists in the rollout of the MSG ground receiving stations. Training workshops for forecasters from SADC, funded through the MTAP project, will be held during early 2005.

In early 2004 a training seminar was held on the topic of forecast verification and in June 2004 a workshop will be held on seasonal prediction using global climate models. Meteorologists from SADC countries participated in all these workshops.

The Nowcasting working group of the WMO is investigating the possibility of holding a nowcasting training workshop for SADC in South Africa during 2005. This event will contribute significantly towards the better understanding and use of very short range forecasting techniques and tools, including radar and satellite. Sponsorship will be needed for these events.

6. Capacity Building of Users

An initiative will be explored between the SAWS, ARC and the Ramano Training College in rural Limpopo Province for weather and climate related capacity building to the local communities. The aim of activities in the region will be to identify rural community forecasting needs for both food security and for early warning to the communities to save life and property. The success of this initiative could pave the way for other regions to follow.

7. Research

Through the MTAP project, the European Union is funding research activities on the MSG output and products. Various institutions in SADC are participating in this eighteen month project. A number of research projects are also running in the region to enhance seasonal climate prediction capabilities.

The World Weather Research Programme (WWRP) of the WMO is investigating the establishment of Developing Country Forecast Demonstration Projects. These projects will develop research capabilities on high impact weather in developing countries through partnerships with regional centres and developed countries.

2.5.2 Fire Danger Index **-** National Disaster Management Centre (NDMC), Department of Provincial and Local Government (DPLG).

A Fire Danger Index is received at the NDMC on a daily basis and early warnings are immediately sent out, if necessary. Weather patterns are also constantly monitored for early warning purposes.

2.5.3 Wide Area Satellite Monitoring Information System (WAMIS) – National Disaster Management Centre (NDMC), Department of Provincial and Local Government (DPLG)

WAMIS is a regional monitoring system initiated by the NDMC. WAMIS is a satellite based information approach for supporting sustainable development and to provide data, products and services to users concerned with disaster management, early warning systems, renewable resources and environmental monitoring, research, development and training in the southern African region. The goal of WAMIS is to provide a wide area coverage and monitoring information service using a suite of low to medium resolution satellite sensors for natural resource monitoring over the region, and delivering timely products and information to the national and regional user community on a non-profit basis.

Component 3: Knowledge Management

3.1 Does your country have disaster risk information management systems (governmental and/or non-governmental)?

See Para. 2.5, above.

The National Disaster Management Centre manages and co-ordinates the national Drought Relief Programme; the Working on Fire Programme; situation reporting systems; a contacts database; disaster management data collection; development of a conceptual document for vulnerability risks; and hazard mapping.

3.2 Are the academic and research communities in the country linked to national or local institutions dealing with disaster reduction?

Yes. A Working Group on Training and Capacity Building comprising relevant role players has been established. See also Para 1.7, above.

3.3 Are there educational programmes related to disaster risk reduction in your public school system?

Not yet. This matter is being addressed by the Working Group on Training and Capacity Building.

3.4 Are there any training programmes available?

Yes. A number of Universities and Technikons have disaster management training Programmes, as do the emergency services units of the major Metro Councils and larger municipalities.

3.5 What kind of traditional indigenous knowledge and wisdom is used in disaster-related practices or training programmes on disaster risk reduction your country?

The question of traditional indigenous knowledge and wisdom will be addressed in the National Disaster Management Framework, which is currently a work in progress – (vide Section 7(2)(j) of the Disaster Management Act, 2002).

3.6 Do you have any national public awareness programmes or campaigns on disaster reduction?

Yes. The Department of Provincial and Local Government through the National Disaster Management Centre, participated in the ISDR commemorations of the International Decade for

Natural Disaster Reduction programmes, and the Department of Water Affairs and Forestry has an ongoing national public awareness programme for veld (savannah grassland) and forest fires.

In the run-up to the millennium change, a comprehensive public awareness campaign was conducted as regards the Y2K phenomenon, and an inter-departmental task force plus representatives of the major parastatal organisations, organised business and civil society prepared a comprehensive, detailed contingency plan incorporating the roles and responsibilities of each actor. The task force was convened and chaired by the Head of the National Disaster Management Centre and reported to Government through the Minister of Provincial and Local Government.

Component 4: Risk Management Applications/Instruments

4.1 Are there any good examples of linking environmental management and risk reduction practices in your country?

See Para. 1.3 above, and Para 5.1, below.

4.2 Are financial instruments utilised in your country as a measure to reduce the impact of disasters (e.g. insurance/reinsurance, calamity funds, catastrophe bonds, micro credit finance, community funds, etc.)?

This issue will be addressed during the rollout of the National Disaster Management Framework, currently a work in progress.

The South African Insurance Association (SAIA) did a fire loss impact study at the request of the Inter-Ministerial Committee on Disaster Management to determine the state of fire service delivery in the country. The exercise resulted in further studies to upgrade fire service delivery in the country.

Insurance companies load premiums of, for example, home-owners who insure houses with thatch roofs; and of businesses that store potentially hazardous materials such as chemicals, cotton etc.

4.3 Please identify specific examples of technical measures or programmes on disaster risk reduction that have been carried out in your country.

Please refer to the responses to all of the paragraphs above

Component 5: Preparedness and Contingency Planning

5.1 Do you have disaster contingency plans in place? Are they prepared for both national and community levels?

Disaster contingency plans are being developed by the national, provincial and municipal spheres of government as provided in the Disaster Management Act, 2002.

Please refer also to the example of the contingency planning that preceded the Y2K phenomenon, at Para 3.6, above.

In sub-regional context the Heads of State and Government of the SADC countries agreed on disaster contingency plans seeking to ensure food security in the sub-region, at their Summit meeting on 15 May 2004, when they adopted the "Dar es Salaam Declaration on Agriculture and Food Security in the SADC Region". They committed their Governments to ensuring, among other things, accelerated agricultural development and sustainable food security through multi-sectoral strategic interventions. To this end, they committed their Governments to develop appropriate programmes to improve flood- and drought mitigation, flood control and strategic water storage infrastructures, strengthen national early warning systems, enhance vulnerability monitoring capabilities, develop a Regional Integrated Agricultural Information System, and consider the establishment of a Regional Food Reserve Facility. They called on all member states to progressively increase funding for agriculture by allocating at least 10% of the respective national budgets, within a period of five years, to the achievement of these objectives. The envisaged Regional Food Reserve Facility would include both a physical reserve and a financial facility, and in this regard studies are to be conducted on the early warning and monitoring system, including a review of the SADC Food Security Early Warning System, and a risk insurance instrument that identifies a risk-management strategy and safety-net support and strategies. (The SADC Food Security Early Warning System is a mechanism designed to allow SADC to respond to food emergencies).

As part of its contribution to providing assistance to a number of its neighbouring states where food insecurity has been a problem during the past two years, the South African Government's financial contribution during the 2003/4 financial year that ended 31 March 2004, was allocated as follows:

- World Food Programme. for provision of emergency food assistance — R22,5 million
- Food and Agriculture Organisation for provision of agricultural inputs to place subsistence farmers in a better position to recover from the food insecurity and once again become self-sufficient; and to combat trans-boundary animal diseases impacting food security in SADC countries (foot-and-mouth disease and contagious bovine pleuropneumonia) — R67,5 million
- WFP and FAO for joint creation/implementation of a vulnerability and information monitoring system for food security in the SADC countries — R10 million

The allocation of this contribution reflects a change in focus from the approach adopted during the previous financial year, when the full allocation was made for the provision of food assistance only, thus a change from a reactive response, to a more proactive disaster reduction / rehabilitation approach.

5.2 Has your government established emergency funds for disaster response and are there national or community storage facilities for emergency relief items?

The Department of Social Development administers the Disaster Relief Fund for immediate relief to victims of a disaster. The national and provincial governments rely on the national Contingency Reserve Fund for longer-term relief. Some of the provinces and larger metropolitan councils have already established storage facilities for emergency relief items such as tents and tarpaulins and plastic sheets.

An inter-departmental committee is currently in the process of framing guidelines for rapid response to disasters outside South Africa, mainly in South Africa's neighbouring countries, but also further afield if necessary. Part of the task of the committee is to make proposals for the funding of such relief operations.

5.3 Who is responsible for the coordination of disaster response preparedness and is the coordination body equipped with enough human and financial resources for the job?

See par.1.2. The Disaster Management Act, 2002 provides for the establishment of the following structures -

The National Disaster Management Centre (NDMC);
The nine Provincial Disaster Management Centres (PDMCs);
The six Metropolitan Disaster Management Centres; and
The forty-seven (municipal) District Disaster Management Centres (MDMCs)

The above-mentioned disaster management centres are responsible for the coordination of disaster response and preparedness in their areas of jurisdiction. The main constraint at this stage is a lack of adequate financial resources and capacity.

Component 6: Call for good practices in disaster risk management

Based on the above analysis and information provided, please provide at least two examples of any successful implementation of disaster reduction activities in your country (could be of local, national or regional scale).

The following are examples of successful disaster reduction activities that were implemented in South Africa*:*

6.1 National Cholera Prevention Strategy

In August 2000, South Africa experienced one of the fastest-spreading cholera epidemics in the world. The worst affected provinces were KwaZulu-Natal and Limpopo. On 26 January 2001 and 7 February 2001 Ministers and Provincial MECs met in Durban and Cape Town to discuss the cholera epidemic. It was agreed at these meetings that there was a need to develop a coherent strategy for government regarding the overall management of government's response. A national Cholera Prevention Strategy was developed and implemented. The objectives of the national strategy were to:

- minimise the fatality rate;
- reduce the rate of cholera infections;
- prevent further spread.

The most fundamental aspect supporting the national strategy was the accuracy of the information on which all decisions and actions were based. The outbreak of the epidemic required that the three spheres of government respond in a coordinated fashion. Government's response to the epidemic reflected clearly that we were not merely dealing with a health issue, but with a number of varied challenges. These challenges touched on the responsibilities of various institutions of government and government departments. For the sake of contributing towards the common cause it was imperative that all role players functioned as one team. The implementation of the National Cholera Strategy proved to be very successful.

The high number of cases in the affected provinces was due mainly to unsafe drinking water and poor sanitation in the affected areas. The overall co-ordinated approach to this epidemic was officially closed by the end of July 2001. However, the second outbreak started during the months of October and November 2001 in KwaZulu-Natal. The summer rains and mobility of migrant labourers contributed towards the spread of the disease.

Long-term intervention strategies to curb the cholera epidemic were implemented and involved the provision of safe water and adequate sanitation primarily in the most affected areas and under-resourced communities. These measures were complemented by on-going health education and health promotion programmes at all levels of care. Health information activities were executed through posters, pamphlets and involvement of the media and consultations with at-risk communities. Outbreak Response Teams and Joint Operations Committees were established. Chlorine was distributed to affected areas for purifying water, with instructions on the procedures to be followed.

Proper case management strategies were revised. As a cost-effective measure, rehydration facilities were established in tents at strategic locations. Outbreak Response Coordinators and health personnel were trained in epidemic management. Guidance was provided on media handling in order to avoid creating undue alarm among the public as well as to provide accurate reports to the media. Epidemic preparedness plans, which included what to do during and after an epidemic, were communicated to Provincial Outbreak Response Coordinators. Laboratory personnel were trained in skills to identify enteric pathogens.

6.2 Working on Fire Programme

The devastating losses suffered in the country as a result of veld fires (i.e. savannah grassland wildfires) has focused the need to establish an integrated plan for fire management. During 2002 the National Disaster Management Centre (NDMC) of the Department of Provincial and Local Government (DPLG) and the Department of Water Affairs and Forestry (DWAF), in collaboration with the forestry industry and various government departments, initiated the Working on Fire Programme (WoF). This is a pilot programme funded through the Poverty Relief allocation that seeks to promote an integrated approach to fire management in six regions throughout South Africa, by enhancing fire management capacity and by assisting in the establishment of Fire Protection Associations (FPAs). In terms of the agreement an amount of R10,5 million per year will be suspended from the budget vote of DWAF and transferred to the Vote of DPLG (sub-programme Disaster Management) for an initial period of three years, to ensure effective implementation of the plan in seven provinces. This will include facilitating the establishment of FPAs with fire-fighting capacity (including ground crews to support aerial fire-fighting capacity and fire control teams to do prescribed burning) in six areas within seven provinces – namely Western Cape, Eastern Cape, Mpumalanga, KwaZulu-Natal, Limpopo, Free State and Gauteng. The Head of the NDMC exercises overall control over the programme.

As the WoF programme has developed, the management needs have been developed accordingly. This has led to the need for a full time Safety and Health Manager and a full time Training Manager.

The overall area management structure has had to be amended to accommodate the need for full time positions within the present available capacity. This led to a reduction in the number of areas from eight to six, with a consolidation of Kwa-Zulu Natal and Free State into one area, and Mpumalanga and Limpopo into one area. This change has resulted in capacity being available to appoint the required Safety and Training Managers.

The Health and Safety Manager commenced duty on 1 April 2004, while the Training Manager commenced duty in May 2004. All six area managers have been appointed and commenced duty as of the end of March 2004.

The Working on Fire Programme will progress into a new phase once the recruitment of all the teams has been completed in the near future. It will allow the programme to focus on its three objectives in a more focused manner: fire fighting, fuel load reduction and fire prevention

The transformation process is progressing with the recruitment of further teams according to the business plan. The formerly unemployed rural women who have been recruited are progressing well in the programme. The upcoming crew leaders course that will be presented at Chrysalis academy will have a number of women on the course who will, if they pass, become the first women crew leaders in the Working on Fire programme.

The following is a summary of the jobs that have been created by the WoF Programme:

PERIOD	CATEGORY	NUMBER OF PEOPLE																				Number of permanent jobs created	
Month	Position	Males Above 25				Women				Male Youth (Below 25)				Disabled				Total				Total	
		B	W	C	I	B	W	C	I	B	W	C	I	B	W	C	I	B	W	C	I		
JAN 04	Fire Fighters	51		25		79		5		171												331	100 %
	Crew Leaders	2	1																			3	75%
	Managers	1	4		1		2								2			1	8		1	10	60%
	TOTAL																					344	
FEB 04	Fire Fighters	51		25		77		13		222												388	
	Crew Leaders	2	2							22								24	2			26	
	Managers	1	4		1		2								2			1	8		1	10	60%
	TOTAL																					424	
MAR 04	Fire Fighters	64		16		60		14		179	88	35										456	
	Crew Leaders			1						5		1										7	
	Managers		2				1								2			1	3			9	
	TOTAL	64	2	17		60	1	14		17	88	36			2							472	

Component 7: Priorities you want addressed at World Conference on Disaster Reduction

Based on the political commitment and the undertakings by political leaders regarding disaster risk reduction contained in the Johannesburg Plan of Implementation of the World Summit on Sustainable Development (JPOI of the WSSD), what is needed now, especially in developing countries, is prioritisation of the implementation of programmes at the national, sub-regional and regional levels, to give effect to that commitment. At national level this would require adoption of national policies placing priority on steps to implement disaster risk reduction programmes, for example the adoption of appropriate legislative instruments creating the necessary national structures obligated with formulating and implementing risk-reduction measures, and empowering these structures through prioritising the provision of financial and human resources to them, as national budgetary priorities.

In accordance with the commitments made by political leaders in adopting the JPOI of the WSSD, incorporation of a risk-reduction component into each development programme implemented by each government department at all three levels of governance, would be an invaluable means to invest in the protection of developmental gains. Funding is available from national budgets, as well as from bilateral and multilateral development assistance, for the implementation of development programmes, and there exist no reasons why there should not be a risk-reduction component incorporated into each development programme, to protect it against damage from disasters, and thereby ensure that it remains sustainable.

Disaster risk reduction should not be viewed as a separate discipline, but should be mainstreamed and incorporated into the broad spectrum of development activities in a cross-sectoral approach. In addition, disasters are not limited by national borders. Thus, while national approaches, on an integrated and cross-sectoral basis remain essential, sub-regional and regional approaches are also desirable particularly when addressing risks such as droughts, floods, locust plagues and trans-boundary pests and animal diseases. This also entails that the capacities for disaster management of the sub-regional and regional economic communities need to be strengthened through international co-operation and partnerships.

In African countries it is essential that the affected communities should be consulted before programmes for disaster risk reduction are implemented on their behalf, to ensure buy-in by the communities and to establish a sense of participation in, and ownership of, the programmes. Public awareness and education campaigns are also considered to be important in this regard.