

*Humanitarian Trends in Southern Africa:
Challenges and Opportunities*



**Regional Inter-Agency Standing Committee
(RIASCO), Southern Africa**

Humanitarian Trends in Southern Africa: Challenges and Opportunities

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COVER IMAGE CAPTION

“PRECIOUS BUNDLE: An as-yet-unnamed baby who was born on the back of a bakkie (pick-up truck) just days ago during the deluge is carried gently across the water by a farmworker” – courtesy of Antione de Ras, The Star, January 25, 2013.



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FOREWORD

Southern Africa is vulnerable to a variety of slow- and sudden-onset disasters: floods, drought, disease epidemics, food and energy insecurity, political unrest and many others. In an average year, millions of people are affected by food insecurity and hundreds of thousands by floods alone.

“Humanitarian Trends in Southern Africa: Challenges and Opportunities” was born out of the realization that humanitarian dynamics in the region are changing rapidly. Population growth, migration, urbanization, water scarcity, climate change and environmental degradation are but some of the forces that now must be taken into account in any conceptual model of humanitarian conditions. There has also been profound progress in our understanding of the role humanitarians can and should play. No longer can we treat emergencies as isolated events, or respond to crises without considering their underlying structural causes and their inter-connectedness within wider socio-economic contexts. We see this paradigm shift in efforts to strengthen disaster risk reduction, address the vulnerability of communities and build resilience by linking humanitarian action to a wider developmental context. Ensuring that mitigation, preparedness, humanitarian response and development are integrated not only builds sustainability but also better prepares us for the next disaster. Therefore, any kind of action must have as an ultimate objective the development of institutional, economic and community structures which can effectively and systematically minimize the impact of any emergency and contribute to the development of southern Africa.

This study is part of these efforts at improving the effectiveness of humanitarian action. It provides a basis on which we can identify the skills and capacities needed in the new humanitarian world, and also offers an invaluable opportunity for partnership among public, private and civil society sectors in the region by allowing for a shared understanding of the threats and challenges we must face together.

EXECUTIVE SUMMARY

Study rationale – the changing character of humanitarian emergencies

This research was prompted by a growing consensus that “the nature of humanitarian emergencies is changing” (UNOCHA, 2011a), with future emergencies increasingly driven over time by “a combination of complex and inter-related circumstances”, rather than single, identifiable shocks (ibid). Such observations resonate closely with those of humanitarian actors within southern Africa who increasingly face new, ‘atypical’ challenges.

Members of southern Africa’s Regional Interagency Standing Committee (RIASCO) have long acknowledged that effective humanitarian planning presupposes a clear understanding of the region’s risk profile. This prompted a call to investigate the threats to lives and livelihoods likely to confront southern Africa over the next decade, along with available capacities to address these challenges. RIASCO also sought greater clarity on the causal processes that may exacerbate population displacement, food insecurity, health emergencies, livelihood loss, as well as at-risk groups, including children and people living with HIV/AIDS. Such concerns led RIASCO, through the Food and Agriculture Organization of the United Nations (FAO), to formally commission a regional research team to investigate likely future humanitarian challenges in southern African and their associated implications for programming. Stellenbosch University (SU), through the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP) coordinated the study.

This southern African project also complements more wide-ranging, systematic efforts to characterise emerging global humanitarian challenges and vulnerabilities to complex stresses. The broader Global Challenges Study, commissioned by UNOCHA and implemented by DARA, seeks to better anticipate and prepare for future humanitarian challenges.

Mobilising new collaborations – southern African universities as research partners

The research was carried out during 2012 by **33 researchers through four research hubs** across the region. These involved the University of Antananarivo (Madagascar), North-West University (South Africa), Stellenbosch University (South Africa), the Technical University of Mozambique, along with independent researchers in Lesotho, Malawi and Johannesburg.

The research adopted a ‘**mixed-methods**’ approach at regional, national and sub-national scales. This incorporated the collection of quantitative and qualitative data, drawing extensively on both secondary and primary information sources. Specifically, the research design involved a desk-top review of relevant reports and published literature on emerging disaster risk and humanitarian assistance issues. This was complemented by primary data collection in thirteen countries, with more than 200 interviews. The research design incorporated detailed analysis of all humanitarian emergencies that generated **consolidated and flash appeals from 2000 – 2012**, departing from the established practice of separating more environmentally-induced disasters from those of social, political and economic origin. This recognised that risks in southern Africa escalate due to the interplay of multiple risk and vulnerability drivers at different scales.

Diverse emergency patterns – and increasingly complex

Contrary to perceptions that southern Africa has a homogeneous and ‘low-risk’ profile, research results **indicate a region exposed to a range of environmental and social pressures**. Excluding the protracted humanitarian situations in Angola and Zimbabwe, **47**

defined international humanitarian emergencies were identified between 2000 and 2012. The research shows that 37 of these were associated with an identifiable environmental shock/stressor, while seven were linked to socio-political triggers and three to epidemics. Environmental emergencies led to **26 flood-related appeals**, each of which reportedly assisted more than 500,000 people. Many of these were due to identifiable weather systems, such as Cyclone Eline in 2000 or Cyclone Favio in 2007.

Others were the result of locally occurring floods and humanitarian situations aggravated by constrained national and regional governance. From 2000-2012, more than **14 million people** reportedly required international humanitarian assistance for flood-related events, including the five million who were affected by Cyclone Eline. The results highlight the short recurrence intervals for major shocks for many countries and the annual co-occurrence of multiple shocks, even in countries that do not seek external assistance.

During the past decade, large numbers of southern Africans have been affected by human-induced emergencies. The research signals a transition from conditions of **armed conflict** seen in the 1980s and 1990s to **social conflicts**. These often occur in urban areas, particularly in national capitals. Humanitarian intervention was triggered by a wide **spectrum of social, political and economic factors**. These include instances of armed conflict (e.g. Angola), political conflict (e.g. Madagascar) and social violence/conflict due to escalating tensions between the State and civil society (e.g. Zimbabwe's 'Operation Restore Order' and Mozambique's food price riots). There is also evidence of **collective violence** (e.g. xenophobic violence against foreign nationals in South Africa).

A recurrent finding of this study is the high frequency of **transboundary emergencies** (emergencies that affect more than one administrative jurisdiction). The results suggest that current data-gathering systems, however, consistently under-estimate the occurrence and effects of transboundary processes, as well as their spatial extent. This is partly due to systematic biases that favour national reporting and is further constrained by non-reporting requirements for countries that do not seek international assistance. **Transboundary risks apply to all scales**. For instance, with increasing global and continental connectivity, and the region's growing integration, **global economic shocks are likely to transfer throughout the region**. The effects of global fuel and food price volatility and economic recession, for example, were experienced by most southern African countries between 2007 and 2009 and resulted in widespread effects and knock-on consequences.

Emerging capacities and resilience builders

In recent years, encouraging capabilities have emerged across the region that have reduced vulnerability and strengthened capacity for response in times of duress. One positive development across most study countries has been the progressive establishment of **national disaster management authorities**, whose core operating budgets are government-funded. This signals increasing national commitment to anticipate and reduce recurrent risks, and provides an institutional framework for retaining skilled human capital. However, with the exception of South Africa (and Windhoek in Namibia), there is limited subnational architecture for municipal or district risk management, despite the presence of disaster (risk) management committees.

There are other important **'resilience builders'** that have allowed households and governments to withstand recurrent shocks and stresses, and that have begun to avert the need for large-scale humanitarian operations. Expanded efforts in **social protection and ARV** support to people living with HIV have protected the region's social and human capital and

reduced vulnerability to a wide range of economic, health and natural shocks. In addition, **migration and mobility**, within countries and across borders, represent adaptive livelihood responses – linked to **sizeable remittance** flows. The rapid expansion of **cellphone use and ICT** in many countries also represent crucial resources for trade and information, as well as cash, and for mobilising social networks in times of duress. Similarly, **informal trade networks** at regional and sub-regional scales have also proven to be essential – reflected, for instance in informal cross-border flows of cereals and other commodities.

Looking ahead: Changing threats and vulnerabilities

Yet, the region is on the move. Between 2012 and 2025, its population is projected to rise from **167 million to 215 million** with an increasing urban share that is located in informal settlements. It is increasingly **mobile**, further enabled by SADC's Free Trade Area protocol (SADC, 2008) and the forthcoming implementation of SADC's Protocol on the Facilitation of Movement of Persons (SADC, 2005). It carries forward entrenched vulnerabilities, such as marked **structural inequality, high levels of chronic child malnutrition (stunting) and HIV** that are increasingly concentrated in towns and cities. In nine of the countries studied, 20%-24% of the population is aged between **15 and 24 years**, unlikely to be enrolled in secondary or higher education, and struggling to find stable employment. Southern Africa's expanding economic links both globally and continentally afford valuable trade and development opportunities, but are also accompanied by new exposures and risks.

Moreover, four countries (Angola, the Comoros, Malawi and Zimbabwe) are identified as fragile states. States that experience chronic fragility warrant particular attention by humanitarian actors, given their compromised resilience to shocks, potential for internal conflict and limited capacity to manage humanitarian emergencies. As southern Africa's interconnectedness increases the chances of the effects of **poorly managed shocks** and stresses in any single country being **transferred rapidly throughout the region**, it underlines the need for continued support to those states so they progress to more stable and resilient conditions.

Based on the findings of field research, secondary data analysis and detailed interrogation of regionally significant humanitarian emergencies, the research team proposes six broad clusters of potential threats with implications for humanitarian action. However the team stresses that these categories should be viewed as indicative only, given the highly dynamic risk profile of the region, and urges both disaster risk management and humanitarian actors to be constantly alert to new and unfolding risk configurations.

The broad areas of concern include:

Environmental threats: Shocks and threats that are generated by a primary environmental driver such as severe weather, floods, fires or earthquakes. They may be also known as 'natural' or 'physical' hazards, but are not limited to natural phenomena (e.g. large informal settlement fires).

Aggregate (economic) threats: Shocks that simultaneously/sequentially affect:

- aggregate or macroeconomic conditions in a particular country or region (e.g. GDP, current account, exchange rate) and,
- a large defined group or groups of people in the same country or region (adapted from Mendoza, 2009)

Socio-political shocks: Complex processes that adversely affect human security, that are generated by tensions between the state and civil society or between different groups.

Public health threats: Events with potential to adversely affect the health of human populations, especially those that may spread internationally or present a serious and direct danger (adapted from the International Health Regulations, WHO, 2005).

Aid Shocks: Refer to the volatility in the value of ODA for a specific country (or region), particularly the abrupt reduction or withdrawal of bilateral or multilateral assistance to lower than expected levels.

Compound and composite threats: Refer to the convergence of several shocks or stresses that either simultaneously and/or sequentially compound (amplify) an emergency – and that increase the likelihood of concatenating crises occurring within the region.

Planning priorities for disaster risk management and humanitarian actors

Although this study identified numerous concerns related to developmental risk reduction and humanitarian action, the study team proposes seven planning priorities. These give emphasis to the changing locus of emergencies and the region's dynamic risk profile. They specifically seek to strengthen regional, national and sub-national capabilities to better anticipate and respond to changing risk conditions facing southern Africa. The seven proposed planning priorities, are listed in Box 1 and then detailed in Table 1.

Planning Priorities for Strengthened Humanitarian Engagement

- Establish institutional mechanisms for multisectoral urban risk management in growing urban centres.
- Support sustainable resourcing for national disaster management authorities.
- Strengthen human capital and capacity in national disaster management centres.
- Strengthen regional efforts in cross-border operational communication and cooperation.
- Improve strategic information management on recurrent emergencies, risks and disasters.
- Revisit the scope and focus of current contingency plans.
- Prioritise measures that protect and advance human and social capital development (i.e. reduce vulnerability).

Box 1: Planning priorities for strengthened humanitarian engagement

Table 1: Humanitarian Planning Priorities - Capacity and Gap Analysis

Planning priority	Capacity analysis	Gap to be addressed
Institutional Concerns		
Establish institutional mechanisms for multisectoral urban risk management in growing urban centres	Southern Africa’s population is increasingly urban , with economic, public health, social violence and food security shocks increasingly located in urban areas. Research findings indicate that with the exception of Namibia (Windhoek) and South Africa, there is no budgeted or sustainably staffed disaster/emergency response institutional capacity in southern African cities.	The absence of defined institutional capability with operational responsibility for urban risk management in rapidly growing cities constrains both developmentally-oriented risk management planning and contingency planning for complex emergencies – and risks diverting national disaster management resources to urban areas at the expense of rural locations – if both come under threat simultaneously.
Support sustainable resourcing for national disaster management authorities	Although almost all southern African countries have established national disaster management authorities, with core staff costs covered by government, many remain heavily dependent on co-funding by external assistance partners.	Highly constrained resourcing limits local efforts in disaster risk management and discourages employment /retention of skilled staff. Prolonged provision of external funding simultaneously creates dependency and increases exposure to aid shocks should funding be withdrawn.
Strengthen regional efforts in cross-border operational communication and cooperation	Study results indicate uneven (and often poor) communication between neighbouring countries on emergent risk conditions (e.g. cholera outbreaks, and more recent downstream Limpopo floods) that have cross-border implications. UN and other international and non-governmental partners currently fill this communication gap. As local response capabilities improve, there is also potential for bilateral humanitarian assistance agreements along shared borders.	Given the high levels of cross-border mobility in southern Africa, combined with high likelihood of transboundary threats (especially epidemics and floods), the absence of mechanisms for timely and transparent bilateral communication increases the likelihood of regional emergencies. The focus here is on real-time, operational communication, rather than relying only on pre-planned seasonal consultative fora such as SARCOF. This also underlines a potential role for the SADC DRR Unit.

Planning priority	Capacity analysis	Gap to be addressed
Strengthen human capital and capacity in national disaster management centres	<p>Research findings indicate highly uneven human resource capabilities in national disaster management authorities. While some countries have built strong capability, in part through retention of experienced and skilled staff over many years, others are less experienced (for instance in the Indian Ocean Countries, aside from Madagascar).</p> <p>The region however, is increasingly served by HEIs that have actively engaged with local and national authorities in strengthening risk management capabilities.</p>	<p>There has been limited opportunity for exchange visits between respective national disaster management authorities (e.g. Namibian officials visiting the INGC, Mozambique for shared insights on improved transboundary flood management and management of flood-displaced people).</p> <p>With growing demand for more highly skilled disaster risk management personnel, there are needs to further strengthen links between practitioners and the region's HEI.</p> <p>There are also needs to manage succession planning for younger, less experienced staff.</p>
Improve strategic information management on recurrent emergencies, risks and disasters	<p>Only three countries (Mozambique, Malawi and Madagascar) implement systematic information gathering on nationally significant disasters and emergencies.</p> <p>There is no evidence of systematic transboundary disaster recording (except epidemics) - which is a regional function.</p>	<p>Most countries do not implement any systematic approach to knowledge management for emergencies and disasters. This includes recording the date, type, areas affected, population displaced or affected. This seriously constrains tracking changes in risk profile over time and limits capacity for strategically investing in strengthened disaster risk reduction or planning for humanitarian response.</p> <p>Systematic transboundary disaster recording allows the consequences of a powerful weather hazard or other threat to be traced across multiple countries, to establish its full impact, again underlining a potential role for the SADC DRR unit, in cooperation with other partners.</p>
Revisit the scope and focus of current contingency plans	Almost all countries studied viewed the SARCOF process as their annual contingency planning exercise. However, this only represents a seasonal preparedness planning process, rather than contingency planning for a less	<p>Given the dynamic character of emergencies and disasters in southern Africa, contingency planning is needed for both events and more persistent variability, for instance those:</p> <ul style="list-style-type: none"> - with longer return periods (e.g. severe droughts,

Planning priority	Capacity analysis	Gap to be addressed
	<p>predictable and wider range of emergencies including smaller but frequent climate events and climate variability.</p>	<p>including events that will affect urban areas, including water supplies)</p> <ul style="list-style-type: none"> - that include unfamiliar and emerging threats (e.g. severe economic shocks), - that include compound and composite threats (e.g. sequential emergencies) that result in complex ‘knock-on’ consequences across borders and over time. - rapidly unfolding emergencies fuelled by social media.
<p>Prioritise measures that protect and advance human and social capital development (i.e. reduce vulnerability)</p>	<p>In almost all countries studied, purposive efforts have been invested in social protection for vulnerable groups. In addition, externally funded provision of anti-retrovirals has been made widely available. These interventions have markedly reduced social vulnerability in the region.</p> <p>However, seven southern African countries have youth bulges equal to approximately 20% of the population, most combined with low youth employment and poor high school enrolment.</p>	<p>Protecting human and social capital is a crucial vulnerability reduction intervention that minimises the need for or costs of humanitarian operations. However, the withdrawal of support for social protection and ARVs will automatically increase exposure of vulnerable groups to health, economic and natural shocks, and increase the likelihood of humanitarian intervention.</p> <p>Similarly, youth-related social risk reduction measures should be considered, including efforts to increase high-school completion and skill-building.</p> <p>Given its widespread distribution in southern Africa, mobile phone technology offers a range of vulnerability reduction options – neither fully understood nor yet explored.</p>

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ABBREVIATIONS AND ACRONYMS

ADB	African Development Bank Group
AIDS	Acquired Immune Deficiency Syndrome
AGAO	African Growth and Opportunities Act
ANC	African National Congress
ART	Anti-Retroviral Therapy
AU	African Union
AUC	African Union Commission
AWD	Acute Watery Diarrhoea
CAP	Consolidated Appeal process
COMESA	Common Market for Eastern and Southern Africa
CRED	Centre for Research on the Epidemiology of Disasters
CFR	Case Fatality Ratio
DCP	Department of Civil Protection
DDRM	Directorate of Disaster Risk Management
DGSCGC	Direction Générale de la Sécurité Civile et de la Gestion des Crises
DMA	Disaster Management Authority
DoDMA	Department of Disaster Management Affairs
DRM	Disaster Risk Management
DRC	Democratic Republic of Congo
EU	European Union
FAO	Food and Agriculture Organization
FEWSNET	Famine Early Warning System
FRELIMO	Mozambique Liberation Front
FTA	Free Trade Area
FTS	Financial Tracking Service
GCM	General Circulation Model
GDP	Gross Domestic Product
GEC	Global Environmental Change
GHG	Greenhouse gas
GIS	Geographical Information System
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IFRC	International Federation of Red Cross and Red Crescent Societies
IFPRI	International Food Policy Research Institute
INGC	Instituto Nacional de Gestão das Calamidades
ISS	Institute for Security Studies
IPCC	Intergovernmental Panel on Climate Change
ITU	International Telecommunication Union
JSE	Johannesburg Stock Exchange
LVAC	Lesotho Vulnerability Assessment Committee
MDC	Movement for Democratic Change
MPLA	Movimento Popular de Libertação de Angola
NAMC	National Agricultural Marketing Council
NDMC	National Disaster Management Centre
NDMA	National Disaster Management Agency
NIDM	National Institute for Disaster Management
NGO	Non-Governmental Organisation

ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organization for Economic and Co-operation Development
PAC	Pan African Congress
PAR	Pressure and Release Framework
PIDA	Programme for Infrastructure Development in Africa
PLHIV	People living with HIV
PRAF	Programa de Asignación Familiar
PRB	Population Reference Bureau
RBZ	Reserve Bank of Zimbabwe
RENAMO	Mozambique National Resistance
RIASCO	Regional Interagency Standing Committee
ROSA	Regional Office for Southern Africa
RPS	Red de Protección Social
RSA	Republic of South Africa
SACU	Southern African Customs Union
SADC	Southern African Development Community
SAGIS	South African Grain Information System
SAPIA	South African Petrol Industry
SARCOF	Southern Africa Regional Climate Outlook Forum
SU	Stellenbosch University
UN	United Nations
UNCA	Commission for Africa
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDESA	United Nations Department of Economic and Social Affairs
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNISR	United Nations International Strategy for Disaster Reduction
UNITA	Uniao Nacional para a Independencia Total de Angola
UNOCHA	United Nations Office for the Coordination of Humanitarian Action
USCR	United States Committee for Refugees (now referred to as: United States Committee for Refugees and Immigrants (USCRI))
VAC	Vulnerability Assessment Committee
VHF	Viral Haemorrhagic Fever
WHO	World Health Organisation
WFP	World Food Programme
ZANU-PF	Zimbabwe African National Union – Patriotic Front

Units

MT	Metric Tonnes
USD (\$)	United States Dollar

United Nations country codes

AGO	Angola
BWA	Botswana
COM	Comoros
LSO	Lesotho
MDG	Madagascar
MWI	Malawi
MUS	Mauritius
MOZ	Mozambique

NAM	Namibia
SYC	Seychelles
ZAF	South Africa
SWZ	Swaziland
ZMB	Zambia
ZWE	Zimbabwe

CHAPTER ONE: INTRODUCTION

1.1 Why this study?

This research was prompted by a growing consensus that ‘the nature of humanitarian emergencies is changing’ (UNOCHA, 2011a), with future emergencies increasingly driven over time by ‘a combination of complex and inter-related circumstances’, rather than single, identifiable shocks (ibid). Such observations resonate closely with those of humanitarian actors within southern Africa who, in recent years, have been confronted with new challenges. These include the effects of climate variability, characterized by sudden-onset weather events along with prolonged dry spells. They also include food and energy price volatility that contributed to social violence and sudden displacement, as well as regional cholera and measles outbreaks, which claimed thousands of lives, especially among children in urban areas.

Such emergencies have occurred in a complex regional environment, characterised by rapid urbanisation. Moreover, southern Africa is increasingly integrated economically, and supported by well-developed regional transportation and communication networks. For more than a decade, it has also been the locus of highest Human Immunodeficiency Virus (HIV) burden globally. Such regional characteristics, accompanied by long-established traditions of national and cross-border labour mobility, create a dynamic regional risk profile with potential for rapid risk escalation within and across national borders and across multiple scales.

Members of southern Africa’s Regional Interagency Standing Committee (RIASCO) have long acknowledged that effective humanitarian planning presupposes a clear understanding of the region’s risk profile. This prompted a call to investigate the threats to lives and livelihoods likely to confront southern Africa over the next decade, along with available capacities to address these challenges. RIASCO also sought greater clarity on the causal processes that may exacerbate population displacement, food insecurity, health emergencies, livelihood loss and other humanitarian aid issues, as well as at-risk groups, such as children and people living with HIV/AIDS. Such concerns led RIASCO, through the Food and Agriculture Organization of the United Nations (FAO), to formally commission a regional research team to investigate likely future humanitarian challenges in southern African and their associated implications for programming. Stellenbosch University (SU) coordinated the study.

This southern African project also complements more wide-ranging, systematic efforts to characterise emerging global humanitarian challenges and vulnerabilities to complex stresses (DARA, 2012). The broader Global Challenges Study, commissioned by the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) and implemented by DARA, seeks to better anticipate and prepare for future humanitarian challenges.¹ The findings from both research processes are viewed as essential for understanding and accommodating identified ‘megatrends’ (Ferris, 2011; Geldsdorf, 2010) that will increasingly shape humanitarian imperatives in forthcoming decades.

As identified in the research terms of reference, ‘southern Africa’ comprises the fourteen countries that fall within the remit of the UNOCHA’s Regional Office for Southern Africa (ROSA): Angola, Botswana, Comoros, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Zambia and Zimbabwe (Figure 1.1.1). This configuration differs slightly from the membership of the Southern African Development Community (SADC), which also includes Tanzania and the Democratic Republic of the Congo (DRC).

¹ For details of the UNOCHA DARA Global Challenges Study, go to: <http://daraint.org/2012/03/29/3427/un-ocha-global-challenges-study/>

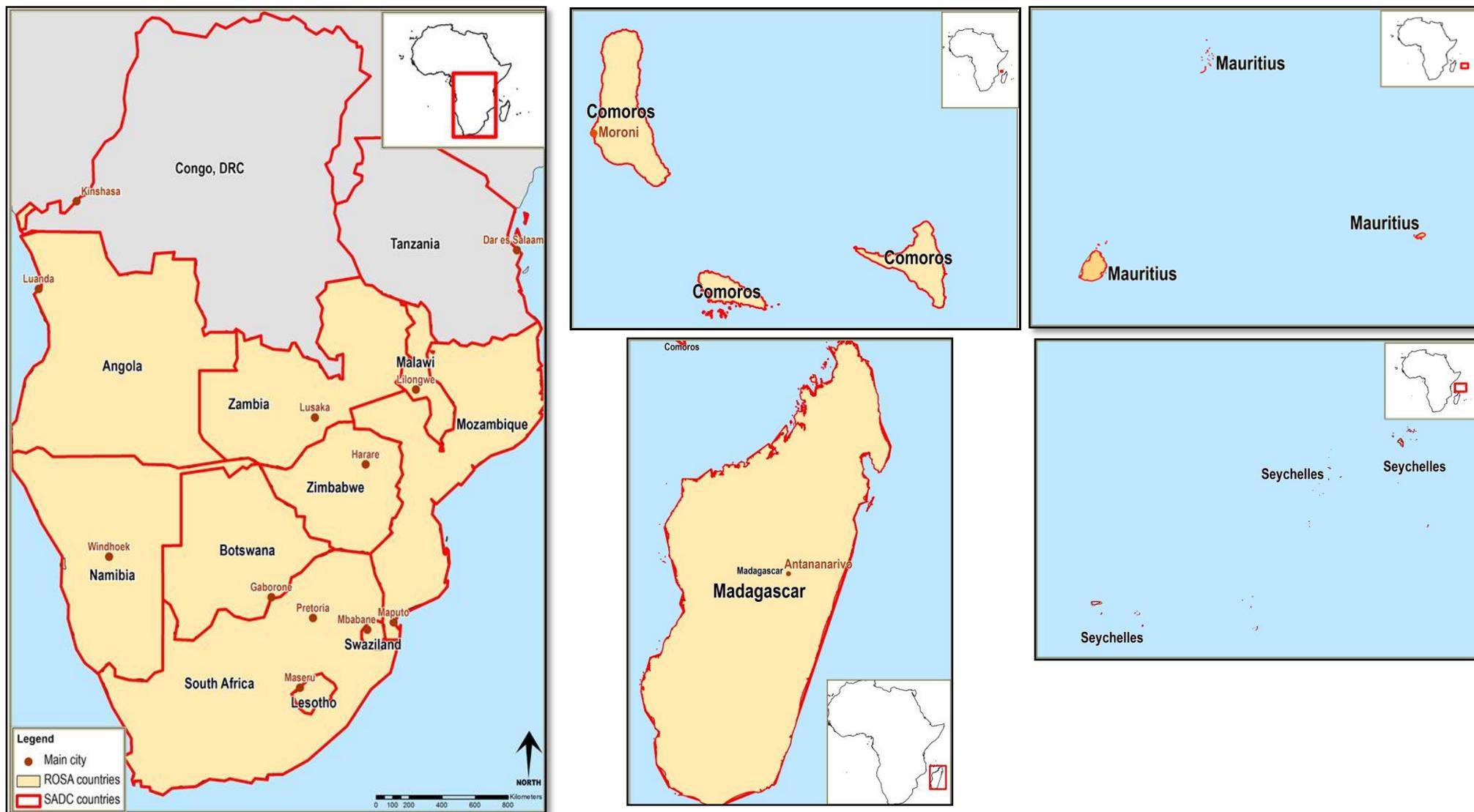


Figure 1.1.1: Maps of southern Africa, showing countries covered in the RIASCO study

1.2 Southern Africa: overview and regional profile

Southern Africa's risk profile is underpinned by an extraordinary diversity of landscapes, peoples, economies and languages. It was estimated in 2012 that the region is host to more than 167 million people (United Nations Department of Economic and Social Affairs, 2013). It bridges the Indian and Atlantic Oceans and covers an area of 6.5 million km². The region includes the expansive Namib and Kalahari deserts as well as the flood plains of the great Zambezi River, the seasonally snow-topped mountains of Lesotho and islands in the south-west Indian Ocean. In addition to its 51 indigenous languages, southern Africans speak languages linked to countries' colonial pasts, including English, French, Dutch, German and Portuguese. Its recent history has been marked by decades of regional destabilization associated with prolonged civil wars in Angola and Mozambique, both of which were intertwined with South Africa's anti-apartheid struggle. Since the cessation of hostilities in Mozambique in the 1990s and in Angola in 2002, however, the region has followed a more enabling development trajectory.

Developmental trends have been influenced by population expansion. The region's population almost trebled between 1960 and 2000, rising from 49 to 135 million people. This growth is likely to continue with estimates exceeding 215 million in 2025 (UNDESA, *ibid*). Medium population projections for 2050 suggest current levels will almost double to 327 million people by mid-century (UNDESA, *ibid*).

A marked feature of the region's recent development has been the steady population redistribution to urban areas. It is estimated that 73.5 million southern Africans lived in urban areas in 2010 (UN-Habitat, 2010).² This growth is expected to persist, with up to 56% of residents in the study countries (109.8 million) expected to reside in cities or towns by 2025.³ The pace of urbanisation has, however, outstripped the capacities of most of the region's municipal authorities to maintain and expand housing and essential services. This is reflected in the growth of large, underserved informal settlements whose residents face numerous livelihood, health and security risks (UN-Habitat, 2010).

A second defining attribute for the region's recent development history has been the impact of HIV/AIDS. Globally, southern Africa accounts for 34% of current infections⁴, with approximately 11.5 million adults and children in 2011 being HIV positive (UNAIDS, 2012). While the pandemic has exerted a costly toll on southern Africa, there are encouraging signs that the spread of the epidemic is slowing, evidenced by declining new infection rates. These were estimated at 1.36 and 1.31 respectively in 2008 and 2009, down from 3.02 and 2.90 in 1996 and 1997⁵. This progress is also illustrated in Figure 4.1.1.3 in Chapter 4 which shows declining prevalence rates in many countries, as well as the region-wide extent of antiretroviral therapy (ART) efforts.

Despite impressive progress in reducing HIV's burden of illness, eight of the study countries fall within the 'low human development' category of the Human Development Index. Four of these (Zambia, Malawi, Zimbabwe and Mozambique) are among the lowest 25 countries ranked globally. They contrast markedly with the island states of the Seychelles and Mauritius, which are classified as 'high human development', and are ranked 52 and 77 respectively. Four out of the five Southern African Customs Union (SACU) countries (Botswana, Namibia, South Africa and Swaziland) fall within the 'medium development' group.

² UN-Habitat (2010) *The State of African Cities 2010: Governance, inequality and urban land markets*. Statistical Annex, Table 1 for Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Zambia, Zimbabwe.

³ *ibid*.

⁴ www.unaids.org/

⁵ UN/AIDS, 2010. HIV Estimates - 1990-2009 – UNAIDS. Available: www.unaids.org/

Table 1.2.1: Summary indicators for study countries

	Country	Population (2011) ⁶	GDP per ⁷ cap. (US\$)	HDI ⁸ rank (2011)	No. PLHIV ⁹ (2011)	HIV ¹⁰ (% adult pop.)	ART ¹¹ coverage (%)
High HDI	Mauritius	1 306 593	8 708.20	78	8 000	0.97	64.3
	Seychelles	86 879	11 641.35	52	-	-	-
Medium HDI	Botswana	2 030 738	8 783.22	118	296 005	17.6	96.1
	Namibia	2 324 004	5 387.27	120	188 500	13.5	92.5
	South Africa	50 459 978	8 143.10	123	5 630 000	17	74.7
	Swaziland	1 203 330	3 353.77	140	195 399	25.9	80
Low HDI	Angola	19 618 432	5 292.45	148	249 838	1.97	36
	Comoros	753 943	830.37	163	-	-	-
	Lesotho	2 193 843	1 117.39	160	289 841	23	68.5
	Madagascar	21 315 135	480.21	151	34 000	0.3	
	Malawi	15 380 888	382.55	171	917 000	10.6	57.7
	Mozambique	23 929 708	547.13	184	1 400 000	11.5	45.5
	Zambia	13 474 959	1 467.39	164	1 114 471	14.3	77.6
	Zimbabwe	12 754 378	787.5	173	1 159 097	13.1	79.7
	Total	166 832 808			11 482 151		

Notes:

- Unspecified value

The region shows high levels of poverty. The 2011 estimates of Gross Domestic Product (GDP) per capita values suggest substantial variation in levels of economic progress, ranging from USD 383 in Malawi to USD 11,641 in the Seychelles. However, low GDP per capita values for the Comoros, Madagascar, Malawi, Mozambique and Zimbabwe indicate that approximately 90 million people live on less than USD 2.50 per day in these countries alone. Although GDP values are higher in medium-development countries, these often mask very high levels of economic inequality. This is due to the presence of some of the most marked structural inequalities recognized globally. For instance, GINI coefficient values for Namibia, South Africa and Botswana, were respectively estimated at 63.9 (2004), 63.14 (2009) and 61 (1994) (World Bank, 2012) signalling glaring socio-economic disparities between different wealth groups in these countries.

Also centrally relevant to this study, is the Organisation for Economic and Co-operation Development's classification of Angola, the Comoros, Malawi and Zimbabwe as 'fragile states' (OECD, 2013), further underlining their increased vulnerability 'to internal or external shocks such as economic crises or natural disasters' (ibid).

1.3 Snapshot of international humanitarian response 2000 - 2012

Over the past decade, an amalgam of constrained governance capacity, recurrent, wide-ranging shocks and the impacts of the HIV epidemic has exacted heavy demands on local disaster risk management and humanitarian responders, as well as their external assistance partners. Although information on 'realised emergencies' is examined in greater depth in Chapter 3, Table A1 in Annex 1 lists the events from 2000 – 2012 that generated international humanitarian action. In addition, recognising the crucial role of national and subnational authorities in managing current and future risks, later sections

⁶ Source: UNDESA. <http://unstats.un.org/>

⁷ Own calculations, using UNDESA values

⁸ Available at: <http://hdr.undp.org/>

⁹ Available at: <http://www.unaids.org/>

¹⁰ *ibid*

¹¹ *ibid*

(section 3.4) focus on the disaster occurrence for Malawi and Madagascar, two countries that face multiple stressors.

1.3.1 A mixed risk profile

A review of humanitarian responses from 2000 – 2012 for southern Africa indicates four broad categories of humanitarian emergency that warranted international assistance. These include:

- Events associated with an identifiable environmental shock or stressor
- Those events associated with clear social and political conditions/triggers
- Identified epidemic emergencies (excluding HIV)
- Protracted/chronic humanitarian situations associated with state failure or fragility

Excluding the protracted humanitarian emergencies in Angola and Zimbabwe, 47 defined humanitarian emergencies were identified from 2000 – 2012. As Tables 1.3.1.1 and 1.3.1.2 show, 37 of these were associated with an identifiable environmental shock/stressor, while seven were linked to socio-political triggers and three to epidemics. On average, 1.6 million people were affected per environmentally triggered event, with floods representing over 60% of all recorded events.

Table 1.3.1.1: Type and frequency of humanitarian emergencies associated with an environmental shock/stress

Type of threat	No. of events	Years reported	Main countries affected	Total pop. affected	Av. Pop. affected /event
Severe weather/floods	27	2000-2011	MDG, NAM, MOZ, MWI, AGO	14 098 257	542 241
Famine/food crisis /insecurity	4	2000-2004, 2005-2006, 2010, 2012	LSO, MWI, SWZ, ZAM, ZIM, MOZ	42 464 477	10 616 119
Drought	2	2000, 2007	MDG, SWZ	1 194 290	597 145
Volcanic eruption	3	2005, 2006	COM	294 000	98 000
Earthquake	1	2009	MWI	31 220	31 220
Locust infestation	1	2010	MDG	2 300 000	2 300 000

(Source: DiMP analysis of UN Consolidated and Flash Appeals 2000-2012)

Table 1.3.1.2: Summary table of socio-political emergencies and epidemics 2000 – 2012

	Year/case date	Country	Emergency type	Affected
Civil strife	Humanitarian situations			
	2000-2004	Angola	Humanitarian situations (Civil war)	5 000 000
	2002-present	Zimbabwe	Humanitarian situations (General vulnerability)	5 100 000
	Social and political conditions			
	2008	Comoros	Political crisis	2 000
	2008-2009	Madagascar	Political strife, food insecurity/ floods/cyclones	516 000
	2009-2010	Angola	Angola DRC expulsions	54 000
	2010	Mozambique	Riots associated with commodity price increase	**
	2005 & early 2006	Zimbabwe	Operation Restore Order/Murambatsvina*	700 000
	2008	South Africa	Xenophobic attacks/Social violence*	50 000
Epidemics	2009	Angola	Resettlement of Angolans expelled from DRC*	54 000
	2005	Angola	Viral Haemorrhagic Fever (VHF)	181
	2006 – 2007	Angola	Cholera	82 204
	2008 – 2009	Zimbabwe	Cholera	98 592

(Source: DiMP analysis of UN Consolidated and Flash Appeals 2000-2012)

Notes:

*Forced urban migration events

** Unable to establish the correct number of people affected

During this same period, substantial support was provided through annual consolidated and mid-year appeals for Angola (until 2004) and Zimbabwe (from 2002-the present).

Tables 1.3.1.1 and 1.3.1.2 illustrate the diversity of humanitarian emergencies within the region, also highlighting countries where diverse threats occur concurrently or sequentially, as illustrated by Madagascar, Mozambique and Malawi.

1.4 Risks do change

The shift in the urban share of southern Africa's population has reframed the region's risk profile. Food security emergencies, epidemics, conflict-related displacement and hydro-meteorological shocks are common in southern Africa (Darcy et al., 2003; Maunder & Wiggins, 2007; SADC, 2011). These are projected to persist under prevailing climate change conditions. However, the region also increasingly experiences a range of other emergencies, many of which occur in densely populated cities and towns. The growth of the region's urban population has been accompanied by new, uncharted humanitarian challenges. These were illustrated by large-scale urban displacement in Zimbabwe (2005), South Africa (2008) and violent bread-price protests in Mozambique (2010). That these events, affecting almost one million people (including the forced displacement respectively of 700,000 people in Zimbabwe and 200,000 foreign nationals in South Africa) (Igglesden, 2008) should have erupted in some of the region's largest cities signals the concentration of tensions in growing urban centres.

The region also saw examples of complex, fast-moving regional emergencies, such as disease outbreaks. These include the 2008-2009 cholera¹² and 2010 measles epidemics¹³, with recorded cases numbering 155,708 and 116,068 for cholera and measles respectively. These regional outbreaks, which involved multiple countries, illustrate the rapidity of cross-border transmission within southern Africa as country scale outbreaks can escalate quickly. They also highlighted the markedly constrained capacity of the region's national and municipal health services to manage communicable disease outbreaks that have well-established prevention and response protocols.

1.5 Key concepts and terms

1.5.1 Revisiting conceptual cornerstones

This assessment draws on prevailing definitions of vulnerability, resilience, threat, emergency, and disaster risk. These are defined in Box 2 (see Annex 1 for a glossary of terms). It acknowledges that risks accumulate due to the interaction between external threats and internal conditions of vulnerability (e.g. coping capacity). This formulation recognises that chronic vulnerabilities (such as chronic illness, food insecurity, low education levels and unemployment) that feature prominently in southern Africa contribute significantly to accumulating risk conditions. This means that even 'small' recurrent shocks can set back prospects for recovery and progress in many households and communities.

¹² Available: <http://ochaonline.un.org/>

¹³ Masresha, B., 2011. WHO AFRO. Measles Outbreaks in Southern Africa in 2010: Presentation to the MI 10th annual meeting Sept 2011.

Core terms and concepts

'Vulnerability refers to “conditions, determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards” (UNISDR, 2009b:30).

Resilience refers to “the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions” (IPCC, 2012b:563).

Disaster risk is “the likelihood over a specified time period of severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery” (IPCC, 2012b:558).

A *threat/hazard* is a potentially damaging physical event, phenomenon or human activity that may trigger or escalate conditions that lead to the loss of life, illness or injuries, property damage, social and economic disruption or environmental degradation (adapted from *UNISDR, 2009b:17*).

An *emergency* refers to an endangering or potentially threatening condition(s) due to dynamic, accumulating risk factors, that requires urgent action to avert, stabilise, de-escalate or reverse its progression (adapted from *UNISDRb:13*).

Box 2: Core Terms used in this Study

This report also incorporates less familiar concepts that acknowledge the interconnectedness of global and local risk processes and inherent complexities in managing these at regional and national scales. For instance, many of southern Africa’s entrenched risks are the result of powerful risk drivers. These include forces such as governance, climate and urbanisation, that are linked to broader socio-economic, ecological and developmental processes, but which determine patterns of exposure and vulnerability locally and nationally.

Risk accelerants represent one particularly important subset of risk drivers in a rapidly urbanising context, given their fast-paced, ‘wildfire’ capacity to escalate and magnify other risks. Social media, for instance, has been identified as a key risk accelerant due to its ability to “exacerbate other risk areas, such as financial risk”, along with its capacity to “spread information like wildfire” (Deloitte, 2012:8).

Risk amplifiers represent a complementary, but related subset of risk drivers proposed by the research team. The concept of risk amplifiers builds on and extends the notion of the ‘social amplification of risk’ advanced by Kaspersen et al (1988). This concept addresses the profound, reverberating qualities that some risk drivers exert on pre-existing vulnerability conditions, simultaneously deepening and extending their effects. Their operative mechanism is analogous to ‘turning up the base’ on a sound system, and is illustrated by the impact of escalating energy and food prices between 2007 and 2008 that markedly amplified the effects of urban poverty and social tensions in several southern African countries.

This report also adopts the concept of concatenating crises. Concatenating crises are viewed as “disturbances, i.e. shocks that emerge near simultaneously, spread rapidly and interact with each other around the globe” (Biggs et al, 2011). The concatenation of risk is likely to become more common in the coming decade, particularly as the region’s activities become progressively interconnected with continental and global processes – and thus exposed to shocks and policy outcomes originating from sources beyond the region.

The concepts of sequential and simultaneous crises and synchronous failures are also relevant both to past and future regional humanitarian and risk reduction considerations. Simultaneous crisis refers to conditions in which different hazards occur at the same time, while sequential crisis refers to

conditions where “hazards trigger cascading disasters in a range of interlocked systems” (Kent, 2011; UNISDR, 2011:7). Similarly, synchronous failure refers to situations where “different risks converge and interact” (Kent, 2011; UNISDR, 2011:7).

1.5.2 Susceptibility to food insecurity

As recurrent food insecurity emergencies have been at the centre of protracted humanitarian operations in southern Africa, this constituted a key study focus. Although numerous definitions of food security exist, Smith et al. (1993) list over 200 definitions. For the purposes of this study, the definition used is that adopted at the 1996 World Food Summit and subsequently advanced by the FAO and a number of other international organisations:

Food security is a state in which “all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preference for an active and healthy life” (ODI, 1997).

Barrett (2010) proposes that food security consists of three hierarchical pillars - food *availability* is necessary but not sufficient to ensure *access* to food, which in turn is necessary but not sufficient for effective *utilisation* of food. If the concept of stability is added as a fourth pillar, then food security exists when all four dimensions are realised simultaneously. This is, as Vink (2012) argues, ambitious given the breadth of the definition and the reality that this is essentially a relative and subjective concept. However, to probe changes in regional food security status, several indicators were identified and examined, with a particular focus on both chronic and acute food insecurity (see Box 3).

Chronic and acute food insecurity

Chronic food insecurity is long-term or persistent in that it can be considered to be an almost continuous state. It is closely related to structural deficiencies in the local food system or economy, chronic poverty, lack of assets and low incomes, which persistently curtail food availability and access over a protracted period of time (Drimie, 2012).

Acute or transitory food insecurity, on the other hand, is usually sudden in onset, short-term or temporary and refers to short periods of extreme scarcity of food availability and access (Barrett & Sahn, 2001). Such situations can be brought about by climatic shocks, natural disasters, economic crises or conflict. According to Devereux *et al*, food insecurity has a third temporal feature (2008).

Seasonal or cyclical food insecurity may be evident when there is a recurring pattern of inadequate accesses to food such as prior to the harvest period - the ‘hungry season’ - when household and national food supplies are scarce or the prices higher than during the initial post-harvest period.

Box 3: Differentiating between chronic and acute food insecurity

These terms allude to the rapidly changing context of this region that involves both long wave stresses such as climate change, and short wave shocks such as food price volatility, and acknowledge that risk is driven upwards by intensifying conditions of political, socio-economic and environmental vulnerability. As was the case in the 2007/08 food price crises, which put the livelihoods of millions in southern Africa at risk, these conditions, coupled with external threats, can trigger widespread food insecurity.

1.5.3 Managing mobility and migration

Although there is a long history of established cross-border movement in southern Africa, there are clear humanitarian implications for mobile populations, migrants, refugees and displaced people. The research team gave particular attention to the migration thematic, especially intra-regional mobility and movement.

The study applied working definitions provided by SADC (2009) in Box 4 below:

Defining Population Mobility and Migration

From Policy Framework for Population Mobility and Communicable Diseases in the SADC Region

“Population mobility refers to movement of people from one place to another, temporarily, seasonally or permanently for either voluntary or involuntary reasons. It is a broad term that describes the full range of mobility from short-term movement (e.g. truck drivers) to longer term or permanent relocation.

Internal mobility refers to movement of people from their homes to other places within the same country e.g. from rural to urban areas.

External mobility refers to movement of people who cross international borders to a foreign country.

Migration is a more specific term that is used for those mobile people who take up residence or remain in another place for an extended period of time, including seasonal migrants. Migration can also be internal or external.

*External mobility can have **legal status**, which means the host government permits the migrants to stay or work, or it may be **undocumented**, which means the migrants do not have official documents to allow them to stay in the host country.*

*Mobility may be **voluntary** – e.g. for work, study or exploration purposes—or it may be **involuntary**; as a result of coercion, trafficking, or poverty (this includes most refugees)”.*

Source: SADC (2009)

Box 4: Definitions of Mobility and Migration

1.6 Research Approach and Methodology

1.6.1 Overview

The research was carried out during 2012 by 33 researchers through four research hubs across the region. These involved the University of Antananarivo (Madagascar), North-West University (South Africa), Stellenbosch University (South Africa), the Technical University of Mozambique, along with independent researchers in Lesotho, Malawi and Johannesburg, South Africa.

The study team adopted a uniform action research methodology that applied a ‘mixed-methods’ approach at regional, national and sub-national scales. This incorporated the collection of quantitative and qualitative data and drew on both secondary and primary information sources.

The study also benefitted from the extensive range of documents and reports that had accumulated on past emergencies and future threats in southern Africa (i.e. Mozambique floods, xenophobic violence,¹⁴ the 2002/03 southern African humanitarian crisis¹⁵). The research team drew heavily on information from these sources and datasets to identify cross-linkages between risk themes, augmenting these with additional primary research.

The research process followed three stages. It began with a desk-top review of relevant reports and published literature on emerging disaster risk and humanitarian assistance issues and challenges. This was complemented by primary data collection in thirteen countries, including focus group discussions and stakeholder workshops in some study sites. Emphasis was placed on specific thematic areas,

¹⁴ Igglesden, V. Monson, T. and Polzer, T (2009). *Humanitarian Assistance to Internally Displaced Persons in South Africa: Lessons learned following the attacks on foreign nationals in May 2008*. Forced Migration Studies Programme, University of the Witwatersrand.

¹⁵ Darcy, J., Griekspoor, A., Harmer, A. and Watson, F., 2003. HPG Background Paper: The Southern Africa crisis: A critical review of needs assessment practice and its influence on resource allocation.

including urbanisation, migration, food (in)security, climate variability/change, social protection, social conflict and the expansion of information and communication technology (ICT).

As the study advanced, the team jointly sought to identify key regional ‘change drivers’ with potential to produce and compound humanitarian situations. This was enabled by corroborating data across regional, national and sectoral scales and further underpinned by Geographical Information System (GIS) outputs.¹⁶ Insights on potential drivers were thus informed and guided by a synthesis of qualitative and quantitative data that was contextually specific, and that incorporated a ‘sense of place’, considered to be a critical element of any vulnerability research (e.g. Wisner et al., 2004).

Table 1.6.1.1 lists the major change drivers identified during the study with potential to produce and compound future humanitarian situations in southern Africa.

Table 1.6.1.1: Key change driver list identified by study team members

DRIVER	COMPONENTS
URBANISATION	Informal settlements, rural to urban migration, urban growth
GOVERNANCE	Trans scale governance structures, political and non political service and administrative entities, traditional structures
CLIMATE VARIABILITY	Climate change, weather systems and patterns, weather related events
FOOD AVAILABILITY	The level of abundance or scarcity of food for households
ACCESSIBILITY	The ability of households to access food
PANDEMICS	Long or short term disease events that pose a serious threat to human life eg. HIV
RELATIONS	Human interactions that influence societal interaction
MOBILITY	The movement of people within or into the region
DEMOGRAPHIC CHANGE	Changes in the distribution of human settlement within the region
ODA	External support and financing for humanitarian and developmental programs
ENVIRONMENT	Land management, natural resources management, water catchment management, pollution, ecosystem, goods and services
EMPLOYMENT	Formal and informal employment in rural and urban

¹⁶ Others have also used the PAR to identify risks and threats in various areas (see for example, DARA, 2010). Vulnerability risks maps in the DARA (2010) case, for example, were used to identify vulnerability in their Climate Vulnerability Monitor ending up with a set of ‘driving’ pressures identified as Climate Change Effects, Climate-related drivers of climate impacts that in combination result in a set of human impacts.

Although it is difficult to attribute causation for humanitarian situations in southern Africa (see Maunder and Wiggins, 2007), the study team successfully adapted the Pressure and Release framework (PAR) (Wisner et al., 2004) to the identified drivers. This generated a working framework for mapping the progression of vulnerability related to humanitarian situations at regional scale. In the case of Lesotho (Figure 2.4.5.1), the overarching framework was further modified and refined to illustrate interactions between key change drivers and their effects on vulnerability, and to signal the contribution of resilience builders in averting or ameliorating risk.

Figure 1.6.1.1 illustrates the study’s working application of the PAR framework, and the sequencing of the respective key change drivers identified.

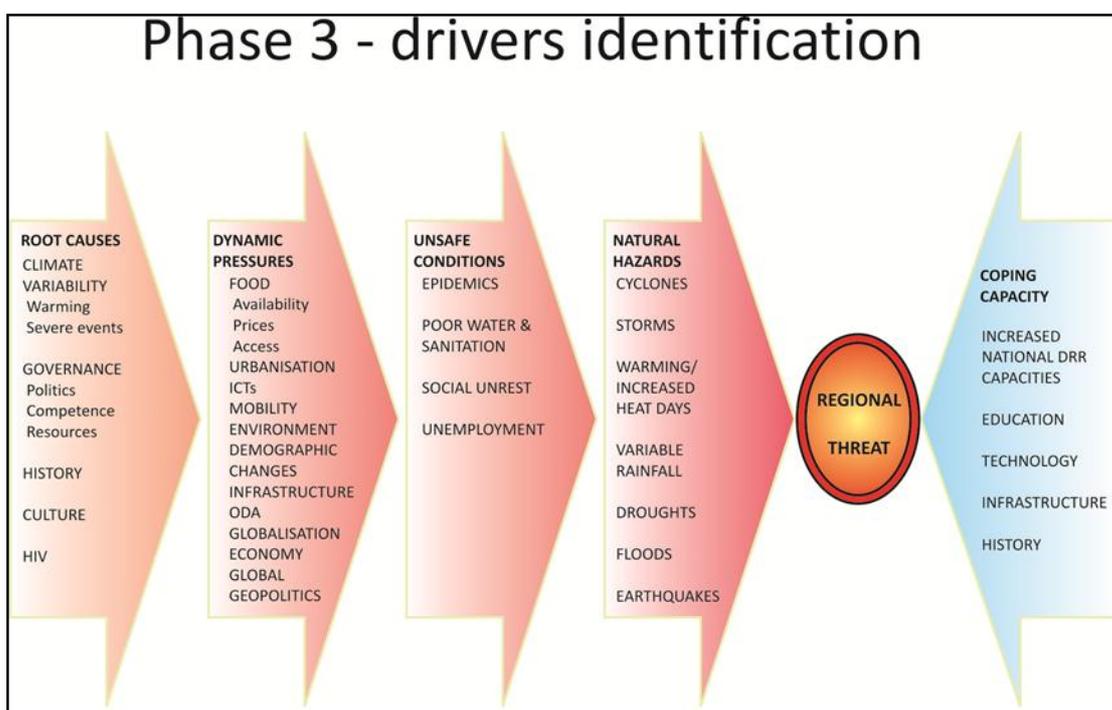


Figure 1.6.1.1: Interface of vulnerability and hazard: an adaptation of the PAR framework

This approach sought to generate insights on key drivers likely to generate or compound future humanitarian situations within southern Africa. It also aimed at identifying possible national and regional ‘resilience builders’, including enabling coping strategies that might potentially ameliorate and reverse the progression of vulnerability (Figure 1.6.1.2).

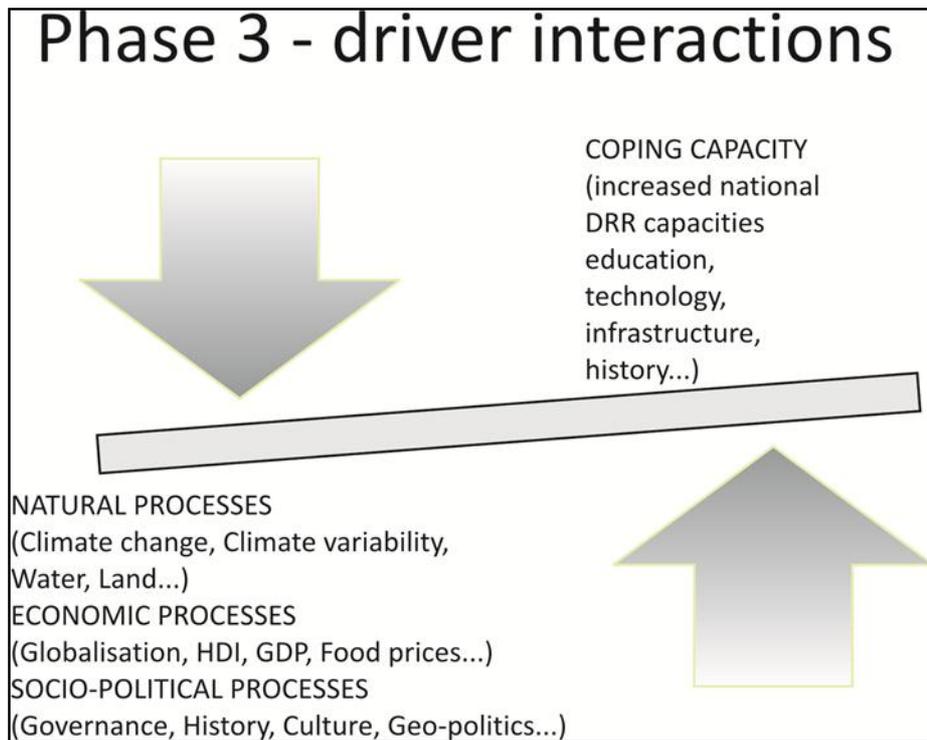


Figure 1.6.1.2: Distilled key risk drivers for southern Africa

1.6.2 Field research and primary data collection

Through the use of standardised data-gathering instruments, field research was undertaken in thirteen countries. Drawing on expert opinions from a wide range of organisations, researchers sought to identify regional, national and sub-national risk management and humanitarian action priorities in the forthcoming decade. Altogether, more than 230 interviews took place with government officials, as well as representatives of international organisations, non-governmental organisations (NGOs), research institutions and the Red Cross movement.

1.6.3 Establishing a base-line of humanitarian emergencies and disasters

A central objective of the study was to generate and spatially represent a reliable and credible baseline of all significant emergencies and disasters from 2000-2011. Unfortunately, only two countries – Malawi and Madagascar - provided a sufficiently robust historical record of nationally significant disasters and emergencies. This made the establishment of a robust baseline impossible at regional scale.

Wherever possible however, disaster and emergency occurrence as well as impact data sourced from UNOCHA, Famine Early Warning System (FEWSNET) and International Federation of Red Cross (IFRC) records were corroborated with information provided by national disaster management authorities and other sources. These included published literature and unpublished reports. Careful attention was also given to the accurate spatial and temporal characterisation of disaster and emergency impacts for events that shared a common hazard (e.g. a tropical cyclone). This was necessary to avoid ‘double-counting’ of occurrences reported within multiple countries that could be linked to a shared hydro-meteorological threat.

For Madagascar and Malawi, it was possible to complete a more detailed decade-long representation and mapping of *nationally significant* emergencies and disasters recorded at sub-national scale. These events, classified by type, locality and frequency of occurrence, could then be related spatially with emergencies signalled as *internationally significant* through Flash and Consolidated Appeal and other processes. This sub-national analysis was achieved by aligning, then merging data on past emergencies for the two countries from three global data-bases. These comprised the Centre for Research on the Epidemiology of Disasters (CRED’s) Em-Dat database, as well as data collected by both FEWSNET and

UNOCHA's Financial Tracking Service (FTS). Results derived from the three sources were then validated using information from national disaster management authorities as well as consolidated annual and flash appeal documents.

Transboundary emergencies that involved at least two-three countries also constituted a particular focus for this study, and were explored by mapping selected regionally significant events (e.g. the 2000 southern Africa floods) to district scale across all affected RIASCO countries.

Similarly, the research team gathered data from all cholera outbreaks between 2000 and 2012 that affected the region and were reported by the World Health Organisation (WHO). These included events that required WHO technical support at national level, as well as those that escalated to humanitarian emergency status. This differentiation afforded insights on cholera exposure events that were defined as nationally significant (i.e. with potential to escalate to emergency status) and whose risk progression was realised in transboundary epidemics regarded as regionally significant.

1.6.4 Investigating causal relationships: analysis of high profile emergencies and disasters

A further area of focus was the identification of causal relationships that exacerbated the severity of emergencies experienced in the region. This was probed by reviewing both published literature and related documentation for several selected high-profile regional humanitarian emergencies, including the 1992 drought, 2000 floods, 2002/3 food insecurity crisis, 2008 social violence, and the 2008-2009 cholera outbreak. This analysis focused on the identification of factors that escalated, stabilised or reduced the severity of these events, including the role of developmental risk drivers.

1.6.5 Data consolidation and analysis

All data were consolidated within regional hubs, and then by the project secretariat at Stellenbosch University. In parallel, the project secretariat synthesized field research results with those derived from global databases (e.g. FAOstat, UNHCR, UNAIDS and UNDESA).

1.7 How this report is structured

This report is organised into seven chapters, beginning with this introductory overview.

Chapter two examines the recent historical context in which disasters and humanitarian emergencies have occurred in southern Africa. It explores shifts in the character of emergencies from the 1980s to the present, demonstrating the transition from a region embroiled in armed conflict during the 1980s, followed by the climate-related emergencies of the 1990s to the increasingly complex and interrelated crises of 2002-2012.

Chapter three gives particular attention to the past ten years, 'deconstructing' the decade's major humanitarian emergencies, as well as recurrent 'small-' and medium-size disasters that signal accumulating risk and vulnerability conditions across the region. It concludes by examining the humanitarian and risk reduction implications of the region's increasing economic integration both globally and continentally.

Chapter four profiles the developmental risk drivers and accelerants currently facing southern Africa. Key concerns foregrounded in this chapter include urbanisation, globalisation, ICT and the effects of climate variability and change, along with the persisting vulnerability and structural inequality.

Chapter five addresses many of the emerging capabilities to manage risk and humanitarian challenges in the region. In addition to recognised mechanisms such as the Southern Africa Regional Climate Outlook Forum (SARCOF) and the increasing reach of social protection programmes, this section speaks to unfolding challenges in managing complex urban risks, as well as vulnerability reduction for HIV/AIDS-affected populations in areas exposed to climate extremes.

Chapter six revisits the study's original terms of reference by reflecting on likely threats, capacities and vulnerabilities for southern Africa to 2022. This not only addresses familiar humanitarian emergencies,

but also likely emerging risk configurations and their implications for future risk reduction and humanitarian action. It summarises the key findings and concludes the report.

CHAPTER TWO: SOUTHERN AFRICA 1980 - 2012: HUMANITARIAN BUSINESS 'UNUSUAL'

2.1 Conflict, climate, cholera, complexity

Although the thrust of this report is forward-looking, a review of southern Africa's emergency history offers valuable insights into recurrent risks as well as emerging vulnerability patterns. It also strengthens understanding of the role played by past emergencies to current and future risk accumulation processes. This is crucial in the southern African context, given the scale of the emergencies and conflicts over recent decades and the resulting wide-reaching, pervasive disruptions to the region's social and economic fabric.

Several issues have shaped the current risk profile in southern African countries. The protracted wars in Angola, Mozambique and anti-apartheid struggle in South Africa resulted in outright destruction of crucial infrastructure and essential services, the effects of prolonged hostilities also caused widespread disruption to livelihoods, claimed more than one million lives, and uprooted or displaced millions of southern Africans within and across national borders. The impacts of recent climate extremes have amplified persisting structural vulnerabilities in many countries, especially those with high HIV prevalence rates, where food production and livelihood strategies have been compromised by these events. While southern Africa's increasing economic integration (regionally and globally) has afforded new development opportunities, this has also substantially increased exposure to food and energy price volatility, as well as prospects for rapid transboundary communicable disease outbreaks, including cholera.

The following sections briefly review the region's thirty-year emergency history, focusing on the decade prior to 1991, the period 1992-2001 and from 2002 to the present. This longer temporal lens highlights a remarkable transition from the violent conflict and instability of the 1980s to increasing integration and interdependence. However, the sections below also recount the processes and events that have entrenched risk and vulnerability. The changing pattern of displacement reflected in three regional snapshots for 1991, 2001 and 2011 (Table 2.1.1, 2.1.2 and Figures 2.1.1, 2.1.2, 2.1.3) also illustrates the dramatic transition from a conflict zone to a region where risks increasingly concentrated in rapidly growing urban areas.

This is measurably indicated by the dramatic decline in refugee population numbers from 1.5 million (1992) to 145,000 two decades later, compared with a trend towards growing numbers of asylum seekers. The rapid escalation of the HIV epidemic in the 1990s is also evident, characterised by the staggering increase in HIV-infections from 2.7 million in 1992 to 10 million, a decade later.

Table 2.1.1: Comparative statistics in detail for southern Africa: 1992, 2002 and 2011: Refugees, asylum seekers and people living with HIV

Country	1992				2002				2011			
	*Refugees	*Asylum seekers	*HIV pop.	*Total pop.	**Refugees	**Asylum seekers	*HIV pop.	*Total pop.	**Refugees	**Asylum seekers	*HIV pop.	*Total pop.
Angola	11 002	-	46 000	11 002 910	12 250	928	140 000	14 890 474	16 223	3 167	230 000	19 618 432
Botswana	497	-	79 000	1 464 924	2 805	978	270 000	1 808 103	3 312	246	300 000	2 030 738
Comoros		-	-	459 515	-	-	-	593 170	-	-	-	753 943
Lesotho	117	-	23 000	1 699 284	-	-	260 000	2 010 261	34	3	320 000	2 193 843
Madagascar		-	9 500	11 974 724	-	-	23 000	16 338 968	9	1	34 000	21 315 135
Malawi	1 058 498	-	480 000	9 681 728	-	-	890 000	11 833 102	6 308	10 545	910 000	15 380 888
Mauritius		-	500	1 084 441	-	-	7 300	1 210 196	-	-	7 400	1 286 051
Mozambique	299	-	90 000	14 318 167	207	6 983	930 000	19 200 021	4 079	9 602	1 400 000	23 929 708
Seychelles		-	-	71 657	-	-	-	83 700	-	-	-	86 000
South Africa		-	290 000	36 690 739	23 344	52 451	4 700 000	45 533 292	57 899	219 368	5 600 000	50 586 757
Namibia	171	-	24 000	1 512 524	21 651	769	170 000	1 973 408	6 049	928	190 000	2 324 004
Swaziland	55 580	-	22 000	908 158	653	368	130 000	1 013 437	759		190 000	1 067 773
Zambia	142 104	-	650 000	8 272 498	246 765	945	880 000	10 693 471	45 632	1 021	970 000	13 474 959
Zimbabwe	237 713	-	1 000 000	11 005 690	9 432	540	1 700 000	12 607 791	4 561	777	1 200 000	12 754 378
Total	1 505 981	-	2 714 000	110 146 959	317 107	63 962	10 100 300	139 789 394	144 865	245 658	11 351 400	166 802 609

* Source: World Bank

** Source: UNHCR

- Value unspecified

Table 2.1.2 Summary of the comparative statistics for southern Africa: 1992, 2002 and 2011: Refugees, asylum seekers and people living with HIV

Year	Refugees	Asylum seekers	HIV pop.	Total pop.
1992	1 505 981	0	2 714 000	110 146 959
2002	317 107	63 962	10 100 300	139 789 394
2011	144 865	245 658	11 351 400	166 802 609

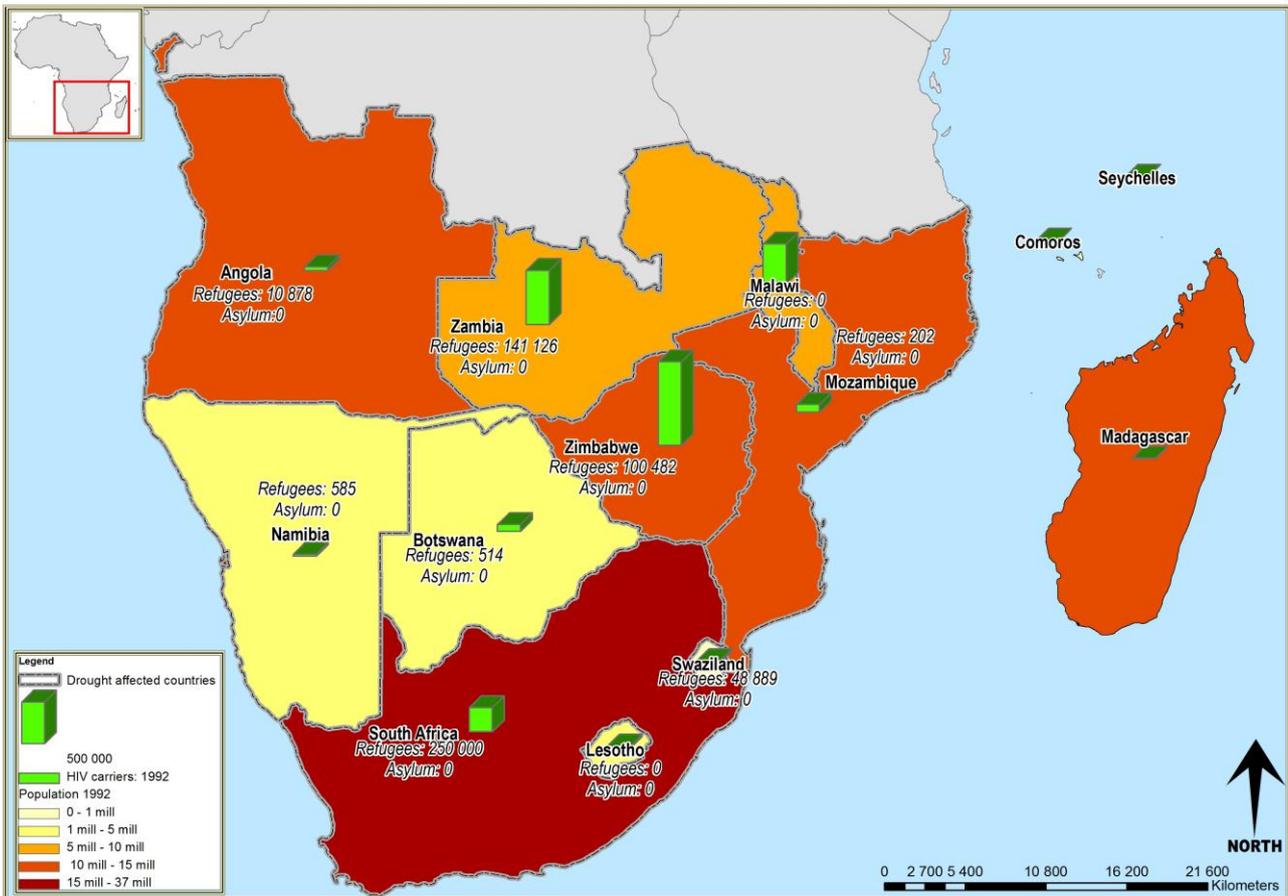


Figure 2.1.1: HIV prevalence, population and 'people of concern' (refugees & asylum seekers) 1992

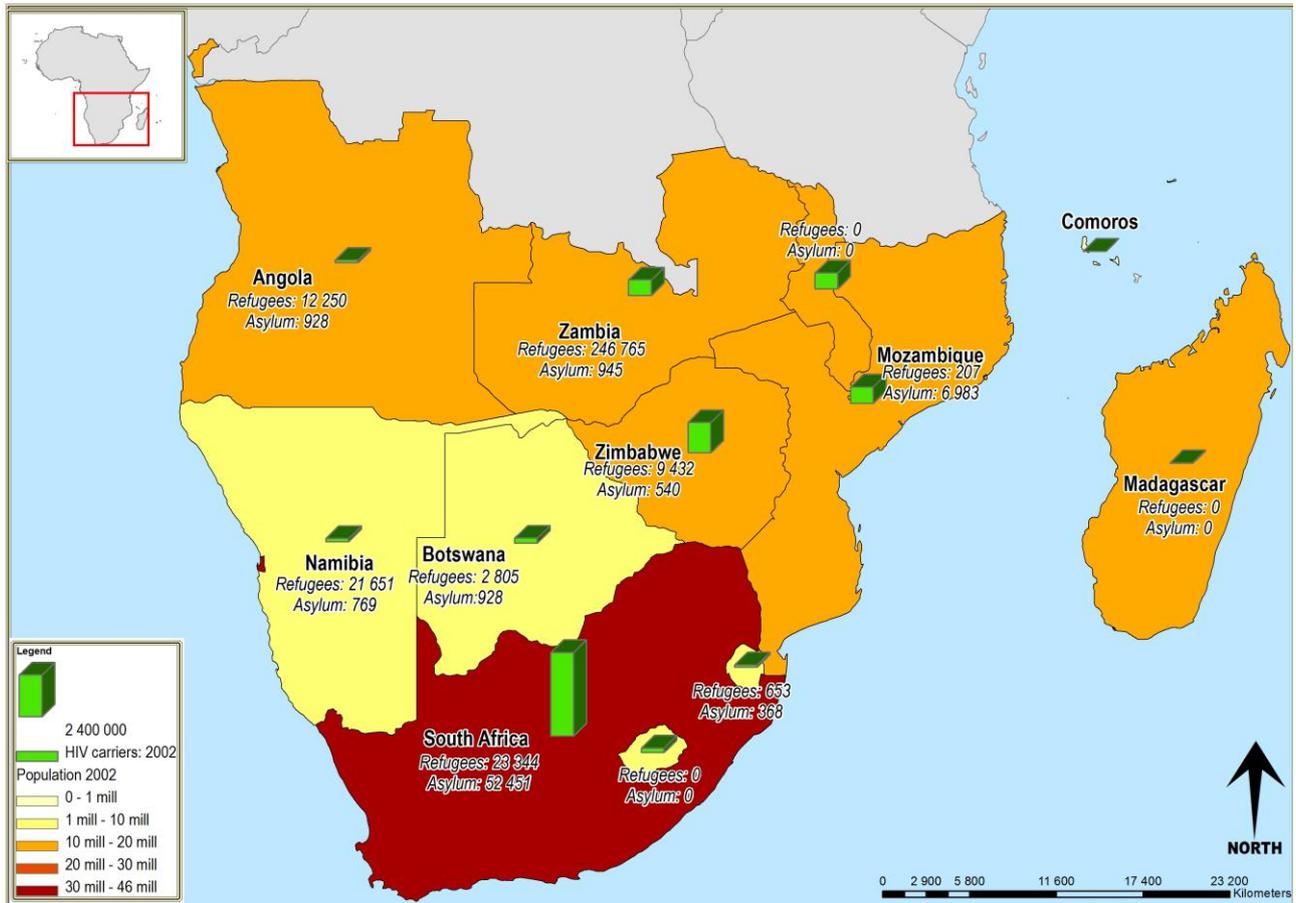


Figure 2.1.2: HIV prevalence, population and 'people of concern' (refugees & asylum seekers) 2002

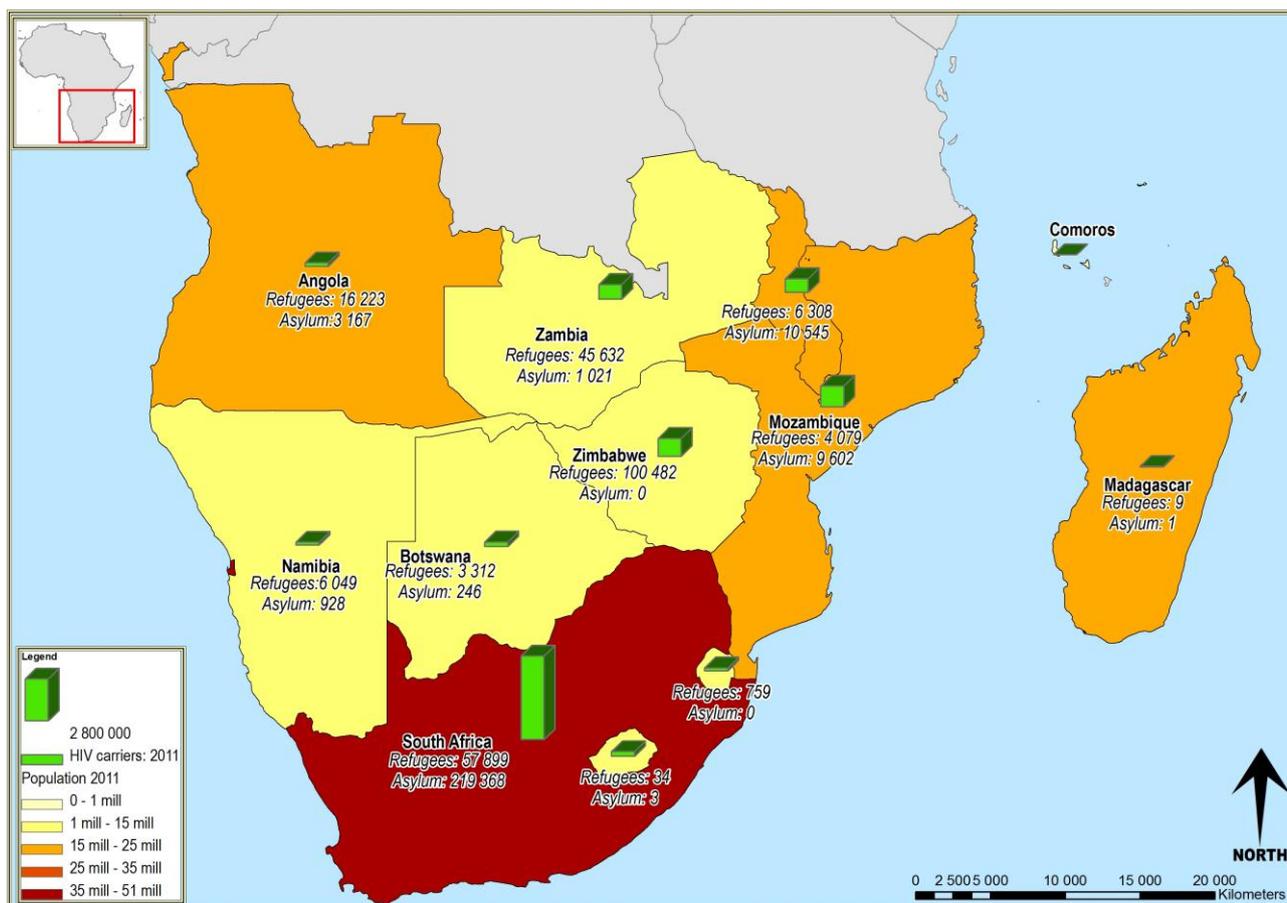


Figure 2.1.3: HIV prevalence, population and ‘people of concern’ (refugees & asylum seekers) 2011

2.2 Humanitarian imperatives 1982 – 91: A regional conflict zone

During the 1980s, much of southern Africa was embroiled in national or regional conflicts. These were closely linked to the geopolitical tensions between the United States and the former Soviet Union and coupled with South Africa’s anti-apartheid struggle. The humanitarian consequences of this regional instability were staggering. By December 1990, nearly 2 million refugees from conflicts in Angola, Mozambique, Namibia and South Africa were dispersed across ten neighbouring countries (United States Department of State, 1991:94-100). These included 308,000 Angolans, who sought refuge in the Democratic Republic of the Congo (formerly Zaire), as well as 823,000 and 250,000 Mozambicans who respectively fled to Malawi and South Africa (ibid). By 1991, at the signing of the Bicesse Peace Accords in Lisbon, the Angolan war, had uprooted nearly 13% of the population, left 50,000 amputees, caused 300,000 deaths and led to the abandonment of 50,000 children (Lari, 2004; United States Committee for Refugees, 1993:57).

Although the Angolan conflict continued unabated until 2002, hostilities in Mozambique ended during 1992. This brutal sixteen-year war also left devastating social and developmental consequences, uprooting approximately one-third of the population, claiming one million lives and orphaning 250,000 children. 2,000 schools and nearly 1,000 clinics were destroyed, while Maputo’s population quadrupled to 2 million people between 1975 and 1992 as people sought refuge in the capital city (USCR, 1993:67).

Despite the intensity of the armed conflict that raged during this period, modest, but encouraging steps towards regional stability were made in the late 1980s. These were significantly enabled in 1987

by implicit agreement by both the United States and former Soviet Union to disengage militarily from the region (Clough, 1992:122-123). More progress was achieved in 1990, when Nelson Mandela's release was announced, along with the unbanning of the African National Congress (ANC), the Pan African Congress (PAC) and South African Communist Party (du Pisani, 1994:59). It was also reflected in Namibia's eventual attainment of independence from South Africa, under United Nations Security Council Resolution 435, and its first democratic election in 1990 (Saunders, 1992).

2.3 Emergencies in the 1990s: no stopping climate variability ... vulnerability marches on

2.3.1 Heartening developments, but no letting up

The period 1992 – 2001 represented multiple transitions for southern Africa. With the cessation of armed conflict between RENAMO (Mozambique National Resistance) and FRELIMO (Mozambique Liberation Front) in 1992, and South Africa's first democratic election in 1994, major progress was achieved towards stability. This was underlined in August 1992, with the signing of the Treaty of the Southern African Development Community in Windhoek, which established a framework for regional economic integration and future development cooperation (Cawthra, 1997:6).

The early 1990s are noteworthy for the 'worst drought in living memory' that accompanied an intense El Niño in 1992. Moreover, although southern Africa had long recognised the need for strengthened drought risk management, the region's capacity was stretched thin during the 1999-2000 La Niña summer rainfall season. While Madagascar and Mozambique were battered by no fewer than 12 cyclones, tropical storms and depressions, the entire region bore the brunt of Cyclone Leon-Eline (Matsimbe, 2003). This powerful system generated widespread flooding and affected 5 million people as it traversed 2,000 km across the continent, with flood impacts (Figure 2.3.1.1) reported as far west as Namibia (Reason & Keibel, 2004). That the 1990s should begin with an intense meteorological drought and conclude with a devastating cyclone underlines the highly variable climatic conditions facing the region.

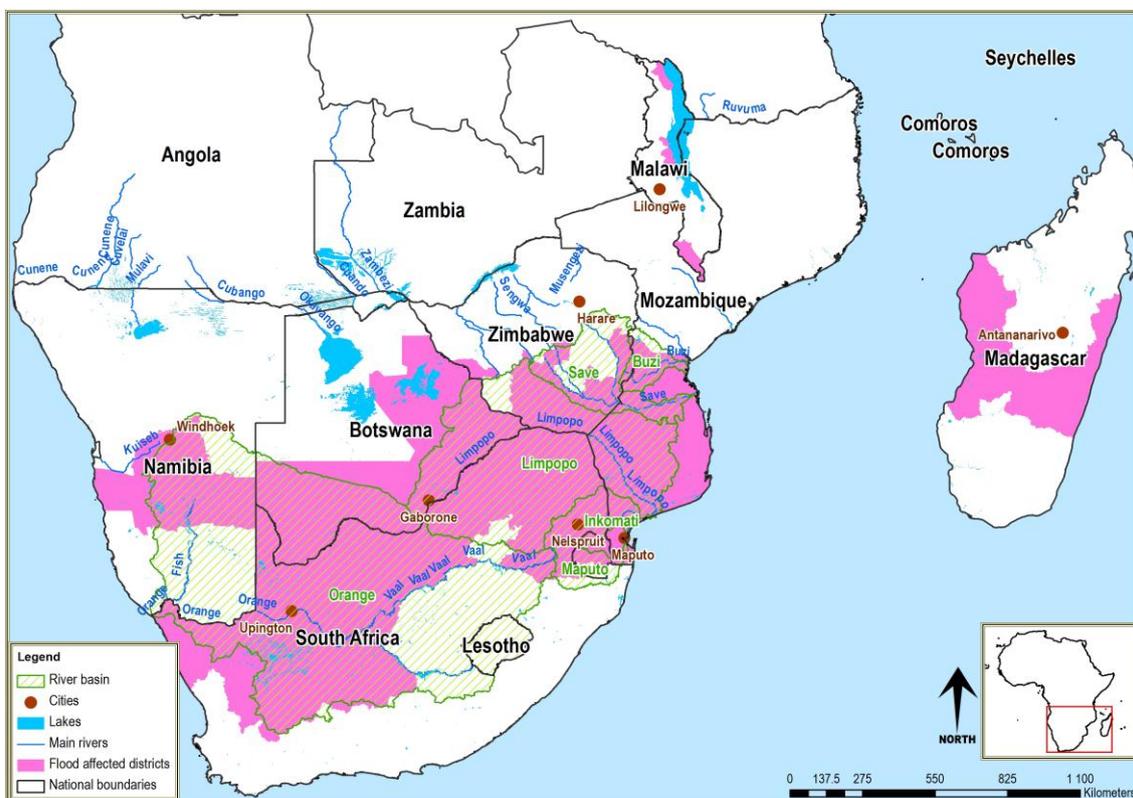


Figure 2.3.1.1: Areas reporting flood effects associated with Cyclone Eline and ex Cyclone Eline

The early 1990s also mark the ‘take-off’ of the region’s devastating HIV epidemic (Mason, 2005), which rapidly followed the widely acclaimed 1992-93 drought relief operations (Holloway, 2000; Tshirley et al, 2010). And while 1992 advanced prospects for strengthened regional stability through the establishment of SADC, it was also witness to the resumption of hostilities in Angola. This renewed conflict between the MPLA (Movimento Popular de Libertação de Angola) and UNITA (União Nacional para a Independência Total de Angola), spawned another decade of brutal disruption and displacement. This meant that, by the end of 1992, the region was host to over 20 million drought-affected people, with more than ten million people classified as refugees or internally displaced from conflicts in Angola and Mozambique.

2.3.2 Climate variability – a region of extremes

The 1992-93 drought and 2000 flood emergencies provide insights into the scale and complexity of severe climate-related processes in southern Africa, and underline the transboundary character of the region’s risks. As both these events are detailed elsewhere (Holloway, 2000; Tshirley, 2010; Christie & Hanlon, 2001), this section only summarises their main attributes and effects. The 1992 drought, for example, triggered by an intense El Niño, compounded a range of vulnerabilities and resulted in a regional maize harvest shortfall greater than 50% (Holloway, 2000:262). This included a reduction of around 50% in South African production (ibid). Livelihood impacts that affected more than 20 million people were experienced across the eleven affected countries, reflected in the estimated deaths of more than a million livestock in Zimbabwe alone and precarious urban water supplies in Bulawayo, Mutare and Chegutu (Secretariat, National Civil Protection Coordination Committee, 1993:19, 22).

Regional health effects also included a cholera epidemic that resulted in 62,000 cases and more than 4,000 deaths, as well as country-wide meningococcal meningitis outbreaks in Zambia and Tanzania (Brushett, 1993:1).

The scale of the international food response “represented the largest action of its kind since the Indian drought of 1966-67 and the aversion of famine in Europe in 1945-46” (Holloway, 2000), with assistance provided to Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia and Zimbabwe, as well as South Africa. Many of these countries were similarly affected two years later in a follow-on drought event from 1994/95 that was reflected in a 35% production shortfall (Holloway, 1995; Uganai, 1996).

Southern Africa’s exposure and vulnerability to climate risks beyond intense droughts were sharply underlined less than a decade later, when Cyclone Eline swept across the entire region. Figure 2.3.2.1 represents the weather system’s remarkable path from 3 February – 1 March 2000, with impacts recorded from Madagascar to Mariental in Namibia. Mozambique bore the major brunt of the resulting floods, which included more than 700 deaths and the internal displacement of approximately 250,000 Mozambicans. A further 290,000 people were displaced in Botswana, South Africa, Zimbabwe, Zambia and Madagascar (Brouwer & Nhassengo, 2006). Severe infrastructure losses were also sustained, with health sector impacts alone in Mozambique reflected in partial damage to a Maputo hospital, four rural hospitals, and 39 health centres (Moore et al., 2003). Less than a year later, in 2001, severe flooding from the Zambezi River, displaced as many as 500,000 people, illustrating again the urgent need for strengthened flood risk management and coordination in many southern African countries.

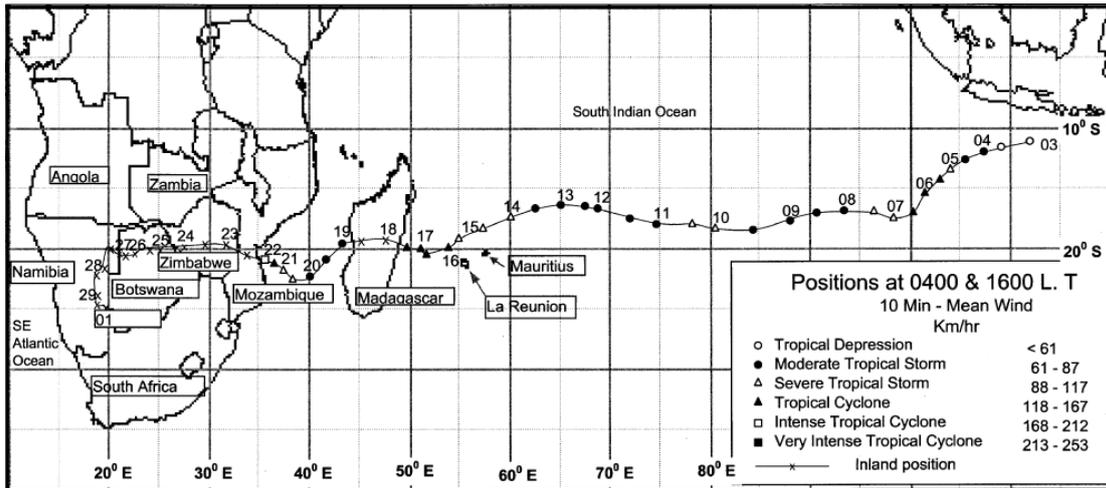


Figure 2.3.2.1: Cyclone Eline’s track across the south Indian Ocean and ex-Cyclone Eline’s southern African mainland, with its position marked at 0400 and 1600 LT between 3 February and 1 March 2000 (Reason and Keibel, 2004). American Meteorological Society. Used with permission.

2.3.3 HIV infection surges across the region

By 1991, concerns were already being voiced about southern Africa’s profile as a ‘high-risk’ region for HIV spread (Zwi & Cabral, 1991). These acknowledged the region’s troubling risk context, inevitably shaped by prolonged armed conflict, population displacement, an entrenched history of migrant labour and rapid urbanisation. In the decade that followed, these observations proved disturbingly accurate, given HIV’s rapid escalation and spread across southern Africa. Mason et al. (2005) report the explosive surge in regional HIV infection, indicated by prevalence rates of pregnant women in the early 1990s, reflected in Table 2.3.3.1.

These increases in HIV infection coincided with the displacement, instability and hardship associated with the concluding years of Mozambique’s bitter civil war, as well as two exacting regional drought emergencies (1992/93 and 1994/5), and South Africa’s progression to a multiparty democracy (1994).

By the time Cyclone Eline swept over the region in February 2000, affecting or displacing 5,000,000 primarily rural southern Africans, the HIV epidemic had already eroded social and human capabilities in the same flood-affected countries (Table 2.3.3.1). In 2000, 9.2 million people were already living with HIV in southern Africa, with an estimated 36% of adults reportedly HIV positive in Botswana (USAID, 2001). The rapid loss of human capital between 1990 and 2000 was reflected in HIV-related deaths of more than 2.8 million southern Africans, 900,000 of whom lived in Zimbabwe, alone (UNAIDS, 2012).

Table 2.3.3.1: Take-off of HIV infection in pregnant women from HIV sentinel surveillance sites

Country	Year	Early Prev. (%)	Take-off year	Prev. (%)	Peak Year(s)	Prev. (%)
Lesotho	1993	6	1994	31	2000	42
Malawi	1987	8	1989	17	1992 – 1999	25
Mozambique	1996	6	1998	11	2000	14
Swaziland	1992	4	1993	22	1998 – 2000	30
Zambia	1987	12	1990	25	1992 – 2001	27 – 31
Zimbabwe	1989	10	1993	26	1994	36

(Source: Mason et al, 2005)

2.4 2002 – 2012: Risks converge and compound

Since 2002, southern Africa's risk profile has been marked by an increasing diversity of shocks, as the urban share of the region's population grows, and as southern African economies become more connected with others globally and continentally. Climate risks have also become more varied, with apparent increases in cyclone- and flood-related events, compared to previous decades (see Chapter four). Household vulnerability and constrained risk governance have also emerged as persistent features of the region's risk profile. These are increasingly intertwined with recurrent climate, conflict, epidemic and economic shocks. In recent years, these factors have converged and compounded, escalating to emergency scale in a widening range of contexts, including the region's largest cities.

The cessation of hostilities in Angola in 2002 marked the end of the region's final long-standing armed conflict. The human costs of this 27 year civil war were estimated at hundreds of thousands of lives lost and millions displaced either internally or in neighbouring countries (Agadjanian, 2003; Clover, 2002; Lari, 2004). It is estimated that 3.8 million internally displaced Angolans returned to their areas of origin within a mere 18 months of the conflict's ending, as did more than 210,000 refugees from adjacent countries. The scale of this relocation – to areas lacking even basic infrastructure and functioning services – posed enormous challenges for post-conflict recovery as well as securing the survival and social reintegration of the returnees (Lari, *ibid*).

2.4.1 Livelihoods stumble and then begin to steady

Positive developments in Angola, however, were overshadowed by a food security crisis that was unfolding in 2002 in other southern African countries (particularly in Malawi and Zimbabwe). This emergency was in large part attributed to the converging effects of recurrent climate shocks, poor governance and the advancement of the HIV epidemic, and affected more than 14 million southern Africans primarily in Lesotho, Malawi, Swaziland, Zambia and Zimbabwe. It resulted in protracted relief and recovery efforts that continued until 2006. Identified variously as a 'new variant famine' (de Waal & Whiteside, 2003; Devereux, 2006) or the 'HIV/AIDS food insecurity syndemic' (Himmelgreen et al., 2009), the emergency profiled the role of profound and compounding household vulnerability due to the effects of HIV, further exacerbated by government policy and inadequate mobilisation of markets (Tshirley & Jayne, 2010).

The introduction of more systematic responses to vulnerability reduction through the Regional Hunger and Vulnerability Programme (SADC, 2012) has largely averted recurrences of regional food crises of this scale. In addition, annual national and regional vulnerability assessments, and the upscaling of social protection efforts, linked to coordinated national HIV programmes, has substantially reduced the vulnerability of those most at-risk. Adult HIV incidence and prevalence rates have also begun to decline, with life expectancy improving due in part to expanding antiretroviral coverage.

2.4.2 Zimbabwean turmoil as regional risk driver

The political and economic turmoil that prevailed in Zimbabwe for much of the decade served as a regionally-situated risk driver, not only resulting in dire humanitarian conditions internally, but also 'spill-over' effects in neighbouring countries. The rapid, successive declines of both Zimbabwe's formal and informal economies, exacerbated by intense political instability between 2005 and 2008 and unprecedented hyper-inflation (until the power sharing agreement of September 2008) led to an almost total collapse of crucial public services (Tawodzera, 2012; Mason, 2009; Potts, 2006; Physicians

for Human Rights, 2008/2009).¹⁷ Such desperate circumstances obliged hundreds of thousands of Zimbabwean nationals to move to neighbouring countries, including Botswana and South Africa.

2.4.3 Urban risk on the rise

'New', fast-paced, primarily urban emergencies have also become more evident from 2005. These included the forced displacement of 700,000 Zimbabweans in Operation Murambatsvina in 2005-2006. Also known as 'Operation Restore Order', this nation-wide intervention resulted in the systematic destruction of 92,460 informal homes and 32,538 businesses across Zimbabwe's towns and cities (Tibaijuka, 2005). The volatile, 'wildfire' character of urban emergencies was further evidenced in May 2008, when widespread xenophobic violence in South Africa forced the displacement of tens of thousands of foreign nationals, and again in August 2008 with an uncontained cholera outbreak in Harare, Zimbabwe. In subsequent months, the outbreak spread beyond Zimbabwe's borders to Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Swaziland and Zambia, resulting in 155,708 cases, claiming more than 4,000 lives (UNOCHA, 2009). In 2010, urban tensions flared once more, this time in Maputo, in response to rapidly escalating food prices, and resulted in food price riots that involved more than 400 people (Sambira, 2010).

Circular migration is a recognised, well-established livelihoods strategy in southern Africa (Crush, 2012). However, during the past decade, regional patterns of population mobility and displacement have become more diverse (Veary et al., 2010; Olivier, 2009). The scale of this complexity is illustrated in Section 3.5.4 which profiles the interconnectedness of global, regional and local stressors and associated social impacts (including mobility and forced movement).

However, there has also been sustained, recurrent displacement, associated with the region's exposure to natural threats, including cyclones, riverine flooding and heavy rainfall. This is reflected in the seasonal displacement of thousands of southern Africans, illustrated in Figure 2.4.3.1 which shows that more than 140 000 Mozambicans were required to temporarily locate to 14 accommodation centres following floods in January 2013 (UNOCHA ROSA, 2013).¹⁸

¹⁷ http://www.jhsph.edu/research/centers-and-institutes/center-for-public-health-and-human-rights/_pdf/PHR_HealthinRuins_Zimbabwe_Jan09.pdf

¹⁸ <http://reliefweb.int/sites/reliefweb.int/files/resources/Mozambique%20Flood%20Displaced%20Accommodation%20Centres%20as%20of%2026%20January%202013.pdf>

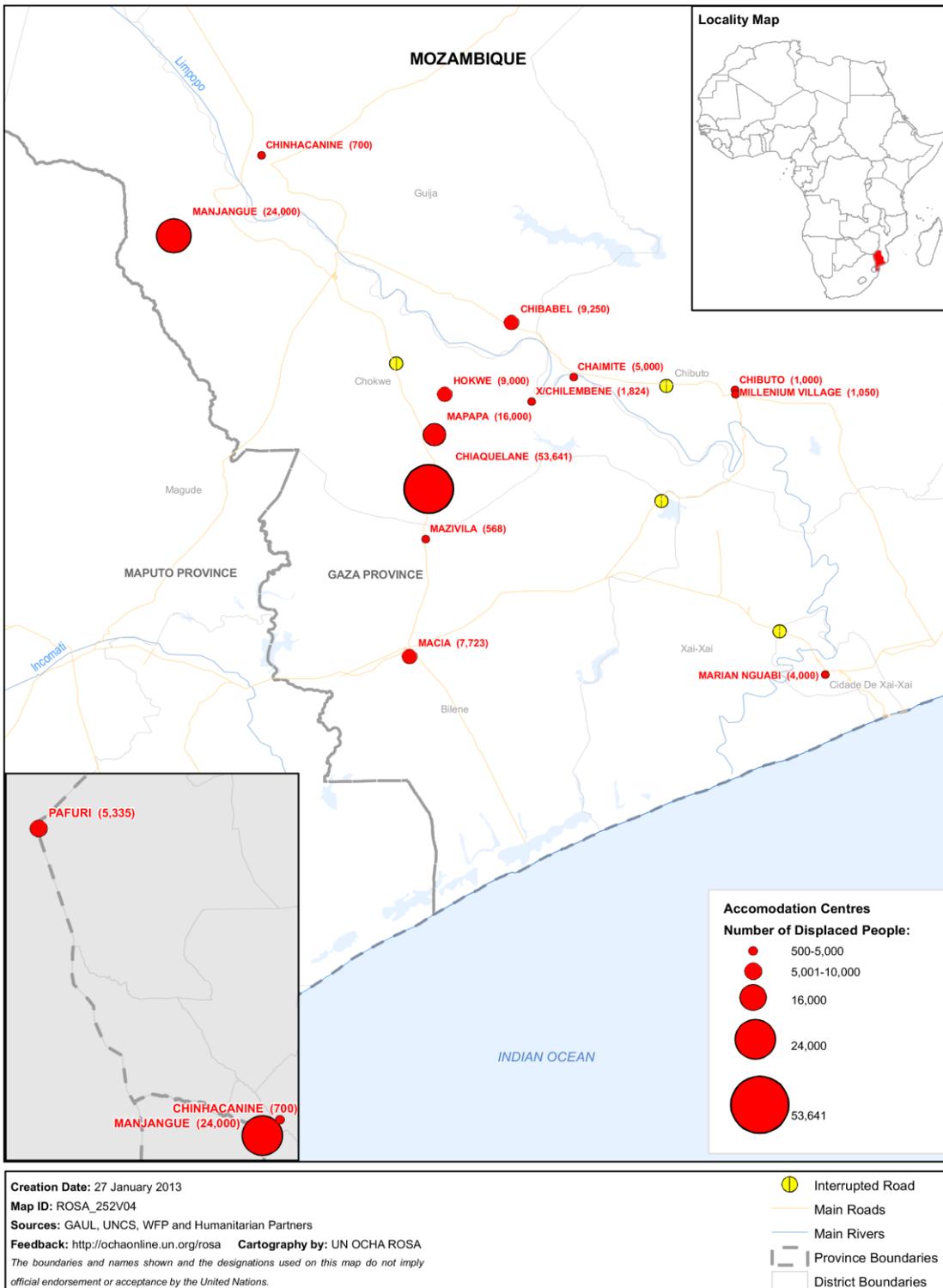


Figure 2.4.3.1: Map showing location of accommodation centres, housing more than 140,000 Mozambicans displaced by floods in January 2013 (Source: ReliefWeb, 2013)

In addition to its historic patterns of circular migration, and seasonal displacement, the region is increasingly a receiver of arrivals from further afield, and measurably reflected in more diverse patterns of asylum-seeking from elsewhere in Africa and from Asia. During the past decade, for

instance, 221,345 asylum applications were received in the 14 study countries from foreign nationals originating in the Democratic Republic of the Congo (DRC), Ethiopia and Somalia. In addition, Bangladesh, China, India and Pakistan contributed: 88,266 (99.2%) of Asian applications (UNHCR, 2012).

2.4.5 Multiple vulnerabilities– many exposures: the case of Lesotho

These changes signal a marked departure from the ‘usual’ risk profile associated with earlier decades. They also indicate the multiple converging and compounding vulnerabilities faced by many countries in the region, illustrated in Box 5 and Figure 2.4.5.1 in a case-study on Lesotho.

Multiple Vulnerabilities– Many Exposures: the Case of Lesotho

The convergence of multiple vulnerabilities in Lesotho has created a complex risk profile, in which poor households are chronically exposed to a wide range of economic, health and climate threats. It is estimated that 23% of adults are HIV positive, with 220,000 children orphaned by HIV.

Droughts are the most recurrent hazards, while floods, early frost and snow storms can also adversely affect agricultural production. However, agricultural yields are declining, in part due to an increasing number of fallow fields, mainly attributable to HIV.

Other vulnerabilities are economic. These are largely due to Lesotho’s membership of the Southern African Customs Union (SACU) which has historically contributed as much as 50% of the Government of Lesotho’s income. However, SACU receipts are exposed to the effects of global economic downturns; declining by 50% during 2010/11. Future reductions in SACU revenues would limit Lesotho’s ability to fund sustainable social protection programmes. Although government spending on social protection has increased over the past decade, it has not always benefitted the poorest amongst the poor and is unsustainable under current fiscal conditions.

Lesotho is also economically vulnerable because of its reliance on textile exports, enabled by the United States African Growth and Opportunities Act (AGOA). For instance, failure to extend AGOA in mid-2011 would have resulted in the almost immediate loss of the 40,000 mainly female jobs in the textile sector.

In 2011/12, Lesotho experienced a 70% drop in domestic food production, resulting in 725,000 people requiring relief. This decline was due to the effects of floods in 2010/11, followed by late rains and early frosts in the following year. It occurred against a backdrop of the falling contribution of agriculture to GDP from 9.3% to 7.1% between 2003 and 2008, with the decline in crops relative to livestock being particularly precipitous.

There are anecdotal reports of households moving to towns in response to rising rural hardship, seeking employment in the burgeoning informal sector. This is in addition to historic patterns of circular and irregular cross-border migration to South Africa.

(Source: Morojele, 2013)

Box 5: The Case of Lesotho

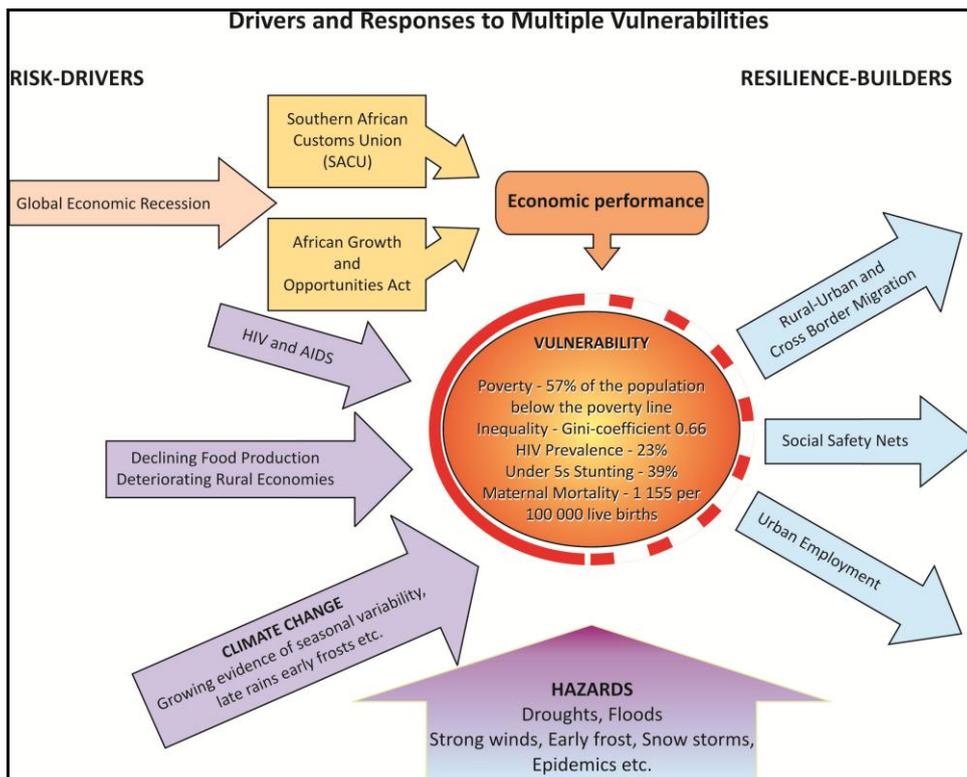


Figure 2.4.5.1: Interactions between key drivers and response to vulnerability: The Lesotho experience

The Lesotho case study not only illustrates the role of a diverse range of natural and socio-economic risk drivers (including global economic forces, HIV and climate variability/change). It also underlines the central role of resilience builders, including migration, urban employment and social safety nets, such as Lesotho’s Child Grants programme. These represent important livelihood strategies and - if curtailed, disrupted or discontinued- would increase exposure to socio-economic and natural threats, as well as susceptibility to hardship and loss.

2.5 To sum-up

This overview of southern Africa’s humanitarian assistance profile over the past twenty years underlines a region with a highly dynamic risk profile, and that is increasingly integrated continentally and globally. The region’s legacies of conflict and instability, combined with the profound effects of HIV and AIDS have also entrenched high levels of vulnerability, especially among the urban and rural poor.

While the region’s risk profile is increasingly diverse, reflecting growing exposure to continental and global shocks, there has been the encouraging emergence of vulnerability-countering ‘resilience builders’, including purposive mobility, urban employment and crucial social protection support.

CHAPTER THREE: REALISED RISKS AND HUMANITARIAN EMERGENCIES 2000 – 2012: IMPACTS AND TRENDS

3.1 Introduction

This regional review of recent emergencies departs from the established practice of separating more environmentally-induced disasters (IPCC, 2012; UNISDR, 2011) from those of social, political and economic origin (UNHCR, 2011; UNOCHA 2011b). The decision to set aside this distinction acknowledges that risks in southern Africa escalate due to the interplay of multiple risk and vulnerability drivers. This includes the sequential and simultaneous effects of past and current emergencies, irrespective of their origin. As the study sought to establish a ‘baseline’ for recurrent humanitarian emergencies, the following sections summarise the results of an exhaustive examination of significant emergencies from 2000-2012 that generated international humanitarian assistance. These were systematically identified by examining records related to all events that resulted in Consolidated or Flash Appeal processes.¹⁹

The chapter also explores the articulation between emergencies flagged as ‘nationally significant’ by national disaster risk management authorities and those that eventually escalated to international appeal status. This emphasises the ‘threshold’ events/processes in Malawi and Madagascar that had potential to escalate, stabilise or reverse. It specifically probes the scale and frequency of ‘small’ and ‘medium’ disasters, primarily managed without large-scale international assistance.

Further focal areas include the underplayed, transboundary character of many of the region’s emergencies and the pervasive challenges of food insecurity in the region. Last, the chapter underlines the increasingly interconnected and concatenating character of the shocks that face the region, along with the powerful risk amplifying role played by global economic forces.

3.2 Deconstructing the decade: realised risks and humanitarian emergencies

3.2.1 No one-size-fits-all

Contrary to perceptions that southern Africa has a homogeneous and ‘low-risk’ profile, this review of emergencies from 2000-2012 indicates a region under sustained pressure, both environmentally and socially. Excluding the protracted humanitarian situations in Angola and Zimbabwe, 47 defined international humanitarian emergencies were identified from 2000-2012. The findings show that 37 of these were associated with an identifiable environmental shock/stressor, while seven and three events could be linked respectively to socio-political triggers and epidemics.

Figure 3.2.1.1 represents the distribution of these events by year, type, country and recipient status for international humanitarian assistance. It shows the annual occurrence of both climate-induced emergencies and epidemics. The figure also includes but differentiates between countries reported as exposed to defined environmental or epidemic threats (in black-coloured text) and those where risks escalated to international appeal status (signalled in red-coloured text). Episodic civil strife or protracted humanitarian emergencies are also reflected. This preliminary but robust timeline indicates the diversity of threats faced annually across the region. It also underlines the short recurrence intervals for major shocks for many countries and the co-occurrence of multiple shocks annually even in countries that do not seek external assistance.

¹⁹ This represents emergencies reported to OCHA and recorded through their FTS. Records by this service include those of the Red Cross/Red Crescent Movement, NGOs, bilateral aid, in-kind aid and private donations.

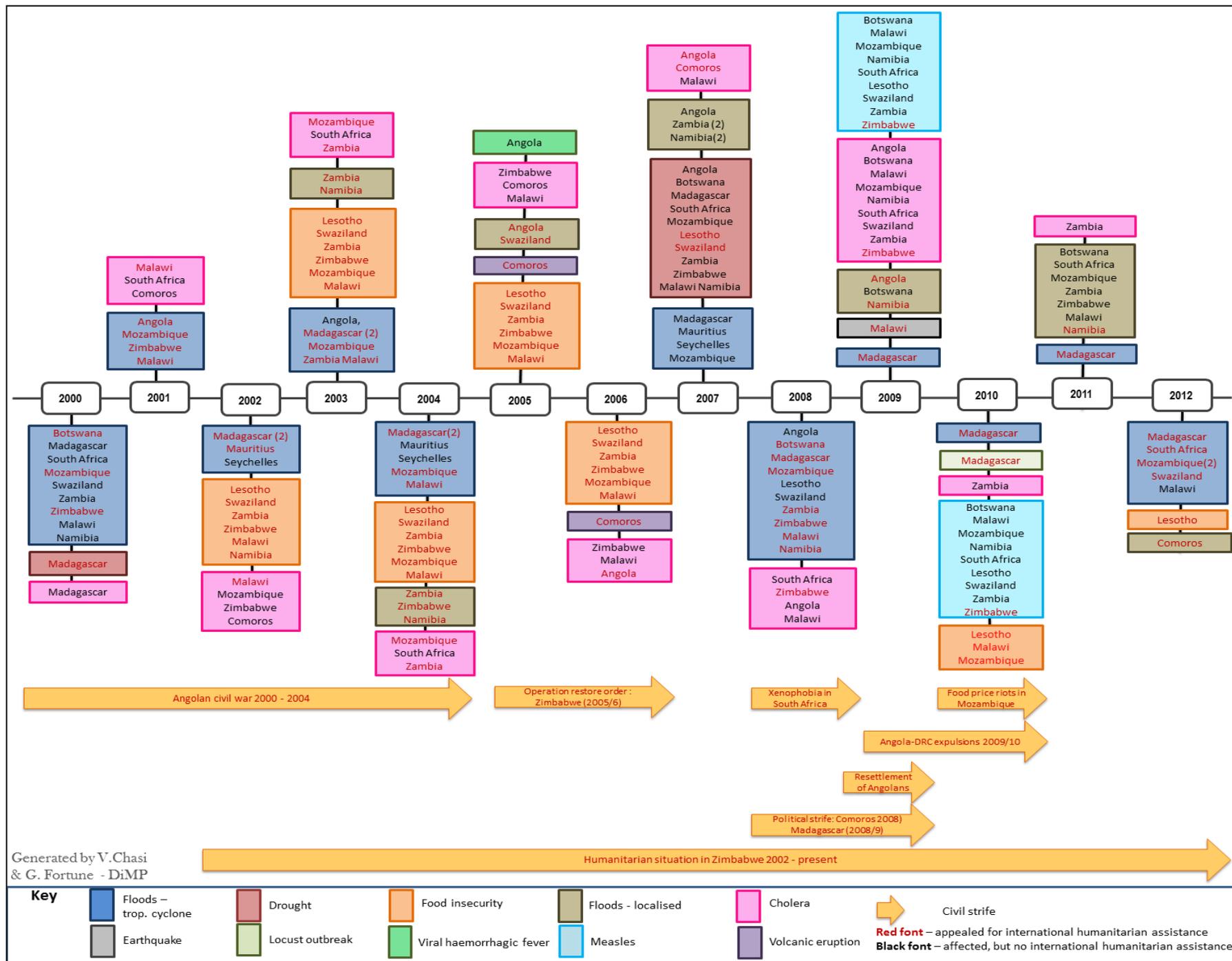


Figure 3.2.1.1: Representation of humanitarian emergencies, southern Africa, 2000-2012

In the absence of consistent and comparable national disaster/emergency reporting systems across the region, the study sought to clarify the scale and allocations for international humanitarian assistance. It reviewed data for the 14 study countries in UNOCHA's FTS.

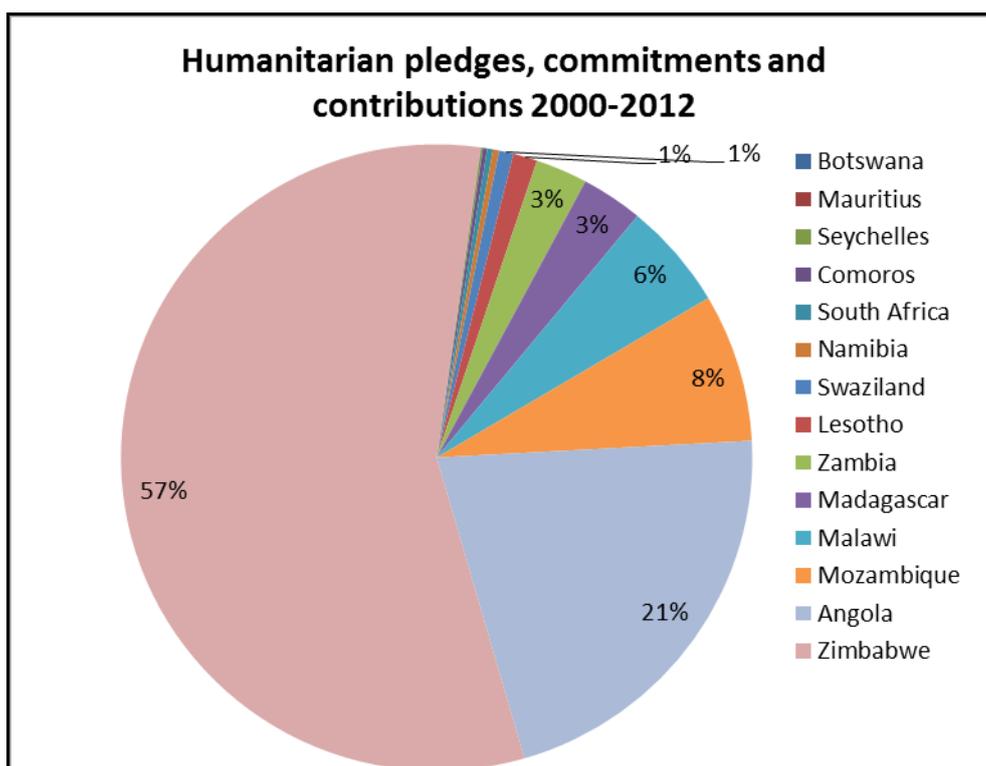
Table 3.2.1.1 lists the allocation of donor contributions between 2000 and 2012, by year and by recipient country. It indicates that for the 14 study countries, approximately US\$ 5.2 billion was pledged, committed or contributed for international humanitarian assistance, with approximately US\$ 2.9 billion (57%) and 1.1 billion (21%) respectively committed to Zimbabwe and Angola (Figure 3.2.1.2).

From 2000-2012, Zimbabwe's share of international humanitarian funding included assistance for a seven-year long 'humanitarian situation', further compounded by two overlapping multi-year communicable disease outbreaks (cholera: 2008-2009 and measles: 2009-2010). Similarly, in Madagascar, the unrelenting occurrence of floods and cyclones, along with a severe locust outbreak and amplified by political unrest between 2008 and 2010, has progressively eroded national capacity. This has resulted in the country being the second highest recipient of international humanitarian assistance since 2008.

Table 3.2.1.1: Humanitarian pledges, commitments or contributions (1 000 US\$) 2000-2012

Year	Angola	Botswana	Comoros	Lesotho	Madagascar	Malawi	Mauritius	Mozambique	Namibia	Seychelles	South Africa	Swaziland	Zambia	Zimbabwe	Total
2000	168 155	316	0	0	9 260	0	0	168 901	0	0	397	0	366	3 301	350 694
2001	153 564	0	0	0	1 445	2 679	0	28 054	525	0	470	0	1 971	333	189 041
2002	253 236	0	0	8 899	8 831	72 007	671	18 268	246	20	6 500	4 000	37 884	235 048	645 610
2003	235 750	100	0	3 916	2 640	7 989	22	8 452	1 689	0	251	6 016	12 213	51 546	330 583
2004	170 360	0	0	0	13 006	0	0	0	312	0	2 597	1 381	44	41 721	229 421
2005	32 869	0	2 229	5 233	2 555	124 426	29	11 279	426	5 008	504	2 694	16 344	73 551	277 146
2006	33 448	100	105	6 520	2 008	33 321	0	18 063	426	190	2 580	360	43 718	375 729	516 568
2007	28 903	0	277	19 245	24 408	8 146	0	50 053	1 743	0	0	15 401	5 748	337 039	490 963
2008	11 881	103	1 958	3 640	31 243	22 048	0	55 832	2 727	0	1 200	6 198	9 071	472 548	618 449
2009	8 052	0	159	870	23 907	4 572	0	13 889	4 299	0	210	1 681	8 842	642 143	708 625
2010	1 768	0	559	646	21 515	6 366	0	11 293	431	0	44	20	1 605	317 839	362 085
2011	877	0	0	6 605	13 322	546	0	4 897	3 397	0	653	370	0	229 501	260 168
2012	6 497	0	5 761	8 225	9 512	3 300	0	6 424	301	0	44	0	0	153 147	193 212
Total	1 105 360	619	11 048	63 799	163 652	285 400	722	395 405	16 522	5 218	15 450	38 121	137 806	2 933 446	5 172 565

Highest annual pledge, commitment or contribution total
 Second highest annual pledge, commitment or contribution total



*Botswana, Mauritius, Seychelles, Comoros, South Africa and Namibia have values less than 1%

Figure 3.2.1.2: Proportionate international humanitarian assistance to study countries (2000-2012)

3.3 Review of emergencies 2000-2012

This section reviews the 47 defined humanitarian emergencies associated with:

- civil strife (including events with social and political conditions/triggers and protracted/chronic humanitarian situations associated with state failure or fragility)
- environmental shocks or stressors and
- epidemics (excluding HIV)

3.3.1 Emergencies associated with civil strife

During the past decade, large numbers of southern Africans have been affected by human-induced emergencies (see Table 3.3.1.1). These span a wide social, political and economic spectrum, and include instances of armed conflict (e.g. Angola) political conflict (e.g. Madagascar) and social violence/conflict due to escalating tensions between the State and civil society (e.g. Zimbabwe's 'Operation Restore Order' and Mozambique's food price riots). In urban areas, there is also evidence of collective violence (e.g. xenophobic violence against foreign nationals in South Africa). While Zimbabwe has required high levels of sustained international humanitarian assistance for more than a decade, political instability and unrest have also prevailed in Comoros and Madagascar.

This signals a transition from conditions of armed conflict in the 1980s and 1990s, located in rural areas to current social conflicts in urban areas, particularly in the national capitals. It also reflects a growing population in towns and cities that is increasingly exposed (and vulnerable) to economic and other shocks, and with capacity to mass-mobilise, enabled by mobile phone and other communication technologies.

Table 3.3.1.1: Emergencies associated with civil strife (2000-2012)

Year/Case date	Country	Emergency Type	Affected
Humanitarian situations			
2000-2004	Angola	Humanitarian situations (Civil war)	5 000 000
2002-present	Zimbabwe	Humanitarian situations (general vulnerability)	5 100 000
Social and political conditions			
2008	Comoros	Political crisis	2 000
2008-2009	Madagascar	Political strife, food insecurity floods/cyclones	516 000
2009-2010	Angola	Angola DRC expulsions	54 000
2010	Mozambique	Riots due to commodity price increases	**
2005 and early 2006	Zimbabwe	Operation Restore Order/Murambatsvina*	700 000
2008	South Africa	Xenophobic attacks/Social violence*	50 000
2009	Angola	Resettlement of Angolans expelled from DRC*	54 000

*Forced urban migration events

** Unable to establish the correct number of people affected

3.3.2 Emergencies associated with an identifiable environmental shock or stressor

Table 3.3.2.1 lists the type and frequency of international humanitarian emergencies associated with an environmental shock/stress, by year, main countries and average population affected.²⁰ It underlines the diversity of emergencies associated with environmental shocks and stresses and shows how flooding has resulted in at least one humanitarian appeal annually since 2000. This has led to 26 flood-related appeals. Based on data analysed in this study, it is estimated that each of these events affected on average more than 500,000 people. Many of these were due to identifiable weather systems, such as Cyclone Eline in 2000. However, others were the result of locally occurring floods and those 'events' further aggravated by governance issues including local and regional governance (e.g. transboundary water management and urban infrastructural management) associated with heavy rain (for instance in Angola, Namibia and Botswana during 2007 and 2008). Altogether, more than 14 million people reportedly required international humanitarian assistance from 2000-2012 for flood-related events, including the five million who were affected by Cyclone Eline.

Table 3.3.2.1: Type and frequency of humanitarian emergencies associated with an environmental shock/stress

Type of threat	No. of events	Years reported	Main countries affected	Total pop. affected	Av. pop. affected /event
Severe weather/ floods	27	2000-2011	MDG, NAM, MOZ, MWI, AGO	14 098 257	542 241
Famine/food crisis /insecurity	4	2000-2004, 2005-2006, 2010, 2012	LSO, MWI, SWZ, ZAM, ZIM, MOZ	42 464 477	10 616 119
Drought	2	2000, 2007	MDG, SWZ,	1 194 290	597 145
Volcanic eruption	3	2005, 2006	COM	294 000	98 000
Earthquake	1	2009	MWI	31 220	31 220
Locust infestation	1	2010	MDG	2 300 000	2 300 000

²⁰ Table A3.1 in Annex 3 presents information on these 37 emergencies responded to with international humanitarian assistance and associated with a definable environmental shock or stressor.

In contrast, each of the four reported famine/food crises/insecurity emergencies affected an average of 10.6 million people. The prolonged duration of these events and the scale of need underline the humanitarian significance of food-related crises in the region. Specifically, the 2002 humanitarian crisis led to 14.4 million people receiving humanitarian assistance predominantly food aid, followed by 7.9 million in 2003/04 and 16.2 million in 2005/06.

Although the number of people requiring food assistance declined from 2006, Vulnerability Assessment Committee (VAC) reports have consistently identified food deficits in several countries since then. As an example, Lesotho VAC reports from 2006-2010 calculate that an average of 4,100 metric tons (MT) of maize was required annually to meet the deficit (LVAC, 2006; LVAC, 2008). This has culminated in the most recent food security crisis in Lesotho, during which more than 700,000 people required food assistance.

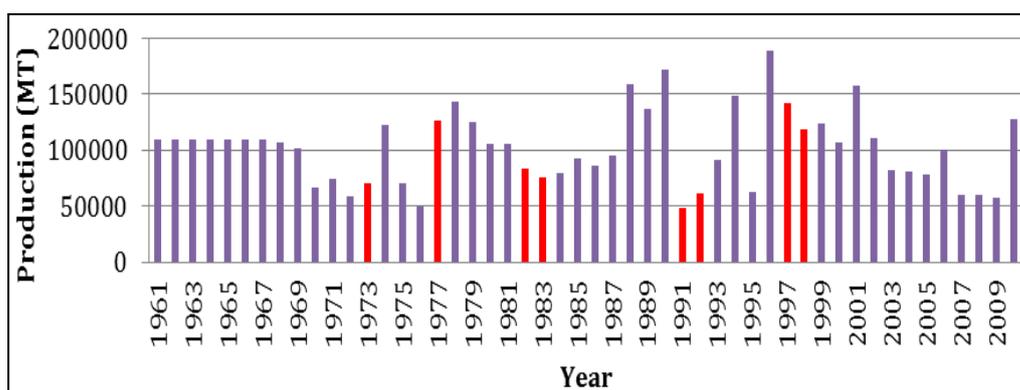


Figure 3.3.2.1: Maize production (MT) in Lesotho, 1961-2009 (Source: Generated by DiMP from FAOStat)

The steady decline in maize production is illustrated in Figure 3.3.2.1 with some of the El Niño years identified in red. The relative highs of 1997 to 2000 gave way to a steady decline in production. From another perspective, Figure 3.3.2.2 illustrates the numbers of people requiring food assistance in Lesotho from 2005/2006 until 2012/2013. It is significant that a larger number of people require assistance in 2013 than in 2005, when the region as a whole appealed for support for the largest number of people (over 16 million). The underlying reasons for this described in section 2.4.4, illustrate the increasing difficulties in promoting food security in the face of multiple shocks and stressors.

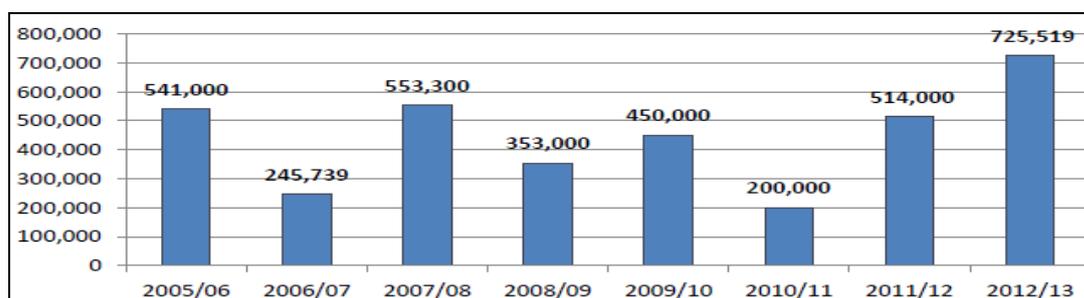


Figure 3.3.2.2: Population in need of humanitarian assistance since 2005/06

(Source: Lesotho Vulnerability Assessment Committee Report, 2012)

This pattern is consistent with findings for countries like Swaziland and Zimbabwe. It suggests that the lack of available food from own production is not unusual in several southern African countries. This is reflected in Figure 4.1.4.1, which depicts the proportion of undernourished as a percentage of the population in several southern African countries – reflecting the share of the population with insufficient dietary energy intake as per FAO figures.

Table 3.3.2.2 shows how frequently each of the study countries was affected by different environmental threats from 2000 to 2012. It summarises environmental hazard exposures either documented as significant in national disaster databases or through FEWSNET, IFRC reports or other sources – in relation to actual humanitarian responses for defined events (shaded in pink). This shows that from 2000-2012, Madagascar received international humanitarian assistance for 14 out of 16 major environmentally-triggered events, while Malawi obtained funding for nine out of 14 emergencies. In contrast, although South Africa was exposed to four naturally-triggered emergencies that were also experienced by neighbouring countries, it was able to self-fund a humanitarian response.

Table 3.3.2.2: Total count of country exposures to nationally significant environmental threats in relation to actual humanitarian assistance provided

Country	Hazard Exposure							Total int. humanitarian assistance
	Severe weather/	Volcanic eruption	Earth-quake	Drought	Food insecurity	Locust outbreaks	Total hazard	
Angola ¹	6	0	0	1	1	0	6	4
Botswana	5	0	0	0	0	0	5	2
Comoros	1	3	0	0	0	0	4	4
South Africa	3	0	0	1	0	0	4	0
Madagascar	13	0	0	2	0	1	16	14
Mauritius	3	0	0	0	0	0	3	1
Seychelles	3	0	0	0	0	0	3	1
Namibia	9	0	0	1	1	0	11	8
Mozambique	10	0	0	1	3	0	14	10
Zambia	8	0	0	1	3	0	12	6
Zimbabwe ²	7	0	0	1	32	0	11	7
Malawi	8	0	1	1	4	0	14	9
Lesotho	1	0	0	1	5	0	7	6
Swaziland	4	0	0	1	3	0	8	6

3.3.3 Epidemic emergencies: international humanitarian implications

As cholera has been endemic in Malawi, Mozambique, Zambia and Zimbabwe since 1998²¹, outbreaks have been reported annually since 2000. Table 3.3.3.1 lists the reported cholera outbreaks that occurred in eight of the study countries. Three of these resulted in more than 80,000 cholera cases each, with the 2006-2007 Angolan and 2008-2009 Zimbabwe outbreaks both requiring external humanitarian assistance (shaded in pink). Encouragingly, six additional emergencies were 'risk-managed' with technical assistance from WHO country offices (shaded in light pink), averting a more serious emergency. These included the 2009-2010 regional measles outbreak that affected nine of the study countries and generated over 44,000 cases.

Table 3.3.3.1: Epidemic disease outbreaks in southern Africa 2000-2011

Outbreak	Country	Case dates	Cases	Deaths	Case Fatality Rate (%)
Cholera	Angola	Feb 2006 - May 2007	82 204	3 092	3.75
		Jan - October 2008	10 511	243	2.3
	Comoros	Dec 2001 - Dec 2002	1 644	47	2.9
		Feb - Nov 2007	1 531	29	1.9

²¹ Total annual cases and deaths since 2000 by country in Table A3.2 in Annex 3

Outbreak	Country	Case dates	Cases	Deaths	Case Fatality Rate (%)
Cholera	Madagascar	Dec 1999 - Mar 2000	15 173	860	5.7
	Malawi	Oct 2001 - Apr 2002	33 150	981	2.96
		Aug 2002	773	41	5.13
		2005 - 2006	4 805	-	-
		Oct 2006 - May 2007	262	-	-
		Nov 2007 - Apr 2008	1 022	20	2
	Mozambique	Jan - Jun 2002	2 028	17	0.84
		Jan - Jun 2003 ¹	11 796	87	7.4
		Dec 2003 - Mar 2004 ²	15 237	85	-
		2009	12 819	119	-
	South Africa	Aug 2000 - Apr 2001	86 107	181	-
		Jan - Mar 2003	2362	-	-
		Feb 2004 ³	179	5	2.79
	Zambia	May - Apr 2003	68	3	4.4
		Nov 2003 - Feb 2004	3 835	179	4.66
		Oct 2009 - Jul 2010	6 804	73	-
		Nov 2010 - Jan 2011	173	-	-
	Zimbabwe	2002	3 125	192	6.1
		Dec 2005 - Jun 2006	1 034	70	-
		Jan - Jun 2008	1 027	72	-
Aug 2008 - 30 Jul 2009 ⁴		98 592	4 288	4.3	
Cholera total			396 261	10 684	-
VHF	Angola	2005	181	159	-
Measles	Region ⁵	2009 - Jun 2010	44 110	722	-

Notes:

¹Related cases reported in Swaziland and South Africa

²Related cases reported in South Africa

³Related cases reported in Mozambique

⁴Related cases reported in Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Swaziland and Zambia. Over the 2008-2009 these 9 countries reported 155,708 cholera cases

⁵Cases reported in Malawi, Mozambique, Zambia, Lesotho, Zimbabwe, South Africa, Swaziland, Namibia, Botswana

---Unspecified value

3.4 The untold story – temporal and spatial distribution of nationally significant events

3.4.1 The crucial role of national and subnational risk management

The research process also examined (where possible), the alignment of disasters addressed by national disaster management authorities with those responded to by international humanitarian organisations and agencies. This recognised that international appeal processes only reflect a fraction of the risks that are realised locally, and under-estimate the scale of prevailing extensive risk at subnational levels. Although most of the fourteen study countries could not provide robust historic disaster events records extending back to 2000, Madagascar and Malawi could provide detailed disaster inventories for this period.

The data in Table 3.4.1.1 were sourced from the national disaster management authority in Antananarivo and reinforce the value of systematically maintained disaster loss inventories. They

show that, from 2000-2012, 31 loss-triggering cyclones affected Madagascar. These generated cumulative impacts for 5.2 million people, affecting almost 170,000 on average per event. Five drought events during the same period cumulatively affected more than 2.1 million people (400,000 on average/drought event).

Table 3.4.1.1: Nationally significant disaster incidents in Madagascar (2000-2012)

Type of threat	Incidents	Affected	Ave. affected/ threat
Drought	5	2 178 290	435 658
Earthquake	3	-	-
Epidemic	3	23 197	7 732
Fire	19	7 832	412
Flood	6	116 807	19 468
Hazmat	6	155	26
Tropical Cyclone	31	5 250 838	169 382
Total	73	7 577 119	

3.4.2 The crucial role of national disaster/emergency recording systems – focus on Madagascar

As discussed in Box 6, the data on nationally significant disaster events were analysed using a three-step process. This approach enabled comparisons between the distribution or frequency of nationally significant events and the respective flows of international humanitarian assistance at subnational scales. Figure 3.4.2.1 for instance indicates that the south-western region of Atsimo-Andrefana recorded 26 events since 2000, with 24 associated with cyclone land-falls and two droughts. Although this region recorded the second-highest number of disasters nationally from 2000-2012, international humanitarian funding was only allocated for two of these. Similarly, the region of Vatovavy Fitovinany (one of the two most populous regions of Madagascar) reported 28 events of national significance - the largest number for any region from 2000-2012. Yet, it received international humanitarian funding on three occasions only.

Steps taken to map nationally significant emergencies

Data sourced from national disaster databases were consolidated and analysed in Microsoft Excel.

First, researchers confirmed the number of hazard events (e.g. tropical cyclone, drought, fire, earthquake etc.) for each subnational entity (Malawi = districts, Madagascar = regions). These are represented in Figures 3.4.2.1 and 3.4.3.1 by the pie charts for districts or regions.

Second, with the assistance of country representatives, the frequency of international humanitarian funding was confirmed for affected districts or regions (represented by the yellow-orange background shading in Figures 3.4.2.1 and 3.4.3.1).

In the last step, the most populous districts or regions were identified to indicate overall population exposure (indicated by diagonal shading).

Box 6: Steps taken to map nationally significant emergencies/disasters to sub-national scale: Malawi and Madagascar (2000-2012)

The annual or seasonal recurrence of climate shocks may build local expertise and strengthened preparedness and response capacity. However, these data also signal very short recurrence intervals for major subnational shocks, what may be termed the 'smaller' and yet significant events. The high

frequency of locally significant shocks not only repeatedly disrupts livelihoods and essential services. It also results in recurrent damage to property and local infrastructure – undermining prospects for development. These results, which foreground the short return periods for subnational shocks, caution against unrealistic aspirations for post-event recovery, resilience-building and risk-averse development in areas like Atsimo-Andrefana and Vatovavy Fitovinany that have sustained two or more nationally significant shocks annually for longer than a decade.

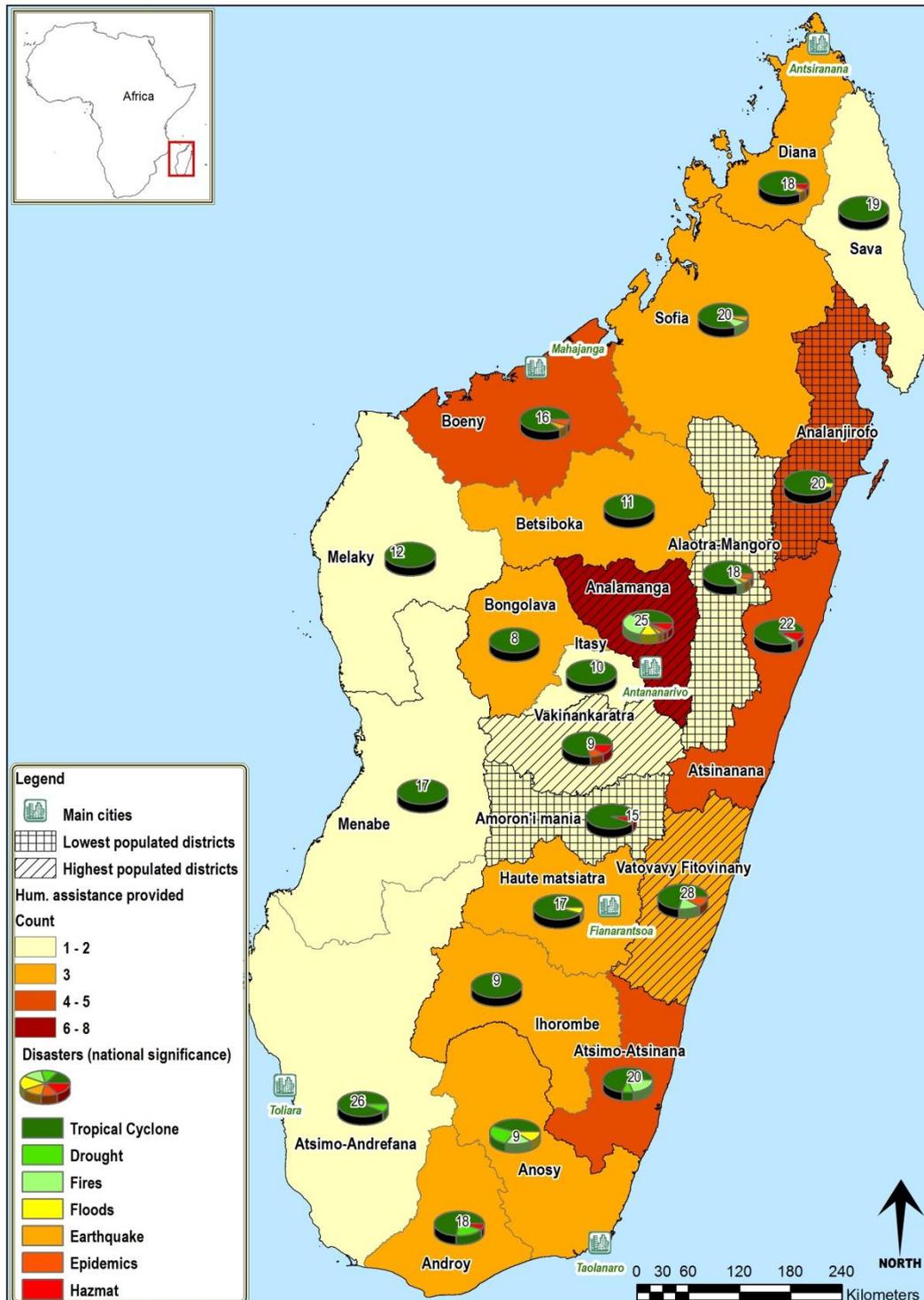


Figure 3.4.2.1: Spatial representation of recorded disaster incidents and allocated humanitarian funding in Madagascar (2000-2012)

Figure 3.4.2.2 further underlines the exposure of particular districts within Madagascar to recurrent shocks by representing the flood effects of Cyclone Haruna that made landfall in February 2013.²² It demonstrates the spatial extent of flooding, attributed to the breaching of dykes in Toliara, Atsimo-Andrefana, along with damage to essential local infrastructure (roads and bridges), and indicates that 67,000 people were flood-affected by this one event.

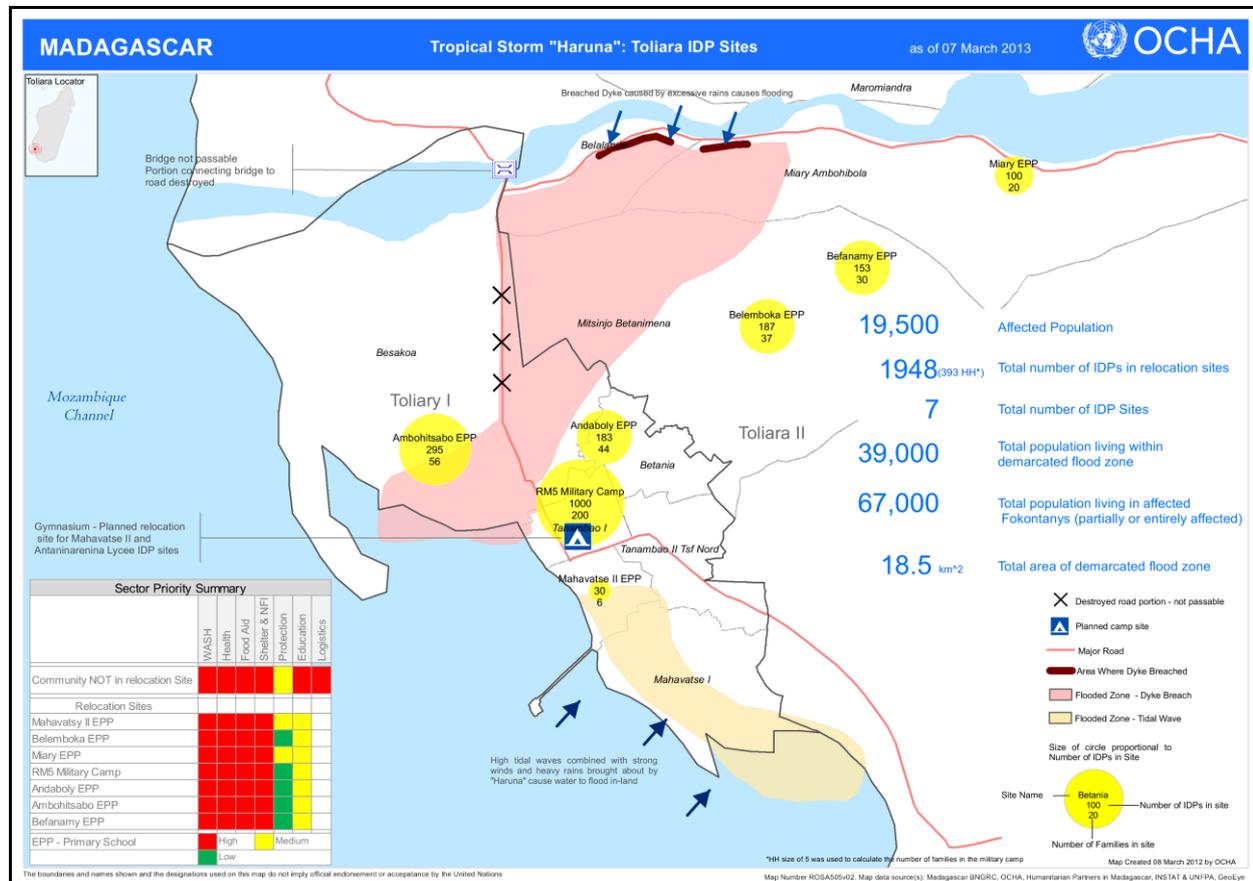


Figure 3.4.2.2 Mapped representation of areas affected by Cyclone Haruna, Toliara, Madagascar (2013) (Source: ReliefWeb, 2013)

3.4.3 The crucial role of national disaster/emergency recording systems – focus on Malawi

A similar review of nationally significant events funded by the international humanitarian community was undertaken for Malawi. Table 3.4.3.1 lists the number of incidents recorded by the Department of Disaster Management Affairs (DoDMA) between 2000 and 2012 and the respective populations affected. Although only 3 drought incidents occurred, these affected more than 4 million people (an average of more than 1.4 million people per event). However, during the same period, 113 flooding events affected over 1.8 million people (an average affected population of over 16,000 per event). This signals real challenges for national and local governments for simultaneously managing intensive and extensive risks. In this instance, drought emergencies represent realised intensive risks, due to the markedly larger population affected by each (less frequent) drought event. They contrast with flood emergencies, which, while more frequent, affect fewer people per event, and thus illustrate realised extensive risks.

²² <http://reliefweb.int/map/madagascar/madagascar-tropical-storm-haruna-toliara-idp-sites-07-march-2013>

Table 3.4.3.1 Nationally significant disaster incidents in Malawi (2000-2012)

Type of threat	Incidents	Affected	Ave. affected/threat
Flood	113	1 848 714	16 360
Hail storm	4	972	243
Food insecurity	7	55 905	7986
Drought	3	4 245 390	1 415 130
Other	6	184 468	30 745
Total	133	6 335 449	47 635

A review of the spatial extent of these disasters at a subnational scale (illustrated in Figure 3.4.3.1), reveals that Lilongwe - one of the most populous districts in Malawi - has been the hardest hit district with 36 events of national significance. The district has, however, received international humanitarian funding for only three of these, while Nkhosakota - one of the least populous districts - reported only nine events but received international humanitarian funding for 4 of these.

Figure 3.4.3.1 also illustrates that with 31 disaster events, Karonga has been the second hardest hit district since 2000; as a result the district has received international humanitarian assistance nine times. The spatial analysis reveals that this district experienced all five of the hazard-types recorded in Malawi, ranging from floods and hail storms to earthquakes in this time period. These continued exposures with short recurrence intervals have possibly compounded local vulnerability and compromised prospects for resilience building.

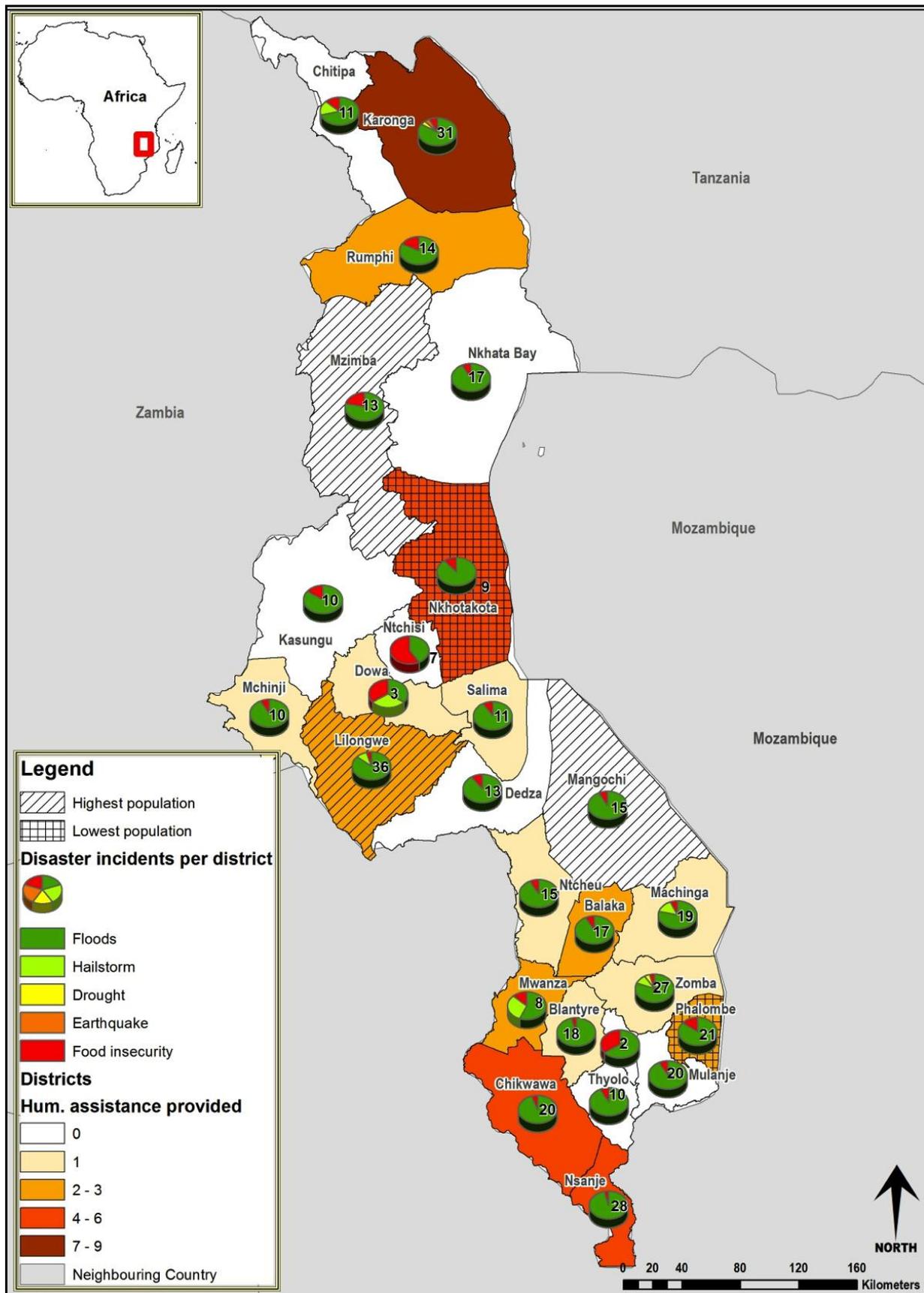


Figure 3.4.3.1: Spatial representation of recorded disaster incidents and allocated humanitarian funding in Malawi (2000-2012)

3.5 The transboundary challenge

3.5.1 Transboundary risk management – falling between the cracks ... or borders

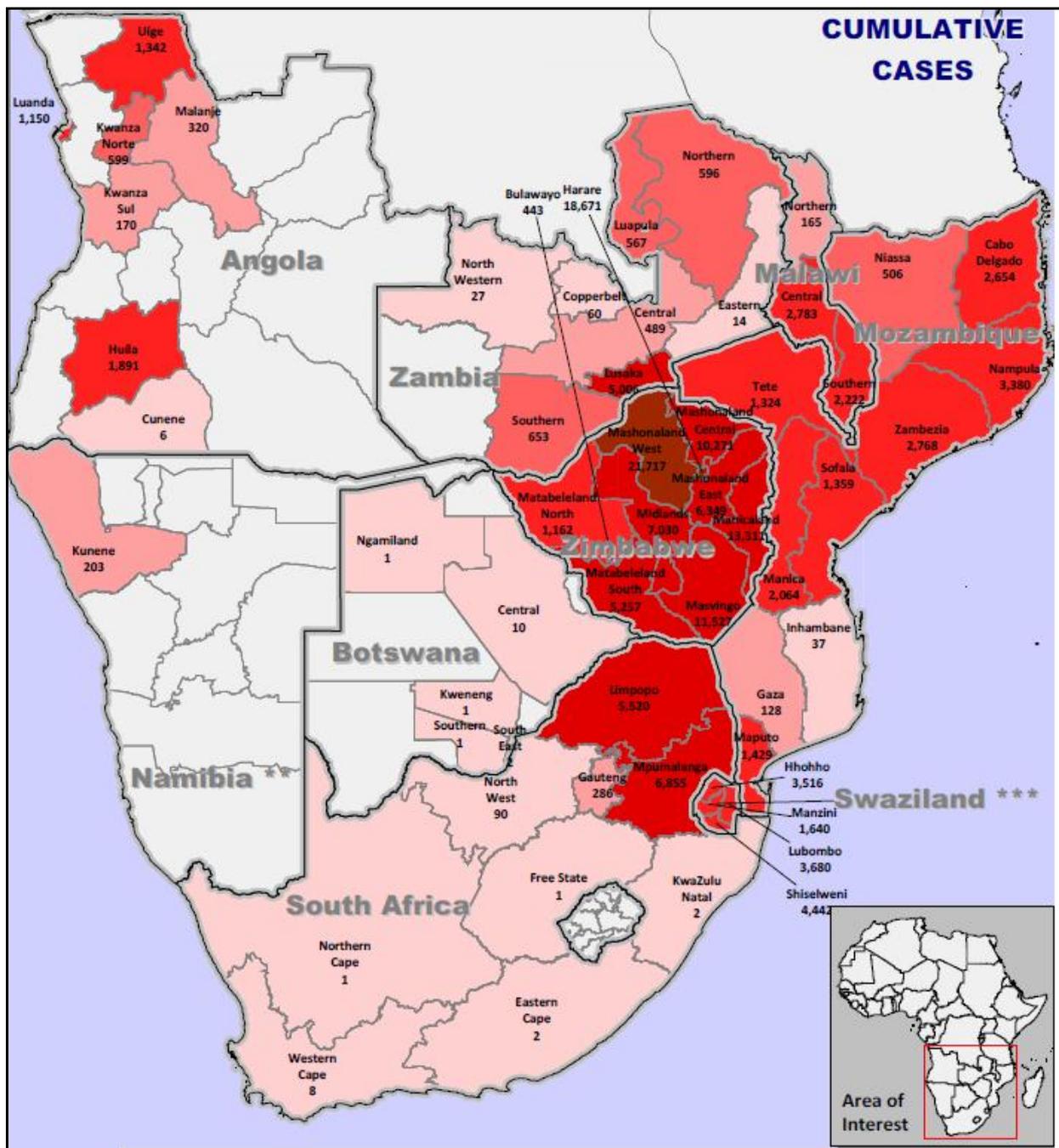
A recurrent finding of this study is the high frequency of transboundary emergencies. Current data-gathering systems however, consistently under-estimate the occurrence and effects of transboundary processes, as well as their spatial extent. This is partly due to systematic biases that favour national reporting and is exacerbated by non-reporting requirements for countries that do not seek international assistance.

In the past decade, there have been 19 environmentally-triggered humanitarian, emergencies with transboundary attributes and three epidemics. The sections below underline some of the reasons for strengthening regional and national capabilities for monitoring these risks.

3.5.2 Epidemic risk as transboundary concern – focus on cholera

As cholera has been endemic in Malawi, Mozambique, Zambia and Zimbabwe since 1998, the possibility of regional outbreaks has increased, exacerbated by intra-regional migration (Said et al., 2011). For example, the 2001-2002 cholera outbreak in South Africa was induced by imported cases, while the 2008-2009 regional epidemic was linked to the Zimbabwean outbreak, first reported in Harare.

Unfortunately, as *vibrio cholerae* typing was not carried out for the 2001-2002 and 2008-2009 regional outbreaks (see Figure 3.5.2.1), it has not been possible to attribute either of these multi-country outbreaks to a single source. In fact, Said et al (ibid) concluded that the 2008-2009 cholera epidemic in southern Africa “occurred either as a result of the Zimbabwean outbreak or independently of it.” Figure 3.5.2.1 reinforces this observation, by showing more than 5,000 cholera cases in South Africa’s Limpopo Province, compared with 15 reported cases nation-wide from Botswana over the same reporting period, despite both countries sharing borders with Zimbabwe.



Country	Reported Cases	Reported Deaths	Case Fatality Rate (CFR %)	Time Period
Angola	5,478	60	1.1	01/01/08 – 05/04/09
Botswana	15	2	13.3	01/11/08 – 17/04/09
Malawi	5,170	113	2.2	15/11/08 – 17/04/09
Mozambique*	15,649	133	0.8	01/01/09 -11/04/09
Namibia**	203	9	4.4	22/10/08 – 14/04/09
South Africa	12,765	64	0.5	15/11/08 – 10/04/09
Swaziland***	13,278	0	0	22/12/08 – 28/03/09
Zambia	7,412	151	2.0	10/09/08 – 09/04/09
Zimbabwe	95,738	4,154	4.3	15/08/08 – 10/04/09
TOTAL	155,708	4,686	3.0	

Source: Ministries of Health, WHO

* Mozambique: Includes only 2009 figures. MoH is currently reconciling 2008 figures.

** Namibia: Includes cholera cases and Acute Watery Diarrhoea AWD cases. No new data received.

*** Swaziland: No cases of cholera have been confirmed, only AWD.

Figure 3.5.2.1: Cholera/Acute Watery Diarrhoea Outbreaks in Southern Africa 2008/9 (UNOCHA, 2009:7)

3.5.3 Floods - a transboundary reality

Of the 26 recorded flood emergencies between 2000 and 2012 that generated international humanitarian appeals, fourteen were transboundary events, primarily linked to tropical cyclones. On four occasions (2000, 2004, 2007, 2008), between five and nine countries reported flood impacts attributable to a common weather system – usually a tropical cyclone - although the research shows that the extent of these events was underestimated. Unfortunately, cumulative losses from transboundary events are not uniformly recorded for those countries that do not seek international assistance. Table 3.5.3.1 illustrates this shortcoming with an extract of the regional disaster database developed for this research. It reviews the 2007 floods, which generated three separate Flash Appeals for Madagascar, Mozambique and Zambia, but were caused by weather systems that affected seven other countries.

The transboundary nature of hazards is illustrated in Figure 3.5.3.1 which shows the development of Cyclone Favio in February 2007 as it moved westwards from Madagascar, intensified in the Mozambican channel and then made landfall in Mozambique. The weather system, which was categorised as a Category 3 tropical cyclone, also produced high rainfall in other southern African countries, including Angola, the Democratic Republic of the Congo, Kenya, Malawi and Zambia. The resulting up-stream run-off in these neighbouring states not only led to wide-ranging effects across another five southern African countries. It also led to additional downstream flooding for Mozambique (see Figure 3.5.3.2).

Table 3.5.3.1: Extract of Table A3.1

Event type	Event year	Affected	Countries affected*	
Severe weather/ Flood	2000	5 000 000	BWA, NAM, MDG, MWI, MOZ, ZAF, SWZ, ZMB, ZWE	
	2004	773 0007	MDG	
		44 1908	MDG, MOZ, MWI, MUS, REU, SYC	
		50 000	BWA, NAM, MOZ, ZMB, ZWE	
	2007	450 000	MDG ¹² SYC ¹³ , MUS ¹⁴	ZWE, MWI, KEN, DRC, AGO
		285 000	MOZ ¹⁵	
		1 738 731	ZMB	AGO, BWA, ZWE
		22 500	NAM	
		1 738 731	ZMB	
	2008 ¹⁶	239 238	BWA, LSO, NAM, MWI, MDG ¹⁶ , MOZ ¹⁷ , SWZ, ZMB, ZWE	
		322,400		
		449 000		

Notes:

AGO = Angola, BWA = Botswana, DRC = Congo, KEN = Kenya, LSO = Lesotho, MDG = Madagascar, MWI = Malawi, MUS = Mauritius, MOZ = Mozambique, NAM = Namibia, REU = Reunion, SYC = Seychelles, SWZ = Swaziland, ZAF = South Africa, ZMB = Zambia, ZWE = Zimbabwe,

* Bold represents countries that appealed for Humanitarian Assistance

¹² MDG was affected by all cyclones

¹³ SYC was only affected by cyclone Bondo

¹⁴ MUS was only affected by cyclone Gamede

¹⁵ MOZ was only affected by cyclone Favio

¹⁶ MDG received aid for cyclones Fame and Ivan

¹⁷ MOZ received additional funding for Cyclone Jokwe

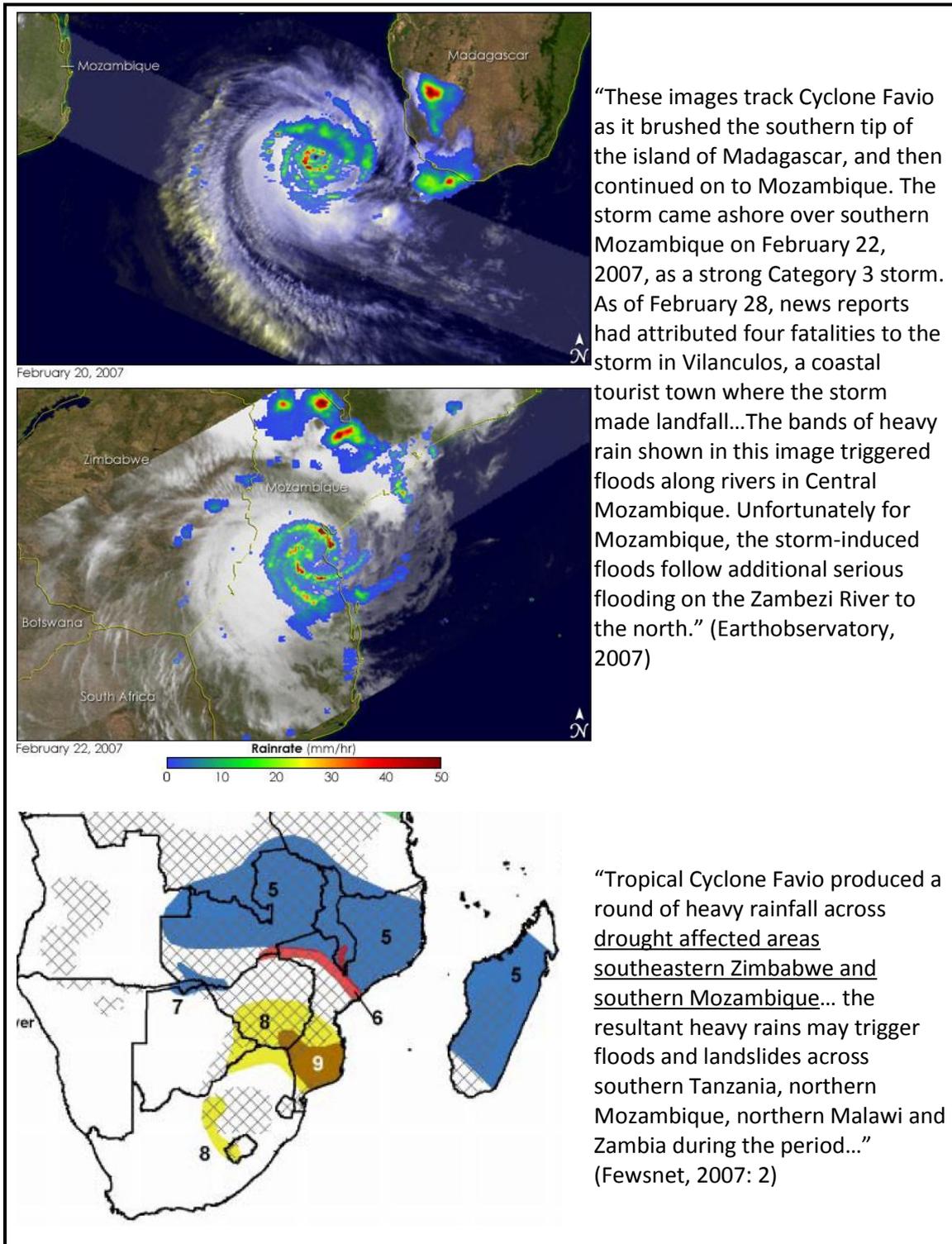


Figure 3.5.3.1: Progression of Cyclone Favio from Madagascar to Mozambique and its satellite early warning image (2007)

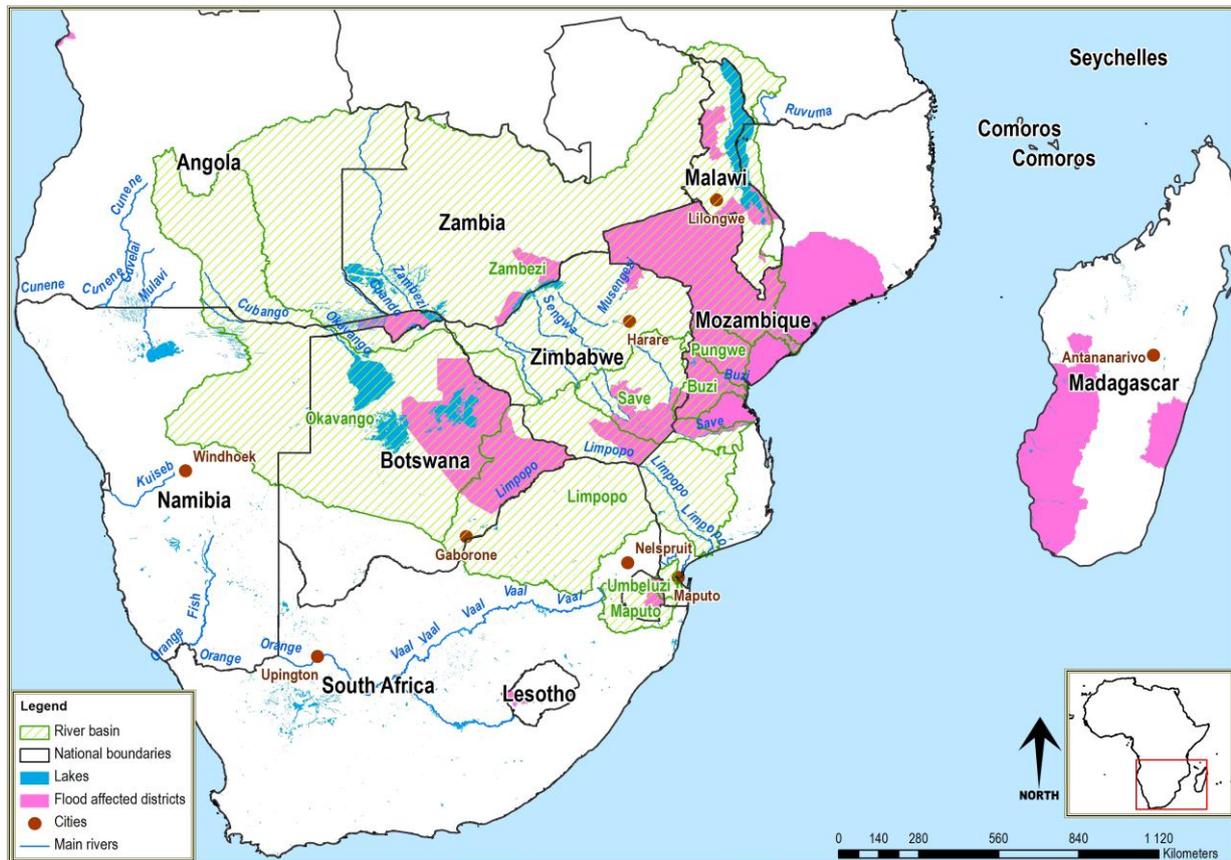


Figure 3.5.3.2 Areas reporting impacts associated with the 2007 floods, linked to Cyclone Favio

3.5.4 Transboundary, trans-continental... trans-national: economic risks and exposures

The concept of transboundary risk is not limited to natural threats or epidemics, nor constrained to adjoining geographic or administrative entities. Transboundary risks (refer to glossary) can apply to global economic or political risks just as readily as public health or environmentally-induced conditions. As southern Africa becomes more economically integrated, and continues to strengthen its links across Africa and beyond, its exposure increases to a wider diversity of threats. Similarly, with growing global and continental connectivity, the consequences of shocks sustained elsewhere are more likely to transfer quickly across southern Africa, with potential to amplify existing vulnerabilities. Insights on the potential impacts of such processes were clearly signalled in 2007 – 2009, when global economic forces generated widespread effects in southern Africa, along with wide-ranging implications for humanitarian assistance. These are described below and represented schematically in Figure 3.5.4.1.

The rationale and interpretation Figure 3.5.4.1: linkages and interactions

Chapter 1 introduced several concepts that acknowledged the interconnectedness of global and local risk processes – and their complexity. These included *risk accelerants*, *risk amplifiers*, *sequential and simultaneous crises*, and *synchronous failure*. The period 2007-2009 particularly underlined the relevance of these concepts for interpreting complex, interconnected risk processes in southern Africa.

During this period, a series of interlinked humanitarian emergencies unfolded in southern Africa, in part due to global economic forces, exacerbated by deteriorating governance conditions in Zimbabwe, as well as political insecurity elsewhere in Africa. These were measurably reflected in marked cross-border movement, widespread xenophobic violence in South Africa (May 2008), a cholera outbreak in Harare (reported in August 2008) and its regional spread (2008-2009).

Figure 3.5.4.1 shows the linkages and interactions that are described below. Blue boxes in the diagram indicate processes that took place at a regional scale, while green and orange boxes indicate country level processes in South Africa and Zimbabwe respectively. Dark red boxes display areas of accumulating risk conditions, while light red boxes show the realised risk outcomes. The numbers in boxes within Figure 3.5.4.1 are clustered together in the text below to enable cross-referencing.

Box 7: Introducing the rationale and interpretation for Figure 3.5.4.1: linkages and interactions

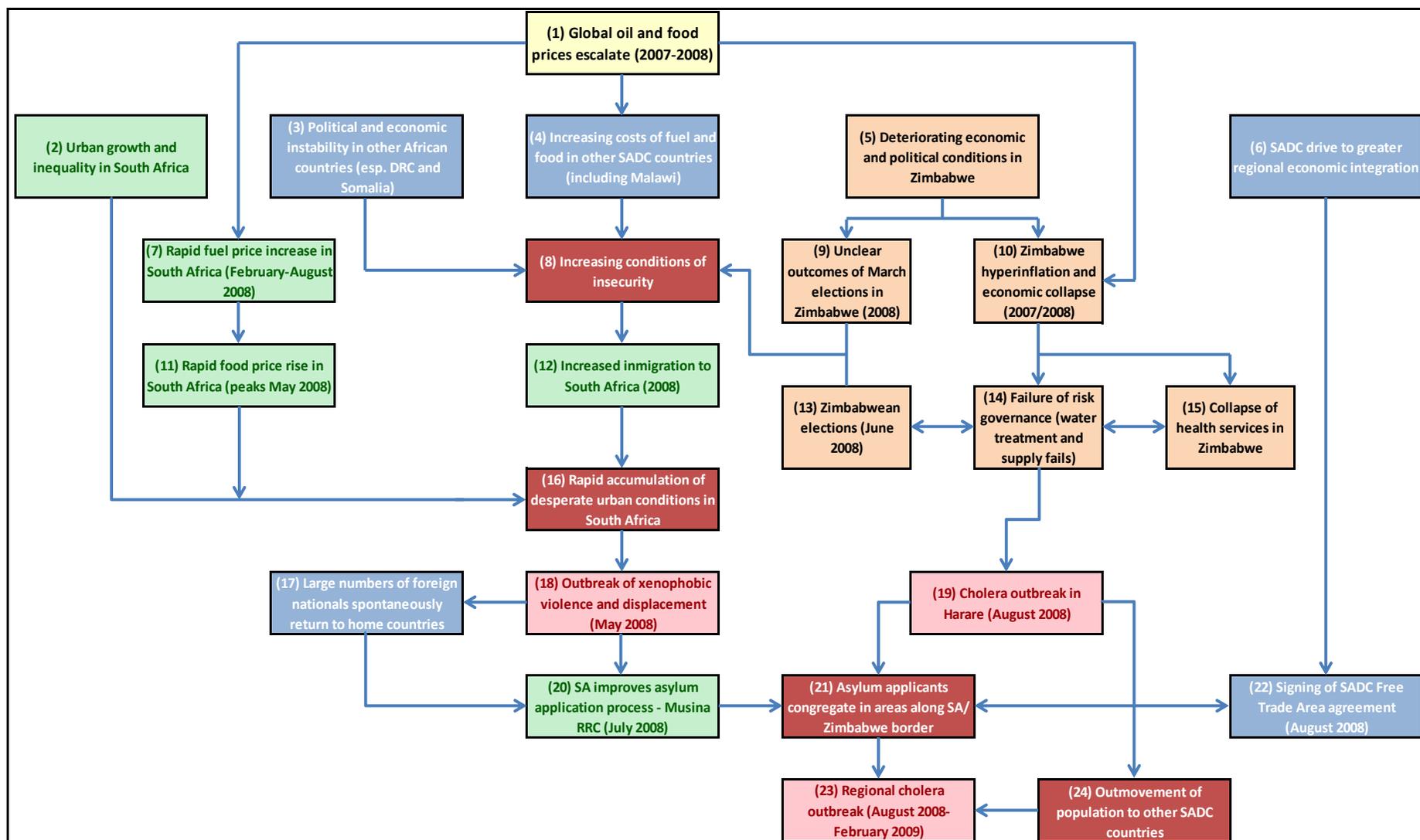


Figure 3.5.4.1: Concatenating emergencies - South Africa 2007 - 2009

Context and regional background 2007- 2008 (Boxes 1-3, 5, 6)

Since 2000, global food and fuel prices have been steadily rising. This has coincided with other trends within southern Africa, including an increased SADC emphasis on regional economic integration. In the case of South Africa, this period has also been characterised by rapid urbanisation, reflected in the growth of informal settlements with limited access to services, as well as marked structural inequality. During this period, Zimbabwe also began to experience escalating political and economic turmoil, accompanied by high levels of food insecurity and entrenched socio-economic vulnerability. By 2007, conflicts had also re-emerged in the DRC and Somalia (which the US ambassador to Kenya declared a disaster area on 3 October 2007).

In late 2007, additional pressures arose in response to sharp increases in global oil, wheat and maize prices that rose rapidly until mid-2008 (see Figure 3.5.4.2). These were subsequently linked to political and economic instability in many African and Asian countries, including the widespread occurrence of food riots (Patel and McMichael, 2009)

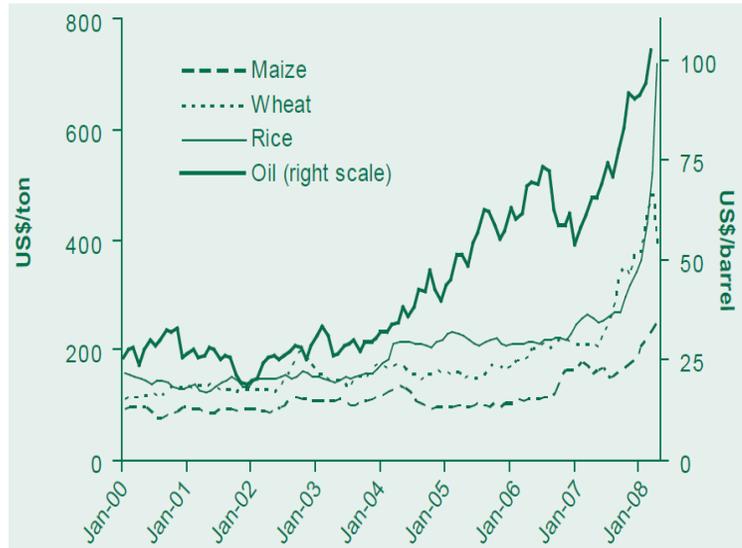
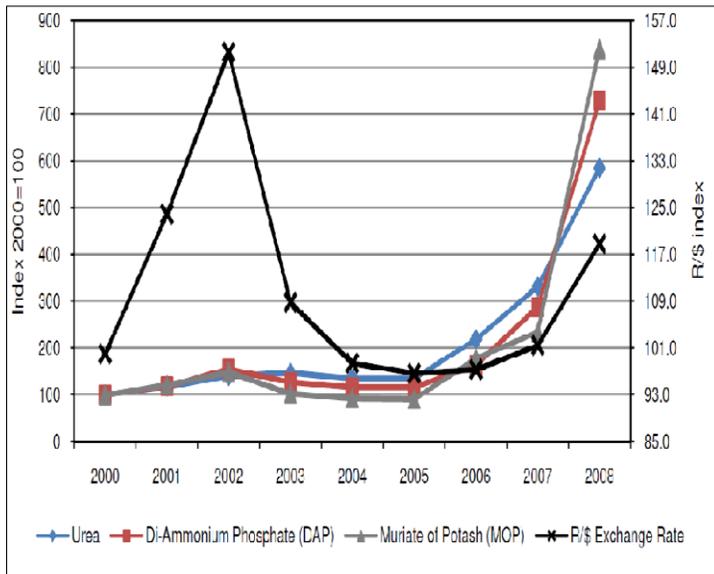


Figure 3.5.4.2: Maize, wheat, rice and oil prices 2000 – 2008
(Source: Von Braun, 2008)

Illustrative effects of global food and fuel price spikes in southern Africa (Boxes 4, 7, 10)



The rapid increase in global oil and food prices was reflected regionally, with implications also for fertiliser costs, for instance, in Malawi (Figure 3.5.4.3). Such economic pressures simultaneously increased local food production costs as well as those for food imports, serving to amplify pre-existing vulnerability conditions. Similarly, the escalation of global oil and food prices resulted in a marked increase in fuel prices in South Africa (Figure 3.5.4.4). This, in turn, caused local prices to spike for staple foods (Figure 3.5.4.5), increasing hardship particularly for poor households in urban areas.

Figure 3.5.4.3: Rapid increase in global oil and food prices was reflected regionally (Source: NAMC, 2008)

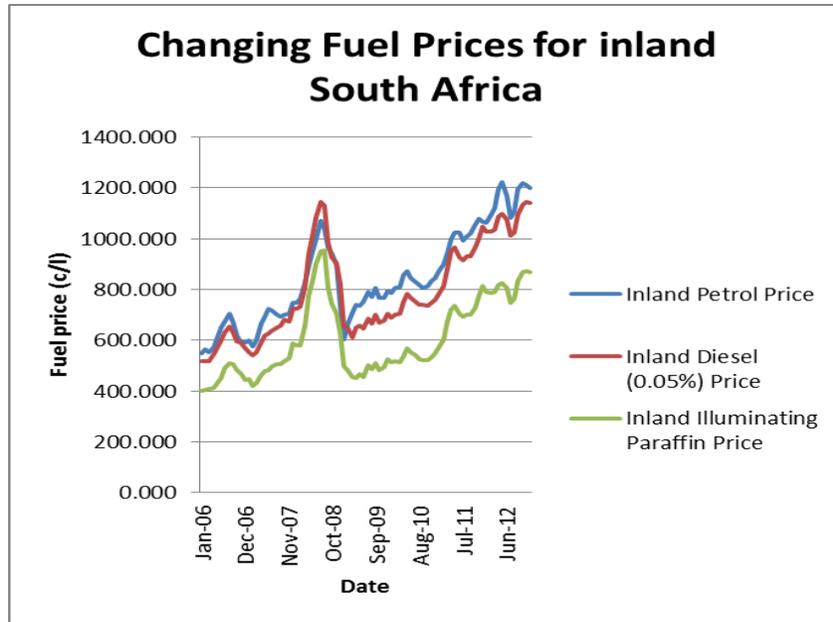


Figure 3.5.4.4: Changing in fuel prices for the inland South Africa (Source: SAPIA, 2013)

By 2008, the steep increase in food and fuel prices had also amplified the rapidly deteriorating governance and economic conditions in Zimbabwe, with monthly inflation rate peaking at 2600% in July 2008 (Figure 3.5.4.5).

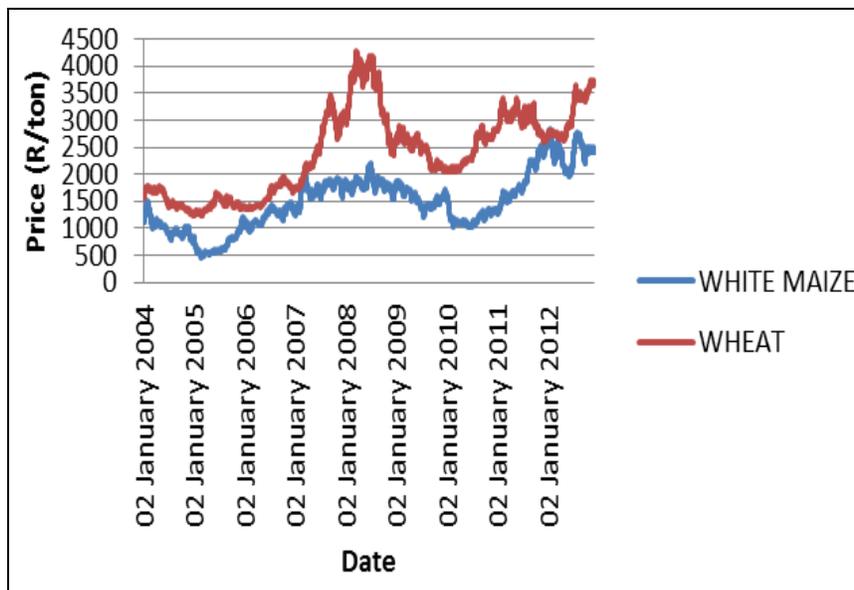


Figure 3.5.4.5: Local prices to spike for staple foods (Source: JSE, 2012)

Zimbabwe as regional risk driver (Boxes 9, 12, 13, 16)

Zimbabwe’s resulting hyperinflation and economic collapse were compounded by the global oil and food price volatility – especially given the country’s dependence on foreign food imports. However, adverse economic conditions also reflected sustained political instability and uncertainty in the months preceding the March 2008 presidential elections. The lack of a clear election outcome resulted in the rescheduling

of-elections for June 2008. Following a period of social tension, intimidation and political violence, Morgan Tsvangirai (leader of the opposition party, the Movement for Democratic Change (MDC)) withdrew from the process, resulting in President Mugabe being re-elected in June 2008.

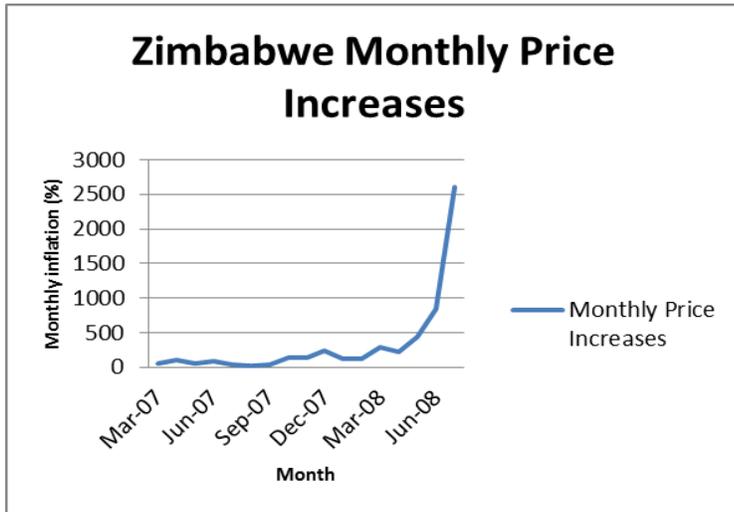


Figure 3.5.4.6: Zimbabwe Monthly price increases (Source is: RBZ, 2012)

Continuing political instability and worsening economic conditions in Zimbabwe resulted in large numbers of Zimbabweans leaving the country to generate livelihoods elsewhere, with more than one million estimated to be in South Africa by the end of 2007 (Makina 2007).

Economic and political hardship intensifies in urban South Africa (Boxes 12, 16, 17, 18, 20)

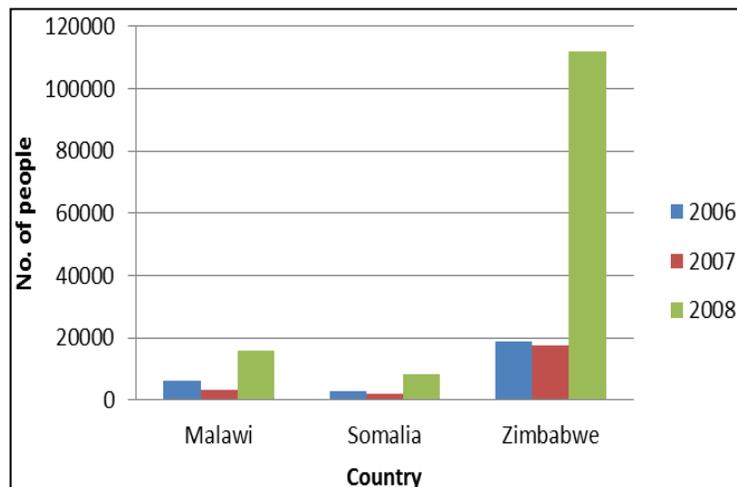


Figure 3.5.4.7: Number of asylum seekers to RSA from Malawi, Zimbabwe and Somalia (Source: UNHCR (2012))

From 2007-2008, the mounting economic pressures on SADC nationals, combined with deteriorating conditions in Zimbabwe and political instability and conflict in other African countries (such as the DRC and Somalia) drove high levels of livelihood insecurity both within and outside southern Africa. This in part prompted the movement of foreign nationals to South Africa, as an adaptive response to hardships in their countries of origin. The scale of this mobility is indicated in Figure 3.5.4.7 which shows the steep increase during 2008 in the numbers of asylum seekers to South Africa from Malawi, Somalia and Zimbabwe.

However, the combination of high levels of urban poverty in South Africa’s informal settlements, increasing food and transport costs as well as the increased number of foreign asylum seekers (mostly in urban/peri-urban areas) generated highly and mutually desperate urban conditions. These driving forces

escalated social tensions, eventually resulting in widespread xenophobic violence in May 2008. Early estimates suggest that between 80,000 and 200,000 foreign nationals were displaced. However, these estimates are viewed as very speculative (and low) as it is not possible to verify the numbers of foreign nationals who voluntarily returned to their countries of origin (Igglesden, 2008).

In July 2008, and as a partial response to the xenophobic violence, the Government of South Africa opened the Musina Refugee Reception Centre near the Zimbabwean border to better accommodate asylum seekers and refugees.

Zimbabwe as regional risk driver (Boxes 14, 15, 19, 21, 22, 23)

Zimbabwean nationals who fled the xenophobic violence in South Africa returned to a country whose basic services had collapsed, including water supply, treatment and waste management services (UN, 2009). These significant failures in services and infrastructure led to an outbreak of cholera in August 2008 in Harare.

At the same time (August 2008), SADC signed a Free Trade Area agreement (Madzingira and Kureya, 2011). These two developments promoted cross-border population movement and led to a build-up of asylum seekers around the South African-Zimbabwean border. This congregation of people during a cholera outbreak, combined with high population mobility accelerated the potential for epidemic spread, resulting in a regional cholera outbreak from August 2008 - February 2009.



Figure 3.5.4.8: Asylum seekers waiting for their applications to be processed in Musina, South Africa (Source: CBS, 2008)

3.6 To sum up

This chapter has profiled the diversity of threats and emergencies that have occurred in southern Africa since 2000. It indicates a wide range of 'long wave' (drought) and 'short-wave' (sudden onset flooding) emergencies, of both natural and socio-political origin. Study findings also foreground the extremely short recurrence intervals for severe weather shocks at sub-national levels in parts of Malawi and Madagascar. These signal the undermining developmental implications of repeated shocks in exposed areas and communities.

The region's interconnectedness both topographically and socio-economically is also clear, underlined by repeated instances of transboundary flooding, communicable disease spread and population movement under conditions of duress. Increasingly, these regional linkages extend globally and continentally, increasing the region's exposure to a 'non-traditional' array of potential shocks and stresses.

CHAPTER FOUR: REGIONAL RISK CHANGES DIRECTION

4.1 On the path to progress, but...

Capacities to reduce risk in southern Africa are nested within a broader regional context. This chapter examines key economic, demographic, environmental and other conditions that will drive, stabilise or de-escalate humanitarian emergencies over the next decade among the study countries.

Encouragingly, and consistent with development patterns elsewhere in Africa, southern Africa has shown favourable growth over recent years. This was reflected in increased per capita income of 12.1% on average between 2009 and 2010 (SADC, 2011), while GDP reportedly improved by an average of 5.4% in 2010 (ibid). Table 4.1.1 below corroborates this general trend, with encouraging increases in GDP per capita from 2000 to 2011.

Table 4.1.1: GDP per capita change 2000-2011, study countries

Country	GDP per capita (US\$)				
	2000	2003	2006	2009	2011
Angola	656	905	2 457	4 069	5 148
Botswana	3 204	4 419	5 921	5 822	8 680
Comoros	359	533	610	748	809
Lesotho	380	467	685	796	1 106
Madagascar	252	325	299	422	467
Malawi	155	200	236	327	371
Mauritius	3 861	4 588	5 194	6 922	8 797
Mozambique	233	237	333	423	535
Namibia	2 062	2 457	3 767	3 983	5 293
Seychelles	7 579	8 523	12 053	9 637	11 711
South Africa	3 020	3 648	5 468	5 738	8 070
Swaziland	1 508	1 827	2 894	2 827	3 725
Zambia	317	400	911	1 006	1 425
Zimbabwe	535	454	434	468	776
Average	1337	1594	2424	2721	3693

(Source: World Bank, 2012)

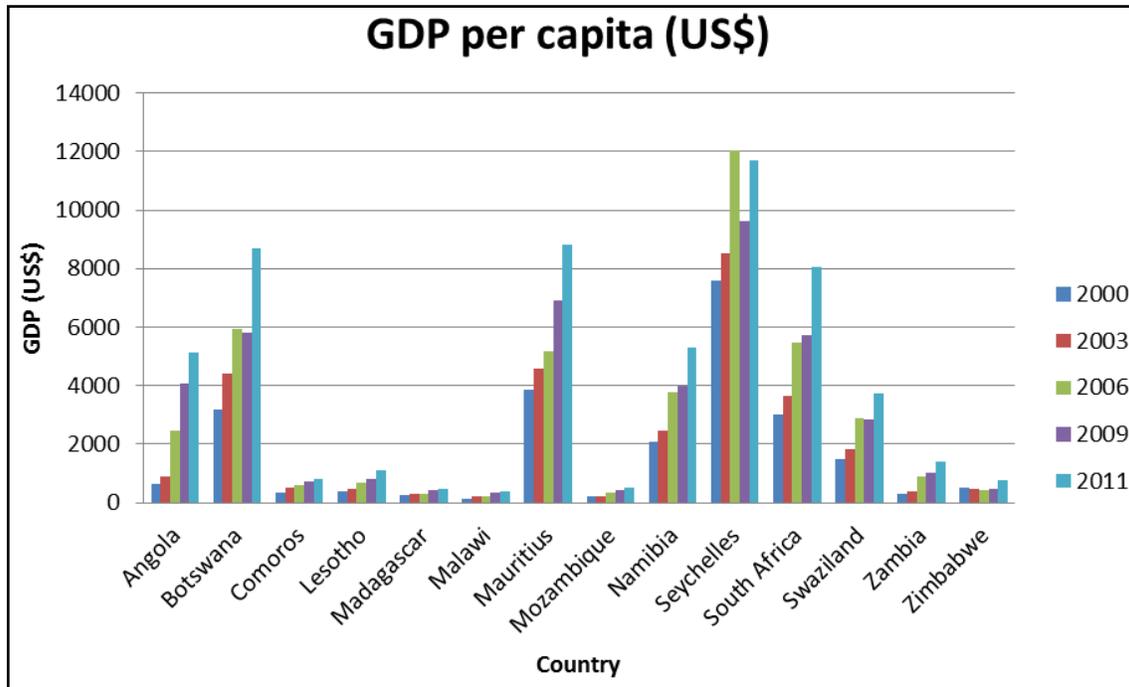


Figure 4.1.1: Changes in GDP per capita with time for SADC countries

However, sustainable economic growth in many of the study countries is limited by structural factors, including energy constraints, infrastructural inadequacies, the slow pace of industrialisation and a precarious reliance on primary commodities like base metals. Agriculture and mining still generate the greatest input for Africa’s economy as a whole, reportedly providing employment for over two thirds of the working class (Chakauya et al., 2009). This situation applies to many of the study countries that remain primarily dependent on commodities for export earnings.

4.1.1 Changing demographics and population growth

By 2025, southern Africa’s population is estimated to exceed 215 million people (Table 4.1.1.1, Figure 4.1.1.1), with the majority living in towns and cities. The region’s under-fifteen year olds (estimated at 38% of current population) will continue to swell the ‘youth bulge’ over this period.²³ In nine of the study countries (Angola, Botswana, Lesotho, Madagascar, Malawi, Namibia, Swaziland, Zambia, Zimbabwe), young people between 15-24 years already comprise 20-24% of the total population (Ortiz & Cummins, 2012).

²³ The term ‘youth bulge’ refers to ‘a demographic trend where the proportion of persons aged 15-24 in the population increases significantly compared to other age groups’. Ortiz, I. & Cummins, M. 2012. When the Global Crisis and Youth Bulge Collide: Double the Jobs Trouble for Youth’. UNICEF, New York http://www.unicef.org/socialpolicy/files/Global_Crisis_and_Youth_Bulge_-_FINAL.pdf

Assuming stability and continued support for HIV and AIDS programmes over the forthcoming decade, HIV prevalence rates (Figure 4.1.1.2) are expected to decline during the 2020s. However, continued support will be needed for at-risk groups, including orphans and vulnerable children, estimated at 35% of all children in Swaziland alone (Gonzalez, 2012).

Table 4.1.1.1: Medium estimates of population size by country

Country	Total population (medium estimates)			
	2000	2012	2025	2040
Angola	13 926 373	19 618 432	27 164 879	36 170 944
Botswana	1 757 925	2 030 738	2 269 075	2 428 013
Comoros	562 469	753 943	1 018 769	1 398 615
Lesotho	1 963 878	2 193 843	2 470 174	2 681 092
Madagascar	15 364 272	21 315 135	30 423 688	43 220 671
Malawi	11 228 756	15 380 888	23 474 431	36 721 473
Mauritius	1 196 027	1 306 593	1 378 314	1 396 334
Mozambique	18 200 656	23 929 708	31 767 590	42 307 969
Namibia	1 895 839	2 324 004	2 824 385	3 325 456
Seychelles	78 685	86 879	91 032	93 313
South Africa	44 760 380	50 459 978	53 526 619	55 940 525
Swaziland	1 063 832	1 203 330	1 392 182	1 561 517
Zambia	10 201 562	13 474 959	20 327 835	32 339 342
Zimbabwe	12 509 477	12 754 378	16 458 535	19 091 525
Total	134 710 131	166 832 808	214 587 508	278 676 789

(SOURCE: UN Dept. Economic and Social Affairs, 2012)

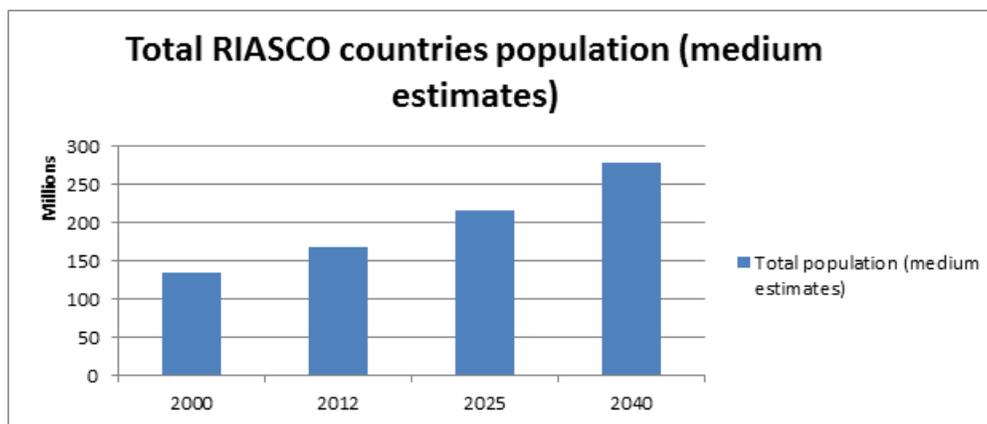


Figure 4.1.1.1: Population growth estimates for states across the study region

(Source: Extracted from UN Dept. of Social and Economic Affairs, 2012)

Table 4.1.1.2: Number of people living with HIV in southern Africa

People living with HIV	2000	2003	2006	2009	2011
Angola	120 000	150 000	180 000	210 000	230 000
Botswana	260 000	280 000	280 000	290 000	300 000
Lesotho	250 000	270 000	280 000	300 000	320 000
Madagascar	21 000	25 000	28 000	31 000	34 000
Malawi	830 000	910 000	930 000	920 000	910 000
Mauritius	5 700	7 800	8 400	7 900	7 400
Mozambique	760 000	1 000 000	1 200 000	1 300 000	1 400 000
Namibia	150 000	180 000	180 000	190 000	190 000
South Africa	4 000 000	4 900 000	5 200 000	5 400 000	5 600 000
Swaziland	110 000	140 000	160 000	180 000	190 000
Zambia	840 000	900 000	920 000	950 000	970 000
Zimbabwe	1 900 000	1 700 000	1 400 000	1 200 000	1 200 000
Total	9 246 700	10 462 800	10 766 400	10 978 900	11 351 400

(Source: UNAIDS, 2012)

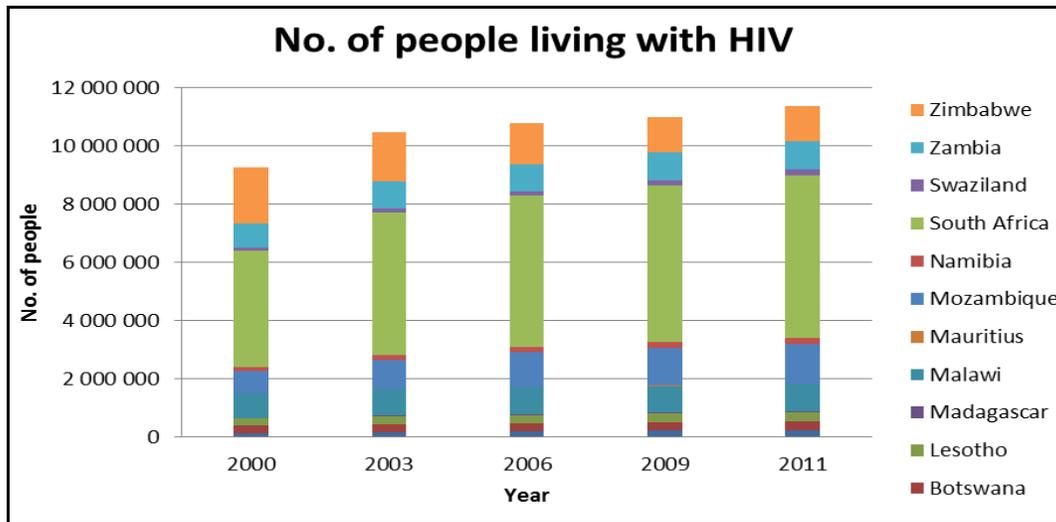


Figure 4.1.1.2: Proportion of HIV positive population per country (Source: UNAIDS, 2012)

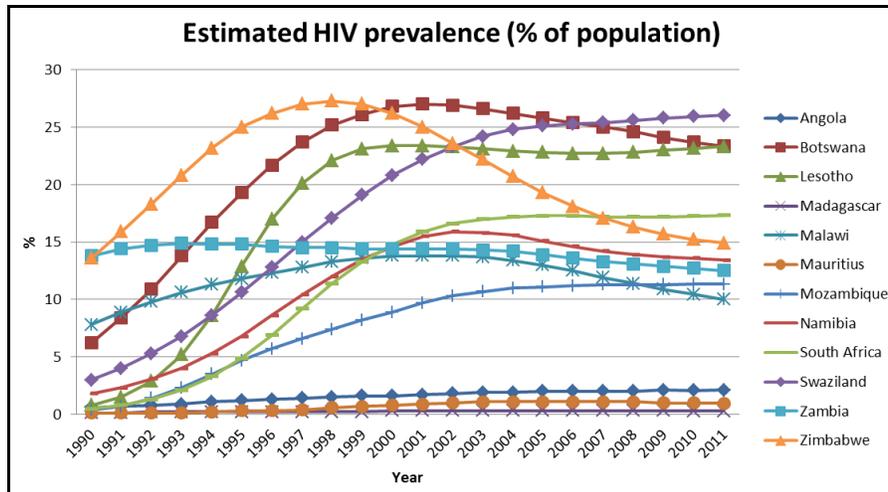


Figure 4.1.1.3: HIV prevalence (% of population) for southern Africa (Source: UNAIDS, 2012)

4.1.2 Education as development imperative

Uneven access to primary and secondary education remains an obstacle to building the skilled human capital necessary for sustained national and regional development. While data from the Population Reference Bureau (PRB) Database indicate generally favourable primary school completion rates, Kotecha paints a bleak picture of the SADC region. She suggests that although primary school registration has increased, one out of every four primary-aged children remains unenrolled (Kotecha, 2012:9). The region’s low secondary school enrolment levels are even more alarming (Table 4.1.2.1 and Figure 4.1.2.1), with the exception of island states such as Mauritius and the Seychelles. This has profound implications for future skills development potential of the region’s burgeoning youthful population, already faced with high levels of unemployment.

Table 4.1.2.1: Enrolment

Country	% Enrolment	
	Female	Male
Botswana	64	56
Lesotho	36	22
Madagascar	24	23
Malawi	24	23
Mauritius	81	79
Mozambique	15	17
Namibia	60	49
Seychelles	99	95
South Africa	65	59
Swaziland	26	31

(Source: PRB, 2012)

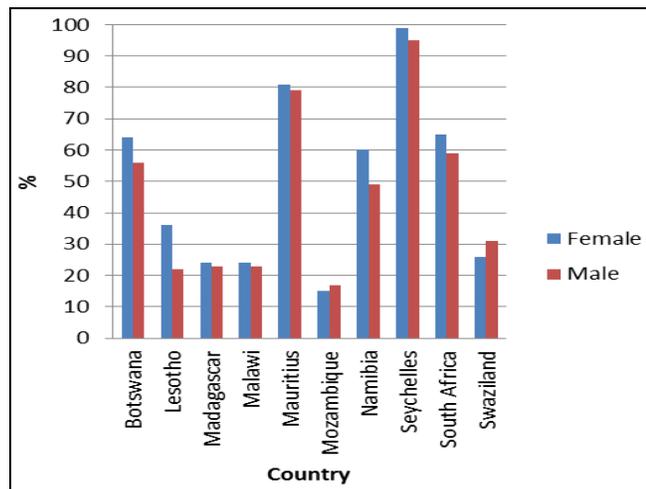


Figure 4.1.2.1: Percent (%) enrolment at secondary school by sex and country (2005-2010)

(Source: PRB, 2012)

Globally, the SADC region has the lowest levels of higher education provision and enrolment rates (Kotecha, 2012). Even the most optimistic future scenario suggests that enrolment rates in higher education across the SADC region can improve only by 27.5% by 2050, well below the current global average of 30%.

4.1.3 Youth unemployment as a risk driver

A recent economic survey undertaken by the African Development Bank Group highlights the issue of youth unemployment, specifically as a related concern across the region. For example, in Angola, where unemployment mainly impacts on unskilled labour, an increasing number of young graduates are unable to find employment. In Swaziland half of youths (generally 15-24 years old) remain unemployed. The African Bank survey also flags the high rate of under-employment in the country (42.2%) (African Development Bank, 2012).

Employment figures for the SADC member states are dated, with independent sources differing markedly from official figures (SADC, 2011:18). Currently Mozambique, Zambia and Zimbabwe are believed to have unemployment rates of over 50%, with Zimbabwe witnessing a staggering 95% (Trademark, 2012).

Namibia recently joined this downward trend, with a Labour Force Survey finding a 51.2% unemployment rate among the country's economically active population, up from 33% in 2004. There has been a noted increase in crime and illicit activities such as drug trafficking (TMSA, 2012). This steep hike in the unemployment rate is said to be related to the decline in the country's agricultural sector due to adverse weather conditions, as well as to the global economic crisis, which has impacted on the country's mining and manufacturing sectors (TMSA, 2012). Although Namibia has a high graduate turn-over, there are few employment opportunities for the country's skilled youth. In contrast, Botswana has the lowest unemployment rate in the region, at only 7.5%, while South African unemployment rates, officially, are also lower than those of other SADC countries (TMSA 2012)²⁴.

4.1.4 Protecting food security despite increasing food prices

Unfortunately, high, sustained unemployment levels have continued to undermine household food security across the region. This is reflected in Figure 4.1.4.1, which depicts the proportion of undernourished people as a percentage of the population in 13 of the study countries - reflecting the share of the population with insufficient dietary energy intake as per FAO figures.

²⁴ Botswana and South Africa currently draw the most migrants from the region and further afield.

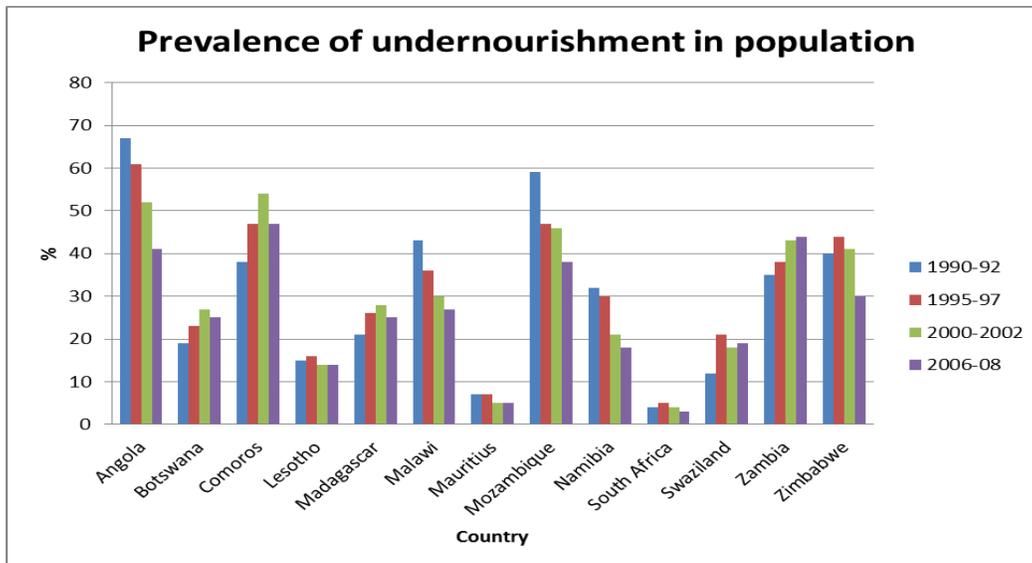


Figure 4.1.4.1: Prevalence of undernourished in population (%) (Source: IFPRI, 2012)

In this context, food prices increasingly determine access to food, particularly as the region is experiencing unprecedented rates of urbanisation and urban growth. Rising cereal costs pose serious problems for the poor, who are net buyers of food, including the urban poor, rural landless labourers and many smallholder farmers (von Braun, 2008). As poor households allocate high proportions of expenditure to food staples, higher prices translate into reduced energy consumption and less diverse diets, of lower quality. At its extreme, rapid spikes in food prices triggered riots in numerous of food-importing countries including Mozambique in 2010.

When considering food price increases, the 2007-2008 global crisis is the reference point, particularly as its effects rippled across the globe and southern Africa. However, declining prices in 2009 were soon overtaken by steady increases that reflected prices at the same levels of the 2007-2008 crisis. As shown in Figure 4.1.4.2, South African food prices increased steadily across a broad spectrum of food items.

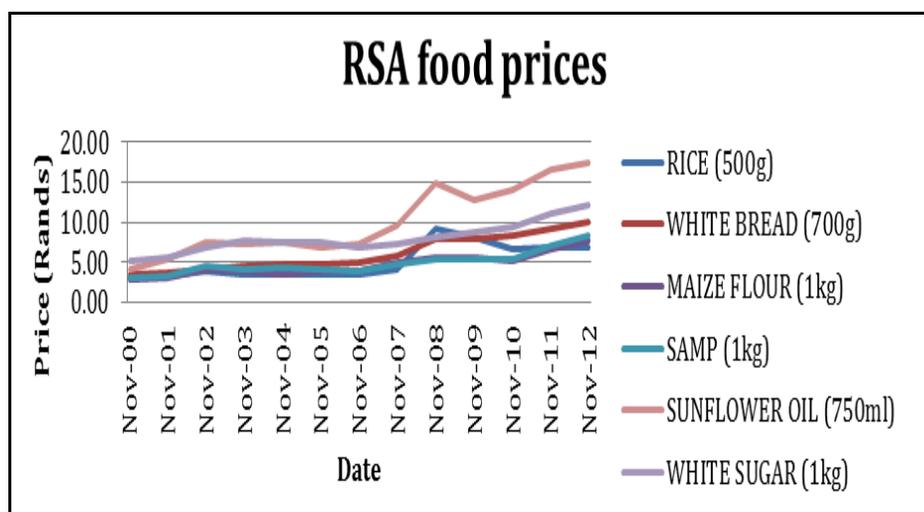


Figure 4.1.4.2: Food prices in South Africa, November 2000 to November 2012 (Source: SAGIS, 2012)

This affected trade in the region as a whole, as South African prices influence those in urban centres throughout the region through the expansion of retailers and informal trade. Higher commodity prices and increasing costs in the food value chain gradually worked their way into food prices, and, given the typical lag between producer and consumer prices, increased at a faster rate over the past two years.

An inability to access food due to high prices has a number of knock-on effects including impacting HIV prevention and AIDS treatment and care (Gillespie et al, 2009). This is significant, considering the powerful role that HIV plays as a driver and consequence of vulnerability in the region. Sudden increases in food insecurity often lead to distress migration as people search for work and food. Mobility is a marker of enhanced risk of HIV exposure, both for the person moving, and for other adults who may remain at home. Recent studies in Botswana, Swaziland, Malawi, Zambia and Tanzania have also shown associations between acute food insecurity and unprotected transactional sex among poor women (Weiser et al, 2007). Adults living with HIV require 10–30% more energy than before they were infected, and children may need up to 100% more (Gillespie et al, 2009). Also, for people living with HIV (PLHIV), inadequate dietary quantity and quality exacerbated by the increase in food prices, may lead to more frequent, more severe opportunistic infections and a more rapid progression to AIDS. For PLHIV who are on treatment, nutrition is important for adherence. Some of the negative side effects of antiretroviral therapy are reduced if medicines are taken with food and if limited available cash is diverted to food purchases, transportation to clinics, which may be costly in terms of time and money, may be jeopardized.

This encapsulates a further dimension of food security notably that of utilisation, particularly the nutrition aspect. Undernutrition in early life is responsible for the deaths of millions of young children annually. It reduces the amount of schooling that children attain and increases the likelihood of their being poor as adults, if they survive. The human and economic costs are enormous, and yet the rate of under-nutrition reduction remains minimal (as evidenced by IFPRI and WHO data). Southern Africa faces an enormous challenge in this regard as illustrated in the following figures.

First, the prevalence of underweight in children under the age of five indicates the proportion of children experiencing weight loss and/or reduced growth, which are collected by the WHO. The changes over time for several southern African countries are presented in Figure 4.1.4.3.

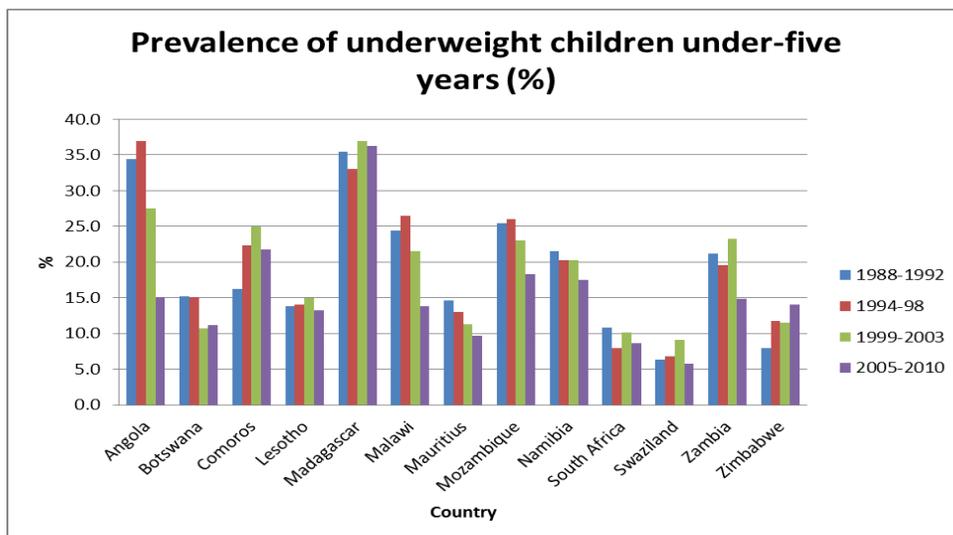


Figure 4.1.4.3: Prevalence of underweight in children under-five years (%) (Source: IFPRI, 2012)

Stunting or chronic malnutrition is a second important indicator of undernutrition, and ‘refers to a condition of low height for age, reflecting sustained and cumulated episodes of undernutrition and/or repeated infections’ (FAO, nd).²⁵ Figure 4.1.4.4 presents data on stunting collected by the WHO for six southern African countries over the past two decades. It provides compelling evidence of the protracted nature of nutrition insecurity in the region. The persistence of stunting in these countries at levels in the range of 40% is of serious concern given its adverse impacts on ‘cognitive development, school achievement, economic productivity in adulthood and maternal reproductive outcomes’ (Dewey & Begum, 2011)

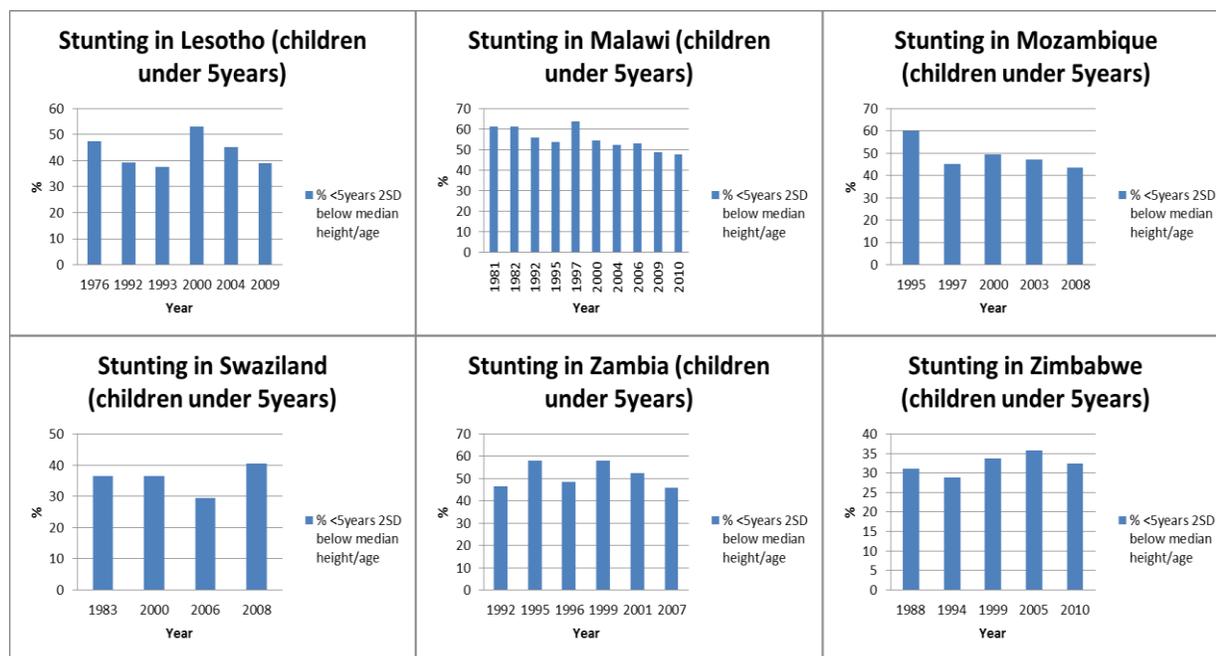


Figure 4.1.4.4: Changes in levels of stunting in southern Africa (Source: WHO, 2012)

With specific respect to nutrition security in urban areas, Garrett and Ruel found the percentage of the population to be energy deficient in terms of food consumption was higher in urban areas in most of the ten countries that were investigated in sub-Saharan Africa in a decade-old study (1999). More recently an 11-city African Food Security Urban Network (AFSUN) study found 76% of sampled households to be moderately or severely food insecure (Frayne et al, 2010). Together with inadequate services, these will constitute a toxic recipe for food-related emergencies, especially in urban areas with high HIV prevalence rates (see Figure 4.1.4.5). This point is further illustrated by the HIV prevalence rates in urban Malawi of 22.7% compared with 10.5% in rural areas, (Malawi Government. 2012), and 23.1% in Zambia’s urban areas, compared with 10.8% elsewhere (National AIDS Council - Zambia, 2012).

²⁵ Source: <http://www.fao.org/food/nutrition-sensitive-agriculture-and-food-based-approaches/faq/en/>

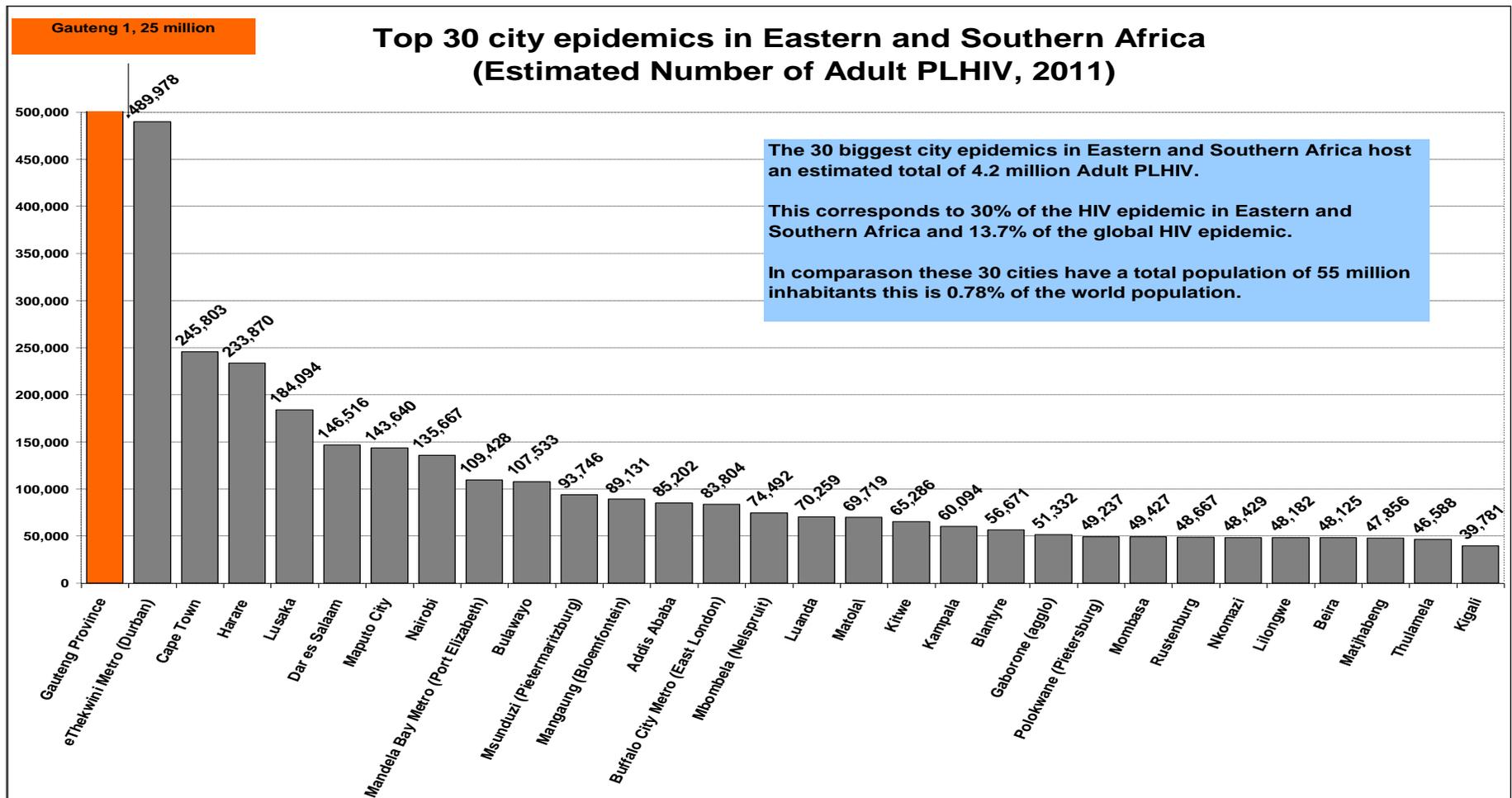


Figure 4.1.4.5: Top 30 City HIV epidemics in Eastern and Southern Africa, 2011 (Source: UNDP, 2011)

The United Nations Children’s Fund (UNICEF) nutrition framework identifies key underlying determinants of nutritional status as sufficient quantity and quality of food, adequate health services and hygiene, and appropriate childcare and feeding practices. Satisfactory access to these three broad elements is vital for proper nutritional status and a resultant healthy and productive life (Bhutta et al, 2008). Although the vital role nutrition plays in development is increasingly understood, wider societal norms at the national and international levels do not support nutrition as well as they could: although better nutrition is in everyone's interests, it is nobody's responsibility. For all these reasons, undernutrition remains a neglected crisis in southern Africa and will continue over the foreseeable future.

Access to food, education and employment and HIV/AIDS represent just four of many pressing challenges facing southern Africa. Others with implications for local and international humanitarian actors include risk drivers linked to rapid urbanisation, the region’s increasing connectedness globally and continentally, and its exposure to environmental change – specifically climate change.

4.2 Understanding Urban Risk

4.2.1 Are the growth projections accurate?

In recent decades, the rate of urbanisation in the study countries across the region has followed an upward trend (Table 4.2.1.1), with Figure 4.2.1.1 indicating that Angola, Botswana and South Africa will be almost 70% urban by 2025 (UN Habitat, 2010).

Table 4.2.1.1: Changing urban population in southern Africa

Country	Urban population			Urban pop (% of total pop)		
	2000	2010	2025	2000	2010	2025
Angola	6 995 000	11 112 000	18 942 000	48.98	58.51	69.03
Botswana	917 000	1 209 000	1 642 000	53.22	61.12	70.26
Comoros	155 000	195 000	302 000	28.08	28.22	33.30
Lesotho	377 000	560 000	887 000	19.96	26.87	38.46
Madagascar	4 143 000	6 082 000	10 836 000	27.12	30.19	37.89
Malawi	1 796 000	3 102 000	6 689 000	15.18	19.77	28.84
Mauritius	510 000	542 000	634 000	42.68	41.79	45.29
Mozambique	5 601 000	8 996 000	15 612 000	30.69	38.43	50.05
Namibia	590 000	840 000	1 346 000	32.35	37.97	47.90
Seychelles	41 000	47 000	58 000	50.62	55.29	63.74
South Africa	25 528 000	31 155 000	37 084 000	56.89	61.70	68.97
Swaziland	244 000	257 000	347 000	22.59	21.38	23.85
Zambia	3 643 000	4 733 000	7 837 000	34.80	35.70	41.49
Zimbabwe	4 205 000	4 837 000	7 921 000	33.76	38.26	47.21
Total	54 745 000	73 667 000	110 137 000	Average		
				40.32	44.87	52.16

(Source UN Habitat, 2010)

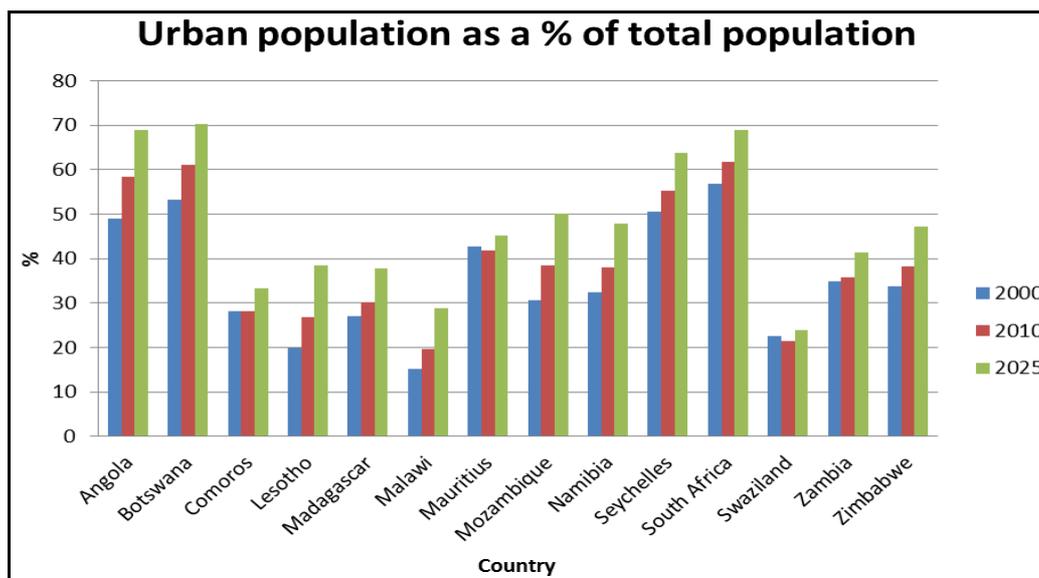


Figure 4.2.1.1: % of population living in urban areas (Source: UN-Habitat, 2010)

Although the continuing growth of African urban settlements may be attributed to natural increase (Potts, 2010:26), in-migration has also contributed substantially to this process. For instance, recent research suggests that the majority of poor urban households in southern Africa currently accommodate either migrants or a mix of migrants and non-migrants (Crush, 2012:5). Crush's continued and empirically-grounded research has recorded an exponential growth of migrant households in urban areas in recent years, along with increased circulation and cross-border movement - trends he believes will continue unabated in the near future.

The process of rapid urbanisation within southern Africa, however, needs to be better understood, not as the growth of megacities as in other emerging economies, but rather of the growth of urban areas of all shapes and sizes, from small market towns of a few thousand inhabitants to the larger towns and cities (Cohen, 2004). Box 7 discusses this, with examples of the different national definitions of 'urban' that prevail in southern Africa.

What is urban? Examples from Africa

The frequently cited United Nations population data employ urban/rural statistics based on the member countries own classifications of what constitutes urban and rural, definitions that vary greatly between states, making comparisons inherently problematic (Cohen, 2004).

For example, in Angola the definition of urban is based on population size alone, so that localities of more than 2,000 inhabitants are considered urban. In other countries, areas have been re-designated as urban due to the changing economic activity structure from mainly agricultural to more urban in nature.

In Botswana for example an urban area is defined as one with a population of more than 5,000 in which at least three quarters of economic activity is of a non-agricultural nature. There is also evidence of rural farmers moving into small urban settlements where they continue to pursue their agricultural livelihoods (Potts, 2010: 27).

The World Bank also recognises these inconsistencies, reporting that as semi-urban areas continue to expand with the arrival of rural migrants, many households continue to rely on agricultural activities to sustain their livelihoods, confusing the distinction between what is urban and what rural (World Bank, 2009: 5). This blurring of the urban/rural divide is further complicated by the growth of transportation and communications networks (Cohen, 2004). For example, remittances earned in urban centres are increasingly contributing to rural livelihoods.

Box 8: What is “urban”? Many definitions

With respect to population projections for specific southern African cities, UN Habitat (2010) estimates that by 2025, over 44 million people will live in the region’s sixteen largest cities (Table 4.2.1.2) Notably, Luanda’s population is estimated to exceed 8 million, while the Malawian urban centres of Lilongwe and Blantyre-Limbe are expected to more than double their 1990 populations.

Table 4.2.1.2: Growth of urban agglomerations in southern Africa

Country	City	Agglomeration growth rates				
		2000	2010	2025	2000-2010	2010-2025
Angola	Huambo	578 000	1 034 000	1 789 000	78.89	73.02
	Luanda	2 591 000	4 772 000	8 077 000	84.18	69.26
Madagascar	Antananarivo	1 361 000	1 879 000	3 148 000	38.06	67.54
Malawi	Blantyre-Limbe	538 000	856 000	1 766 000	59.11	106.31
	Lilongwe	493 000	865 000	1 784 000	75.46	106.24
Mozambique	Maputo	1 096 000	1 655 000	2 722 000	51.00	64.47
	Matola	504 000	793 000	1 326 000	57.34	67.21
South Africa	Cape Town	2 715 000	3 405 000	3 824 000	25.41	12.31
	Durban	2 370 000	2 879 000	3 241 000	21.48	12.57
	Ekurhuleni (East)	2 326 000	3 202 000	3 614 000	37.66	12.87
	Johannesburg	2 732 000	3 670 000	4 127 000	34.33	12.45
	Port Elizabeth	958 000	1 068 000	1 222 000	11.48	14.42

Country	City	Agglomeration growth rates				
		2000	2010	2025	2000-2010	2010-2025
	Pretoria	1 084 000	1 429 000	1 637 000	31.83	14.56
	Vereeniging	897 000	1 143 000	1 313 000	27.42	14.87
Zambia	Lusaka	1 073 000	1 451 000	2 267 000	35.23	56.24
Zimbabwe	Harare	1 379 000	1 632 000	2 467 000	18.35	51.16
Total		22 695 000	31 733 000	44 324 000	39.82	39.68
Total (without South Africa)		9 613 000	14 937 000	25 346 000	55.38	69.69

(Source: UN-Habitat, 2010)

The fast pace of urbanisation in Africa has not been matched by a concomitant growth in the industrial or agricultural sectors that has been seen in other parts of the world. Although Asia manifests the most rapid rate of urbanisation globally, for example, it has simultaneously experienced huge economic growth. Potts (2009) suggests that the surge in urban employment opportunities seen in Asia has generally not occurred in Africa. She relates this to a legacy of the 1980s structural adjustment policies which caused a gradual stagnation or even decline in employment and, associated with this, a burgeoning in the growth of the informal sector providing very low income jobs (Potts, 2009: 254).

4.2.2 Increasing informalisation of urban areas

Africa, similarly to other parts of the world, is witnessing an increasing informalisation of its rapidly growing urban areas. This growing informality is reflected not only in the type of human settlements but also the growth of the 'second economy' or informal sector.

Rapid on-going urbanisation has been associated with a shortage of available land to house new urban communities. As a result, many poor people have settled in areas previously undeveloped due to their flood risk as well as other marginalised land. Slum dwellers with limited access to electricity are also increasingly denuding forested areas for fire wood, building materials, as well as clearing areas for housing or food gardens. This has had several negative consequences. These include the loss of natural ecological services such as the absorption of rainwater runoff, reduction in water quality and increasing health risks due to pollution, with waste increasingly polluting river systems with knock-on consequences (Mafuta et al, 2011).

Urbanisation has not only increased the demand for water for domestic consumption, but also scaled up the water requirements for key economic sectors such as power generation, industry, and mining. Mpande and Tawanda (1998) suggest that together with the exacerbating effects of recurrent droughts, water shortages may become a common concern in their own right across the SADC region. Their study revealed that the demand for water in some major urban centres in the Zambezi River Basin for example already exceeded capacity.

4.3 Environmental change

4.3.1 Climate drivers, impacts and responses in southern Africa: New variants or business as usual?

There is medium confidence that droughts in some areas and seasons may intensify.

The patterns of rainfall, moreover, appear to remain consistent with the general atmospheric controls for the region but it is the magnitude and the frequency of weather-producing systems that may change. Such changes, as will be shown below, may in turn impact on food security, growing seasons, health and may exacerbate stresses on natural resources. These may prompt an array of responses (e.g. migration and conflict) that in turn may have wider impacts. Such projected changes will not, however, occur on a 'neutral' or 'blank' landscape and the underlying vulnerability will continue to be key and indeed may well be further aggravated in the next years. In the following sections some of the key projected changes with reference to climate change and climate variability are presented. These are, however, projections and thus cannot be read as being certain.

4.3.2 General climate drivers and projected changes

Drying is projected for several areas in southern Africa as the region undergoes warming. A well-known projection summary is therefore that the western parts of the region may become drier and the eastern parts wetter. Not all regions will experience such changes and there will be much spatial and temporal variability. Central Botswana, for example, is projected to become warmer at a rate faster than surrounding areas (CSAG, 2012).

Rainfall, a much more difficult variable to project outwards into the future, may also change. It is not just the overall amounts of rain that may change (either increase or decrease over time) but also the pattern of change within season and between seasons, including the numbers of rain days (see also Table 4.3.2.1). Moreover as the work of Engelbrecht and others (2012) is beginning to show, it is the enhancement in the 'rain-producing' system (e.g. cloud bands) that will become critical to examine, particularly where these dynamics manifest as tropical and local storms.

Table 4.3.2.1: Projected climatic changes in southern Africa

Expected Change	Source
Drying is projected for several areas in southern Africa as the region undergoes warming.	Hewitson, 2010, 64
Regional modelling and downscaling results (e.g. Tadross et al., 2005) both support an increase in the rainfall intensity in southern Africa. "In regions of mean drying, there is generally a proportionally larger decrease in the number of rain days, indicating compensation between intensity and frequency of rain."	Christensen et al., 2007, p. 871
"Rainfall in southern Africa is likely to decrease in much of the winter rainfall region and western margins. There is likely to be an increase in annual mean rainfall in East Africa."	Christensen et al., 2007, p. 850

Expected Change	Source
<p>“A general increase in extreme rainfall events is projected over southern Africa despite the projected decrease in closed-low frequencies. It is deduced that this increase in extreme rainfall events is driven by intense convective rainfall events occurring within more frequently forming tropical-temperate cloud bands. Over Mozambique, extreme rainfall events are projected to increase in association with more frequently occurring closed-lows.”</p> <p>“A general decrease in the annual frequency of occurrence of closed-lows is projected for southern Africa and surrounding oceans. General decreases in rainfall associated with closed-lows are projected to occur over southern Africa and surrounding oceans... An exception is Mozambique, where spatially coherent increases in rainfall are projected, albeit without local statistical significance” (projections based on one model assessment).</p>	<p>Engelbrecht et al., 2012</p>

In an assessment of appeals and efforts to try and link these back to possible climate-driver causation, the research team interrogated the number of appeals related to various change-drivers. This resulted in a ‘calendar’ or linear time-line representation of drivers of significant change from 2000-2012. From this analysis, flooding clearly emerges as a strong driver of change, particularly for countries such as Botswana, Madagascar, Namibia and Mozambique, (see Table 3.2.1.1). However, it is limiting to focus humanitarian risk-reduction efforts only on flood-risk reduction, given the sequencing of floods following dry spells in southern Africa.

Notably, during this study, a number of respondents expressed the personal view that prolonged drought (as occurred in the early 1980s, 1990s and 2000s) was ‘overdue for southern Africa’. If such an event were to occur, and if there were limited improvements in risk reduction, sustainable safety net provisions and effective ARV programmes, amongst others, the impacts in the region may be similar if not more severe to those noted in the early 1990s (see for example Bird et al., 2003; Maunder, 2005; Cliffe, 2006; Jackson et al., 2006; Maunder and Wiggins, 2007).

While there are some emerging robust findings for possible projections of climate into the future, evidence from field research (e.g. interviews and perceptions of change) also calls greater attention to smaller, incremental climate shifts and changes. Respondents are already noting changes in the region. Determining if these ‘weather-related’ changes are linked to climate change is very difficult, and requires more rigorous assessment. Nonetheless, smaller disasters are becoming noticeable. The findings suggest that they may result from the interaction between climate change and a range of other factors such as poor or weak governance (e.g. transboundary water management) and urban planning. Indications are that it may indeed be the smaller changes brought about by storms and seasonal changes in climate - variability in the climate system - that may become more challenging risks in the future (IPCC 2012). This suggests the need for flexibility in management and risk reduction interventions moving forward.

4.3.3 Climate – Related impacts: Some preliminary assessments

Trying to disentangle impacts, of ‘natural’ disasters is exceedingly difficult. The desk-top assessments and interviews of some key stakeholders in the region identify several potential impacts. These outcomes may be both a result of the driver of change, or due to an environmental driver that yields a range of social ‘impacts’. A strong environmental stressor may enhance these ‘drivers of change’. In such cases, an additional pressure may be exerted on existing drivers, or what is referred to in the vulnerability literature as ‘outcome’ vulnerability and ‘enhanced internal vulnerability’ (see for example interactive drivers of change for one component of the environmental system namely food, Figure 4.3.3.1). Deriving simple outcomes and indeed metrics of changes is thus exceedingly difficult.

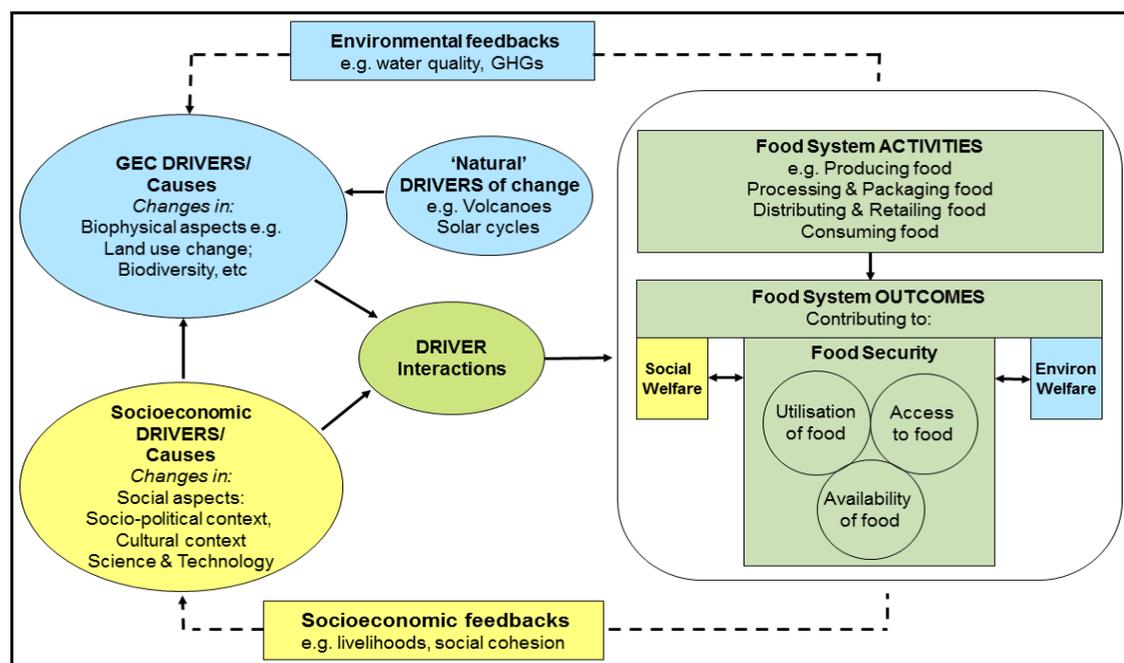


Figure 4.3.3.1: Food system drivers and feedbacks (adapted from www.gecafs.org and Ericksen, 2008)

Droughts, floods and heat stress usually result in the reduction in good quality water. This may have a range of health consequences, including diseases such as cholera. Evidence-based research on this topic is limited for the southern African region. Of the available assessments, some show that childhood nutrition is critical and is already being affected by periods of climate stress. One assessment undertaken by Alderman et al. (2006), for example, notes that children who were exposed to drought in Zimbabwe during the 1980s, along with the ravages of war, were seriously affected nutritionally. While such changes may be dramatic, they may also take the form of daily, more insidious changes that need to be better understood, particularly with reference to climate.

Table 4.3.3.1: Examples of possible impacts of climate change on agriculture and migration

Sector	Impacts on sector
Agriculture and food security	Parts of southern and East Africa will experience temperature stress of more than 30 degrees centigrade.
	Length of growing periods may change, and in some instances, may be less than 20 days.

Sector	Impacts on sector
	Increased runoff will cause erosion that also have impacts on agricultural production.
	Cropping may become a risky activity.
Migration and conflict	Extreme events and climate shocks such as severe drought and floods can aggravate local livelihoods and induce population movement in the region. The decision to move, however, is a very serious decision and is not easily undertaken. It is usually a compound mix of factors, and not climate alone, that are responsible for pushing people into moving.
	In the 1997-2010 drought period, for example, in Zimbabwe droughts were less severe than those occurring in the previous decades, but the compelling factors inducing movement were "...experienced as extreme and contributed to food insecurity because they occurred in the context of rapidly deepening vulnerability produced by broader conflict and economic contraction." (Foresight, 2011)
	Climate stresses will aggravate development progress, including gains in infrastructural development. Heavy rainfall events are already placing strain on urban infrastructure. Climate stressors may also impact on urban food security. This issue requires more interrogation given that, as noted earlier, rising food prices may make it harder to secure food.

(Source: Adapted from Ericksen et al., 2011)

Determining the current role of environmental stresses in the southern African region is extremely difficult (O'Brien et al., 2009). This is partly due to the complex interactions that co-produce a range of vulnerabilities to a variety of stresses, including many identified in this report, such as economic pressures, health stresses, development stresses and other challenges. Attributing changes directly to climate is thus exceedingly difficult. Making generalisations in support of project into the future is even more difficult and complex.²⁶

Notwithstanding these challenges and the caveats, there are a few key take home messages that may assist in humanitarian planning efforts going forward:

- The climate pattern (from perceptions derived in the course of this study) indicates a possible change from what has been experienced in previous decades. Whether this is a notable trend or indeed linked to climate change would require much more detailed scientific assessments.
- Flooding appears to have become a critical component of risk, particularly regional and localised flooding. This apparent change appears to be mirrored in humanitarian assessments of appeals, but once again this is from very preliminary research and more

²⁶ For this reason, readers are urged to read more on issues such as climate variability and change (e.g. various IPCC assessments).

research using these data must be undertaken before making any definite statements and claims.

Changes in local climate, including seasonal changes, also appear more noticeable. Such changes together with, for example, rainfall variations in terms of individual storms, heat days and winds all would seem to be make the case for a focus on risk-reduction efforts that are targeted on both the smaller, but no less critical climate drivers in the system, as well as continued attention to the larger drivers of climate and weather that have traditionally been a focus in the region, such as El Niño–Southern Oscillation (ENSO) events and large-scale drought. Finding robust and scientific support for making such claims is, however, limited at this stage and readers are urged to consult the 5th IPCC assessment report and the IPCC SREX report (IPCC, 2012).

4.3.4 Water scarcity

The combined effect of population growth, increased food production requirements and urbanisation continue to increase water demand. While the prospect of international or intra-regional water wars are unlikely (Ohlsson and Lundqvist, 2000), there is a greater likelihood of increased intra-national competition for water resources to preserve livelihoods, particularly between large economic sectors such as agriculture and industry. Given the increasing rate of urbanisation, competition is already emerging between the interests of growing urban populations, expanding into previously rural areas, and the irrigation requirements of farmers (Holloway et al., 2012). For instance, with specific respect to the Zambezi Basin, Mpande and Tawanda (1998) note that, “the rising human population has combined with the food and water shortages and high livestock mortality occasioned by recurrent drought to increase both the demand for waters of the Zambezi and the potential for competition among agricultural and domestic uses”. They further suggest the potential for increasing and escalating competition for these scarce resources between Zimbabwe, Botswana, South Africa and Namibia should any of these states develop a long-term water strategy.

4.4 Economic interdependence and globalisation

While globalisation has many perceived benefits, Cohen suggests that the downside of increasingly interconnected markets and open borders is that local economies are becoming more vulnerable to external economic shocks. These shocks and their humanitarian implications for the period 2007 – 2009 were presented in Section 3.5.4 and Figure 3.5.4.1. However, consistent with prevailing views advocating regional trade integration as a key element for sustaining African economic growth (UNCA, 2012), SADC anticipates much greater economic integration in the future. This was reflected in the launch of a Free Trade Area in 2008, with prospects for a SADC Common Market by 2015 and a common currency by 2018 (Cilliers et al., 2011:58).

Increasing regional integration and global interdependencies have also been reflected in changing patterns of mobility. Potts (2010), for instance, notes that recent African migration rates and movement patterns have responded to global economic changes by becoming increasingly continent-bound. She argues that the global economic downturn has made traditional European (ex-Colonial) countries less viable destinations, with rising migration flows emanating from East, Central and West Africa now increasingly headed South. Similarly, Cross suggests that South Africa, more than any other country on the continent has the greatest urban labour absorption capacity (Cross, 2009).

While mobility and migration are long established livelihood strategies in southern Africa, relationships between host nationals and migrants have not always been harmonious in southern Africa. According to Crush and Williams (2010), drawing on several recent studies on xenophobia in the region, intolerance of migrants is greatest in those SADC countries where the influx of 'foreigners' is greatest, namely Botswana, Namibia and South Africa. However, they acknowledge that xenophobic sentiment has become a significant issue across all southern African countries.

4.5 To sum up

Just as humanitarian concerns follow people, southern Africa's changing settlement patterns and population distribution are reshaping its risks. The region's growing population is increasingly located in urban areas, often in unplanned and underserved settlements with inadequate municipal infrastructure. It is also young, with up to 20% of the population aged between 15 and 24 years old and likely to be unemployed. Established patterns of purposive cross-border mobility have become city-bound and are associated with an ever-expanding informal economy. This has been augmented by patterns of continental migration from outside southern Africa.

Chronic vulnerability conditions, including high HIV prevalence and elevated childhood stunting are also increasingly concentrated in urban areas, while, in many countries, enrolment in highschool is low and pursuit of higher education opportunities remains constrained.

In addition, there are shifting patterns in the weather and climate, with climate variability remaining a key challenge. While future projections anticipate an increase in extreme rainfall events, population exposure and vulnerability also constitute key determinants of local risks. For instance, increasingly, areas not previously flagged as 'high-risk' may become more emergency-prone, due to population growth and settlement patterns, rather than changing weather or other environmental factors.

CHAPTER FIVE: RISK GOVERNANCE IN SOUTHERN AFRICA: CHANGING CAPABILITIES TO MANAGE RISKS AND EMERGENCIES

5.1 Capabilities emerge... but, not quite there yet

In recent years, encouraging capabilities have emerged across the region that have reduced vulnerability and strengthened capacity for response in times of duress. This chapter explores emerging institutional capabilities to address risks with humanitarian assistance implications. These include the capacities of the region's national disaster management authorities, as well as the mechanisms for provision of social protection for vulnerable groups. Additional attention is given to adaptive strategies mobilised by individuals and households that have helped reduce vulnerability to economic shocks and stresses. These include the growing roles of mobility and remittances as purposive livelihood strategies, the important contribution of formal and informal trading links and increasing regional penetration of mobile phone and other forms of ICT.

5.1.1 Emerging institutional capabilities

A positive development across the study countries has been the progressive establishment of national disaster management authorities, whose core operating budget is government-funded. This signals increasing national commitment to anticipate and reduce recurrent risks, and provides an institutional framework for retaining skilled human capital. The diversity of national structures available in the region is summarised in Table 5.1.1.1 below, and staffing levels for selected institutions in Table 5.1.1.2.

Table 5.1.1.1: The diversity of national structures available in the region

Country	National Disaster Management Authority	Acronym
Angola	Comissão Nacional de Protecção Civil	CNPC
Botswana	National Disaster Management Office	NDMO
Comoros	Direction Générale de la Sécurité Civile	DGSCG
Lesotho	Disaster Management Authority	DMA
Madagascar	Cellule de Prévention et Gestion des Urgences	CPGU
Malawi	Department of Disaster Management Affairs	DODMA
Mauritius	National Disaster Committee	NDC
Mozambique	Instituto Nacional de Gestao de Calamidades	INGC
Namibia	Directorate of Disaster Management	DDRM
Seychelles	Department of Risk and Disaster Management	DRDM
South Africa	National Disaster Management Centre	NDMC
Swaziland	National Disaster Management Agency	NDMA
Zambia	Disaster Mitigation and Management Unit	DMMU
Zimbabwe	Department of Civil Protection	DCP

Table 5.1.1.2: Illustrative staffing levels in eight national disaster management authorities

Country	Institution	Total staff	Contingency
Comoros	DGSCGC	6	No
Lesotho	DMA	48	No
Malawi	DoDMA	9	No
Mozambique	INGC/NIDM	146	Yes
Namibia	DDRM	34	Yes
South Africa	NDMC*	37	Yes
Swaziland	NDMA	15	Yes
Zimbabwe	DCP	8	Yes

* Excludes staff in nine provincial disaster management centres, metros and local municipalities (E.g. the City of Cape Town Disaster Risk Management Centre has more than 80 full-time staff members).

Table 5.1.1.2 illustrates staffing allocations for national disaster management authorities in eight of the study countries. It shows emerging government commitment for core funding of this competency, along with modest allocations of contingency reserves for immediate response. While these developments are encouraging, the staffing levels are uneven. Moreover, with the exception of South Africa (and Windhoek in Namibia), there is limited subnational architecture for municipal or district risk management, despite the presence of disaster (risk) management committees. While disaster risk management committees represent a first step towards the multisectoral coordination of risk reduction efforts, they cannot be custodians of information, nor provide effective implementing vehicles without an executing mechanism.

Lusaka constitutes a practical example of these challenges. It is estimated that 17% of Zambia's population resides in the Lusaka District, of which approximately 70% is informally planned. Although the District Commissioner's office is tasked to chair a multi-sectoral disaster management committee, there is no dedicated team or budget for operational disaster risk management. This is despite recurrent outbreaks of communicable disease and urban flooding.

Given concerns about increasing urban risks, the absence of clear DRM management nodes within large cities and urban centres constitutes a serious constraint for any future articulation between the international community and subnational authorities.

Further strengths are underlined by the wide presence of both (Southern African Climate Outlook Forum) and Vulnerability Assessment Committees (VACS). In many interviews, respondents linked their seasonal contingency planning to the SARCOF process, an important first step towards systematic risk reduction. However, robust risk management planning extends beyond annual 'seasonal preparedness' which SARCOF addresses, and should include events with longer recurrence or return periods (for instance, a severe El Niño event).

5.2 Vehicles for vulnerability reduction

Across the region, there have been a number of successes in reducing vulnerability, illustrated by the Fertiliser Input Support Programme in Malawi, as well as the progressive expansion of social protection programmes, especially those that target and support HIV-affected households.

Fertiliser subsidies in Malawi

Malawi has provided government subsidies to promote fertiliser usage since 2005. These are intended to improve production outcomes in start-up small-scale agriculture and underpin food security. The successes of this are clearly depicted in Figure 5.2.1, which shows maize production in metric tonnes over time, particularly since 2005.

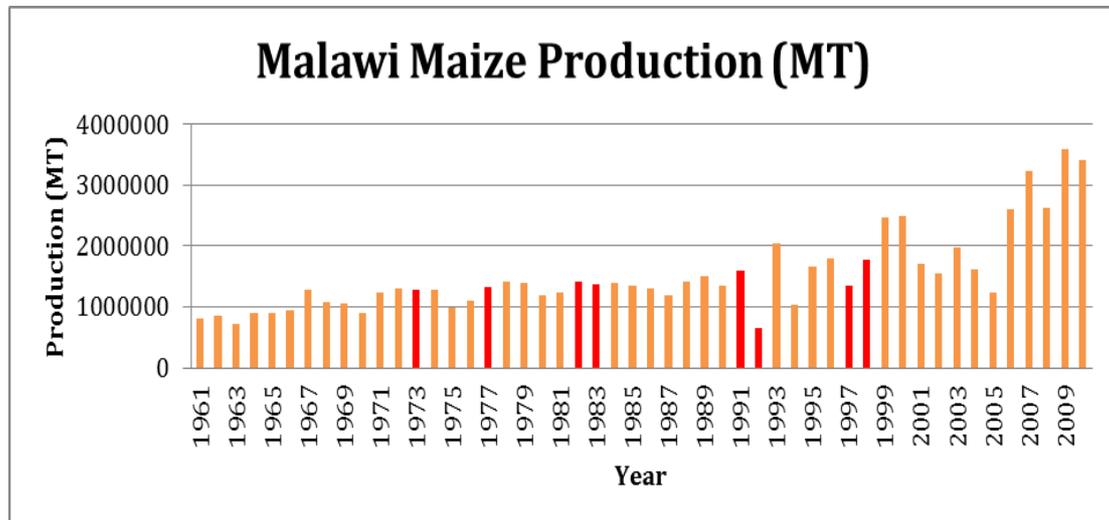


Figure 5.2.1: Malawi Maize Production (MT) (Source: FAO, 2012)

Although there has been a dramatic improvement since 2007, the programme has not been without its challenges, with the country recently experiencing a maize deficit in southern-based districts. Similarly, although the subsidy programmes targeted the most vulnerable communities, many households were not able to afford the subsidised fertiliser, or did not know how to apply it effectively (Dorward et al, 2008; Denning et al, 2009). The fragile ecological basis of agriculture in Malawi may also reverse these gains in time. Apart from the ecological sustainability question, fertiliser prices are subject to changes in oil prices, which have shown a significant increase over the past five years. This may undermine the financial sustainability of the programme due to the unaffordability of even subsidised fertiliser.

Expansion of Social Protection Programmes

Another important change in the region has been the increase in government provision of social protection, most notably through cash transfers. DFID, citing evidence from South Africa and Nicaragua, notes growing evidence that social transfers can significantly contribute to reducing undernutrition (DFID, 2010). Grants given to child-headed households, disabled individuals, or as old age pensions, achieve this by providing an additional source of income to people in vulnerable groups, who may not have secure access to food through their incomes, social networks, or own production. Their effectiveness as a food security measure has been enhanced by adjusting the provision of grants to reflect extreme fluctuations in food prices.

There is also recent evidence from the Protracted Relief Programme in Zimbabwe that cash transfers contributed significantly to household incomes by helping to stabilise consumption and meeting some of the cash needs especially in rural areas (PRP, 2012). Similar measures include, for example, the Child Grants Programme in Lesotho, Social Cash Transfer Programme in Malawi, expansion of Social Welfare Grants in Namibia and the School Bursary Scheme in Swaziland.

However, social protection cannot be seen as a panacea to food insecurity in the region. Hoddinott, in a comparative assessment of the impact of four social transfer programmes (Mexico's Progresa; Nicaragua's RPS; Honduras' PRAF; and Brazil's Bolsa Alimentacao), for instance, found that only two of these – Progresa and PRAF – reduced stunting (2010).

Provision of ART and other measures to reduce HIV and AIDS impacts

The systematic expansion of ART, and related social protection programmes have made dramatic differences to life expectancy and livelihood prospects for HIV-affected households across the entire region. They have been instrumental in preserving the region's social and human capital, which constitute crucial resources for withstanding recurrent shocks and stresses. For instance, in Malawi, while as many as 100,000 deaths were reported annually at the beginning of the epidemic, by 2011, this had reduced to 48,000 (Government of Malawi, 2012). Similarly, in Lesotho, which acknowledges its 'loss of the middle generation', annual deaths attributed to HIV declined from 12,000 in 2008 to 8,500 in 2012 (Ministry of Health and Social Welfare – Lesotho, 2012). Impressive results have also been reported from Botswana, which notes a 60% decline in annual HIV-related deaths since introducing its ARV programme, from 14,700 in 2003 to 6,200 by the end of 2010 (National AIDS Coordinating Agency – Botswana, 2012).

5.3 More Mobility

5.3.1 Circular migration – a long history

There is a long history of the informal movement of people across borders in southern Africa (Crush et al, 2006; McDonald, 2000). However, they note that since 1990, there have been significant changes to these long-standing migration patterns, particularly labour migration. Specifically, they suggest that there has been a growth in both the scale and the complexity of movements across borders. This migration, they argue, is primarily city-bound, leading to growing informality (ibid), with a concomitant expansion of informal activities and small enterprises. Mobility in this context is not considered as a coping strategy or adaptive response to immediate hardships, challenges and shocks. Rather, it is viewed as a purposive livelihood strategy, one that is often planned and discussed at household level in order to harness opportunities, be those economic or social in nature.

For instance, a migration survey conducted by the HSRC between 2001 and 2002 highlighted the role of poor economic conditions and unemployment, political instability and marginalisation of minority ethnic groups in countries of origin as key 'push' factors (Kok et al, 2006). However, it also underlined strong 'pull' factors in the destination countries. The most important reason identified for cross border migration was the search for employment, and indeed more than three quarters of migrants interviewed were employed, even though most were unskilled and only a third semi-skilled. A recent UN report suggests, for example, that mining continues to attract workers from Angola, Mauritius, Namibia, Swaziland, Zambia and Zimbabwe (UN ECA, 2012: 66).

Recent research corroborates the growing trend in cross-border mobility, by demonstrating a massive increase in the number of legal border crossings to South Africa from other African countries rising from around one million in 1990 to nearly eight million in 2008 (Crush, 2012). Figure 5.3.1.1 specifically represents legal entries from Zimbabwe to South Africa from 1990-2010 and shows steep increases over the last decade (ibid).

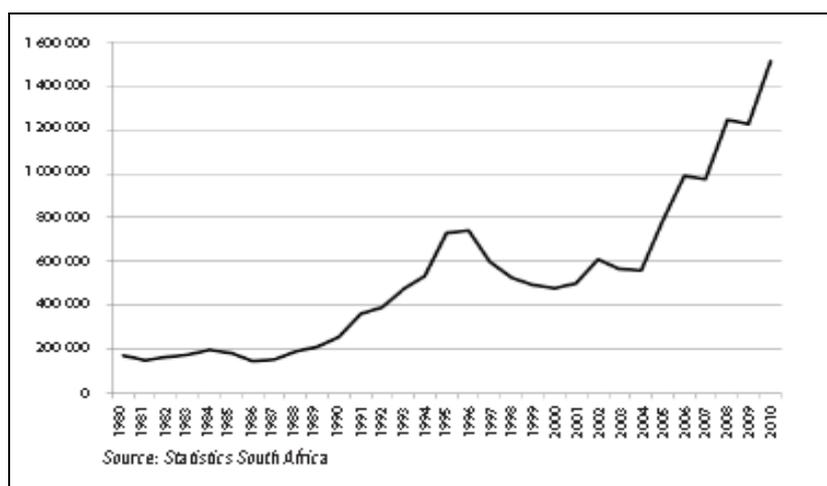


Figure 5.3.1.1: Legal entries to South Africa from Zimbabwe, 1990-2010 (Source: Crush, 2012)

The growing mobility of women (Todes et al, 2010) in recent years, increasingly undertaken independently of men, reveals a gendered difference in motivation for migration. Dodson suggests that while men are driven to migrate in search of employment, “women’s migration is driven by a wide range of social and reproductive factors in addition to economic incentives” (Dodson, 2000). Even the economic motives for migration are gender-specific, with women going largely to trade and men to work, most in formal employment. Thus migration is closely tied to socio-economic roles and responsibilities allocated on the basis of gender.

5.3.2 The critical role of migrant remittances

Economic drivers are often considered to be the most important motivations for migration. A recent report based on national surveys undertaken across the globe found that the availability of jobs, and related to this the capacity to send remittances back home, were of the utmost importance for migrants (Foresight, 2011:46). It has been suggested that global remittances are currently more than three times the value of official development assistance while almost equalling foreign direct investment (World Bank, 2009b). For instance, in 2010 alone African migrants sent US\$ 40 billion to African countries in remittances (Plaza and Ratha, 2011:7).

There is evidence that remittances, which are generally regular, rise in response to shocks in the recipient country where remittances help to reduce poverty and stimulate economic and livelihood activities. However, less is known about remittances in the sub-Saharan region than any other part of the developing world, due primarily to a lack of data (von Burgsdorff, 2012).

Combined with migration, the provision of remittance income constitutes a key source of livelihood security in southern Africa. The potential scale of these financial inflows is indicated in recent research carried out in 2011 with Zimbabwean migrants to South Africa’s Western Cape (von Burgsdorff, 2012). The study results suggest that total remittance flows from South Africa to Zimbabwe in 2011 could have ranged from ZAR 5.1 – 6.8 billion (USD 7.5 – 10 million)²⁷. This constitutes a considerable source of livelihood support for those back home and a crucial contributor to vulnerability reduction.

²⁷ USD 1 = ZAR 6.79; Source: http://ws9.standardbank.co.za/research/rates_monthly.html

5.4 More trade, less aid

The role of trade emerges as a central capability for resilience-building at all geographic scales. For instance, at continental scale, Africa is acknowledged to have emerging economic strength and opportunities (Christensen, 2010). China specifically has recognised this opportunity, investing heavily in much-needed African infrastructure in exchange for resources, with investments reaching a staggering US\$ 166 billion by 2011. China has now officially overtaken the United States as Africa's largest trading partner (Christensen, 2010:4).

At regional and sub-regional scales, informal trade has also proven to be essential – reflected, for instance in informal cross-border flows of cereals and other commodities. This is reflected in Figure 5.4.1 below produced by FEWSNET (2012), underlining substantial cross-border outflows particularly from Malawi and Mozambique.²⁸ Altogether, 139,243 MT were reportedly traded informally from SADC countries.²⁹

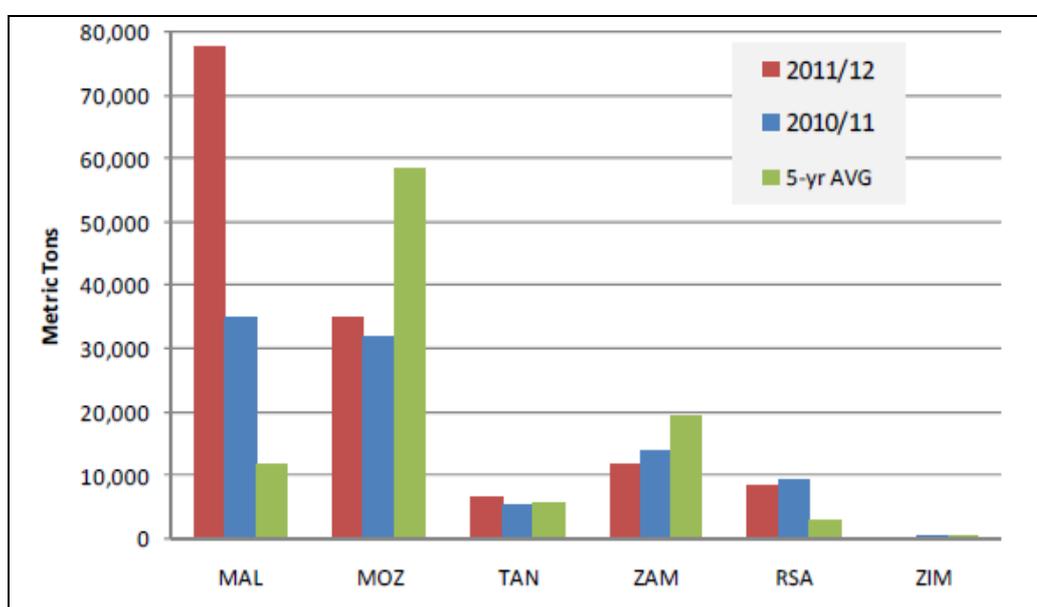


Figure 5.4.1: Scale of informal maize exports 2011/12 compared with 2010/11 and 5 year average (Source: FEWSNET, 2012)

5.5 *PLEASE CALL ME*

Perhaps one of the most pervasive resources for vulnerability reduction has been the impressive expansion of mobile phone users in southern Africa. Table 5.5.1 and Figure 5.5.1 respectively show the extraordinary increase in mobile phone subscriptions and associated coverage in the past decade. By the end of 2011, it was estimated that there were approximately 120 million mobile phone subscriptions in the study countries. The Institute for Security Studies (ISS) argues that “mobile phones have become tools for social transformation. Small-scale farmers link up with markets, citizens can report (and video) instances of abuse... and citizens can identify instances of crime” (Cilliers et al., 2011:53)

²⁸ www.fews.net/

²⁹ *ibid*

Citing the Economist (September 2009), they argue that “adding an extra ten mobile phones per hundred people in a typical developing country boosts growth in GDP per person by 0.8 percentage points” (ibid).

The expansion of ICT in southern Africa – and particularly growing access to mobile phones represents an untapped resource for humanitarian action – especially as it expedites access to ‘mobile money’ (Cilliers et al., 2011:54), which may be crucial for reducing vulnerability during times of duress.

Table 5.5.1: Mobile- cellular telephone subscriptions in study countries 2000-2011

Country	Mobile-cellular telephone subscriptions				
	2000	2003	2006	2009	2011
Angola	25 806	350 000	3 054 620	8 109 421	9 491 000
Botswana	222 190	444 978	823 070	1 874 101	2 900 263
Comoros	-	2 000	36 877	122 596	216 438
Lesotho	21 600	125 950	357 913	661 000	1 051 000
Madagascar	63 094	283 666	1 045 888	6 283 799	8 159 599
Malawi	49 000	135 114	620 163	2 485 646	3 855 760
Mauritius	180 000	462 405	772 395	1 086 748	1 294 100
Mozambique	51 065	435 757	2 339 317	5 970 781	7 855 345
Namibia	82 000	223 671	608 846	1 217 000	2 439 281
Seychelles	25 961	49 229	70 340	110 668	126 594
South Africa	8 339 000	16 860 000	39 662 000	46 436 000	64 000 000
Swaziland	33 000	85 000	250 000	664 432	766 540
Zambia	98 853	241 000	1 663 328	4 406 682	8 164 553
Zimbabwe	266 441	363 651	849 146	3 991 000	9 200 000
Total	9 458 010	20 062 421	52 153 903	83 419 874	119 520 473

(Source: ITU, 2012)

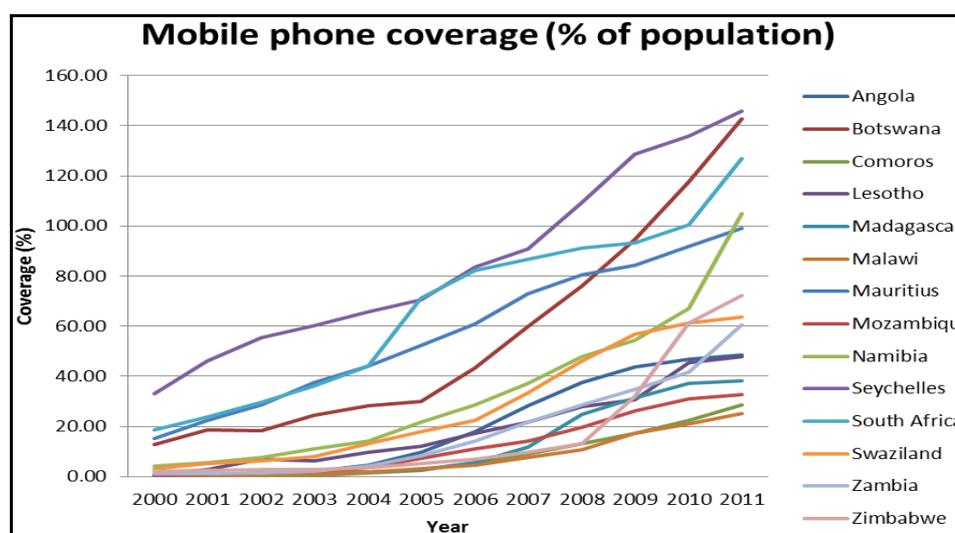


Figure 5.5.1: Mobile cellular telephone coverage for 2000-2011 (Source: ITU, 2012)

5.6 To sum-up

This chapter has profiled some of the emerging 'resilience builders' that allow households and governments to withstand recurrent shocks and stresses, and that – in many countries - have begun to avert the need for large-scale humanitarian operations. They illustrate the protective role of enabling governmental intervention, for example, through strengthening national and local risk management efforts. Similar measures in social protection and ARV support to people living with HIV have also reduced vulnerability to a wide range of economic, health and natural shocks.

However, this chapter has also highlighted a range of other vulnerability reducing strategies, reflecting the mobilisation of social capital across the region. Migration and mobility, within countries and across borders, represent adaptive livelihood responses – linked to sizeable remittance flows. The rapid expansion of cellphone use and ICT in many countries also represent crucial resources for trade and information, as well as cash, and for mobilising social networks in times of duress.

CHAPTER SIX: LOOKING AHEAD – CHANGING THREATS AND VULNERABILITIES

6.1 Focus on future threats and vulnerabilities

Southern Africa is host to an increasingly diverse and dynamic range of threats to lives and livelihoods as well as chronic poverty and sustained levels of food insecurity. Its exposure to natural threats is further exacerbated by the effects of protracted and bitter armed conflicts. Although mostly now resolved, past conflicts claimed millions of lives, caused widespread population displacement and destroyed essential infrastructure. They also resulted in the massive disruption of basic services and loss of skilled human resources.

Since the 1990s, southern Africa has also borne the brunt of the HIV epidemic which, between 1990 and 2011, claimed as many as 10.5 million lives (UNAIDSa). During the past two decades, the social and institutional consequences of the HIV epidemic have also acted as strong vulnerability drivers for natural and other threats across the region. Southern Africa carries forward this legacy, with more than 11.5 million people within the study countries living with HIV in 2011.

Yet, the region is on the move. It is increasingly urban, with on average, 50% of southern Africa's inhabitants projected to reside in urban areas by 2025 (UN Habitat, 2010). In the case of Angola, Botswana and South Africa, the urban share will expand to approximately 70% by this date (ibid). It is increasingly mobile, further enabled by SADC's Free Trade Area protocol (SADC, 2008) and the forthcoming implementation of SADC's Protocol on the Facilitation of Movement of Persons (SADC, 2005). Southern Africa's expanding economic links both globally and continentally afford valuable trade and development opportunities, but are also accompanied by new exposures and risks. These include susceptibility to global fuel and food price volatility, as illustrated in Chapters two and four.

The region's risk profile is not static and has changed dramatically in the past two decades. This calls for new thinking, approaches and partnerships to accommodate a wider diversity of interlinked and fast-paced threats. The following sections review the main study findings on threats the region may face, along with vulnerability conditions that may exacerbate their effects – and capacities that may avert or minimise their outcomes. It concludes by highlighting selected planning priorities for humanitarian action over the forthcoming decade.

6.2 Recapping the regional context

Between 2012 and 2025, southern Africa's population is projected to rise from 167 million to 215 million (UNDESA, 2012) with an increasing urban share that is located in informal settlements. It is purposefully mobile, but with uneven employment prospects, and whose livelihood opportunities are constrained by marked structural inequality. It carries forward entrenched vulnerabilities – such as high levels of chronic child malnutrition (stunting) and HIV that are increasingly concentrated in towns and cities. In nine of the countries studied, 20%-24% of the population is aged between 15 and 24 years (Ortiz & Cummins, 2012), unlikely to be enrolled in secondary or higher education, and struggling to find stable employment.

Moreover, as noted in Section 1.2, four countries (Angola, the Comoros, Malawi and Zimbabwe) are identified as fragile states, countries unable to meet their ‘population’s expectations or manage changes in expectations and capacity through the political process’ (OECD, 2008:16). States that experience chronic fragility warrant particular attention by humanitarian actors, given their compromised resilience to shocks, potential for internal conflict and limited capacity to manage humanitarian emergencies (ibid). As illustrated in Chapter 3, southern Africa’s interconnectedness increases the chances of the effects of poorly managed shocks and stresses in any single country being transferred rapidly throughout the region. As this characteristic particularly applies to countries experiencing chronic fragility, it underlines the need for continued support to those states so they progress to more stable and resilient conditions.

The region’s economic futures are also directly relevant to humanitarian planning processes, given the wide-ranging knock-on consequences of 2007-2008 fuel and food price volatility and the global economic recession. The medium-term³⁰ outlook for southern Africa is reportedly favourable, with (excluding South Africa) regional growth projected at 6.2% and 6% respectively for 2013 and 2014. This is due to anticipated rising incomes, lower inflation, higher remittance flows, lower interest rates, and significant foreign direct investment flows, particularly from China, India and Brazil.

6.3 Profiling threats with humanitarian implications

6.3.1 Identifying threats

Based on the findings of field research, secondary data analysis and detailed interrogation of regionally significant humanitarian emergencies, the research team identified six broad clusters of potential threats with implications for humanitarian action. However the team stresses that these categories should be viewed as indicative only, given the highly dynamic risk profile of the region, and urges both disaster risk management and humanitarian actors to be constantly alert to new and unfolding risk configurations.

As the study team recognises that the interface between these categories is blurred, it proposes a new category, termed “compound and composite threats”.

Table 6.3.1: Proposed clusters of threats with implications for humanitarian action

Cluster Title	Description
Environmental	Refers to shocks and threats that are generated by a primary environmental driver such as severe weather, floods, fires or earthquakes. They may be also known as ‘natural’ or ‘physical’ hazards, but are not limited to natural phenomena (e.g. large informal settlement fires).
Aggregate (Economic) shocks	<p>Refer to shocks that simultaneously/sequentially affect:</p> <ul style="list-style-type: none"> - aggregate or macroeconomic conditions in a particular country or region (e.g. GDP, current account, exchange rate) and, - a large defined group or groups of people in the same country or region (adapted from Mendoza, 2009) <p>These economic threats include food and fuel price shocks that increase vulnerability by intensifying economic pressure on the extremely poor and escalating food and livelihood insecurity.</p>

³⁰ The World Bank; Global Economic Prospects. <http://siteresources.worldbank.org/>

Cluster Title	Description
Socio-political shocks	<p>Refer to complex processes that adversely affect human security, that are generated by tensions between the state and civil society or between different groups.</p> <p>These include social violence and conflict in urban settings, as well as constrained governance. They also include conditions that lead to forced displacement and migration.</p>
Public health threats	<p>Refers to events with potential to adversely affect the health of human populations, especially those that may spread internationally or present a serious and direct danger (adapted from the International Health Regulations, WHO, 2005).</p> <p>In southern Africa, these primarily involve communicable diseases with epidemic potential.</p>
Aid shocks	<p>Refer to the volatility in the value of ODA for a specific country (or region), particularly the abrupt reduction or withdrawal of bilateral or multilateral assistance to lower than expected levels.</p> <p>In southern Africa, substantial support from the Global Fund for AIDS, TB and Malaria has enabled wide-scale provision of ART. Its sudden withdrawal would have significant consequences for social vulnerability, especially in countries with high HIV prevalence rates, but constrained health resources.</p>
Compound and composite threats	<p>Refers to the convergence of several shocks or stresses that either simultaneously and/or sequentially compound (amplify) an emergency.</p> <p>An example of compound risk is described in section 3.5.4 where the effects of global economic pressures and political instability in Zimbabwe converged, creating desperate urban conditions in South Africa for both South Africans and foreign nationals, in part triggering an outbreak of xenophobic violence.</p>

6.3.2 Unpacking the list

Environmental threats

Study results underline several clear environmental threats of natural origin, particularly riverine flooding and drought. The study team, however, cautions against narrowly interpreting these conditions. This particularly applies to the region's rapidly urbanising character - and the likelihood of a wider range of flood conditions (including rising floods) in urban areas with poor storm-water and sanitation. These have clear implications for human health, as already illustrated in Lusaka, where seasonal urban flooding is associated with cholera outbreaks.

Drought and dry spells remain recurrent concerns, with many respondents anticipating a severe El Niño event within the next decade. While a severe El Niño has potential for regional drought and crop failures (such as in 1992), its effects on urban water supplies and human health implications represent important considerations.

Although data on the recurrent flood patterns and severe weather are unavailable across the region, insights from Madagascar and Malawi respectively indicate frequent cyclone and flood events (in some districts, occurring two – three times seasonally). While individual events may not exact significant losses, their cumulative impact at sub-national scale has adverse consequences on local development prospects.

Aggregate (economic) threats

The urbanising character of the region and its increased economic integration has created exposures to global economic conditions. This was clearly evident, not only on mainland southern Africa, but also from the Indian Ocean island nations dependent on income from tourism, where the Seychelles economy came under particular pressure. Similarly, increased fuel and food prices may impact highly isolated island states significantly, due to higher transportation costs.

As remittance income plays a crucial vulnerability reduction role for both rural and urban households in southern Africa, sudden changes to access to remittances constitutes a major livelihood shock (for instance, through contraction of mining or agricultural employment, or changes in immigration policy that limit cross-border trade and mobility).

Socio-political threats, shocks and stresses

This constitutes a key area of concern at multiple scales. These include continental pressures that result in forced migration southwards, as well as the potential for intra-regional mobility and migration as coping strategies in times of duress. Table 6.3.2.1 provides examples of prevailing socio-political threats in the region. They also include tensions generated by constrained governance, often magnified in large towns and cities, where multiple risks converge and have potential to rapidly escalate. The region has a large youthful population, and with increasing access to mobile phone technology, enhanced capability to rapidly mobilise.

Table 6.3.2.1 Examples of prevailing socio-political threats and their humanitarian implications

Threat	Humanitarian implications
Political instability	Uneven governance capacity prevails in several states. Political instability has numerous implications for livelihood security, displacement, service disruption and forced migration. Mobility and migration are expected to prevail as established livelihood and coping strategies.
Risk governance	Uneven capacity to both maintain critical infrastructure (e.g. urban water supply infrastructure) and to detect/report emergent risk conditions.
Urbanisation	Rapid urbanisation implies the increasing concentration and diversity of risk conditions in urban centres. This increases the complexity of possible emergency situations.
Social violence	Increasing population expansion in urban areas. Inadequate service delivery, livelihood and food insecurity in urban areas increase the potential for social tension and unrest (for instance bread riots in Mozambique, xenophobic violence in South Africa, violent service delivery protests).

Public health threats

Communicable disease outbreaks constitute the main cause of death in southern Africa's humanitarian emergencies, evident from recent cholera and measles outbreaks. Cholera and measles outbreaks are also associated risks with other emergencies, including drought, urban and riverine flooding and the congestion of people at border crossing points, as well as in temporary transit or other centres where water and sanitation services are inadequate.

These findings underline the potential for rapid epidemic transmission both within urban centres (especially informal settlements) and across national borders, highlighting the need for strengthened urban risk management capability and cross-border cooperation and communication.

In several Indian Ocean island states, outbreaks of the Chikungunya virus and malaria occur frequently. Their isolated location may constrain rapid response.

Aid Shocks

International assistance currently underwrites a wide range of crucial vulnerability reduction services in southern African countries. These include support for social protection, provision of ART and cross-funding of national disaster management authorities. While this has been instrumental in strengthening capacity to manage recurrent shocks at household and national scale, it represents a key exposure factor for humanitarian assistance programming.

Compound and composite threats

These reflect the increasing likelihood of *concatenating crises* occurring within the region - "shocks that emerge near-simultaneously, spread rapidly and interact with each other" (after Biggs, 2011). Compound and composite emergencies may also be fuelled by *risk accelerants* whose fast-paced, 'wildfire' capacity serves to escalate and magnify other risks (e.g. social media), or *amplified* by the profound, reverberating effects that some risk drivers exert on pre-existing vulnerability conditions.

As described earlier, this category represents a crucial focus for future humanitarian programming. It also calls for more a more progressive approach to anticipatory contingency planning that incorporates global and continental risk factors, as well as important development changes within the region. This also requires engaging a more diverse range of stake-holders, augmenting established humanitarian partnerships.

6.3.3 Evolving risks – new knowledge priorities

While the study underlined these general areas of humanitarian concern, it also identified numerous gaps in current knowledge about unfolding risks in the region. For instance,

- How does increased access to social media and mobile phone technology escalate and/or minimise different risks of humanitarian concern and how could this technology be more effectively harnessed?
- What constitutes effective humanitarian programming for urban emergencies in different contexts?
- What are causal pathways for the transmission of global economic shocks and their realised outcomes for different at-risk groups? What is the relative effectiveness of different individual, household and governmental strategies in minimising these impacts?

- Is it possible to prioritise threats of humanitarian concern at national and regional scale, and to strengthen the risk management of transboundary threats?

Although these questions exceeded the scope of the current study, they represent important concerns for future investigation.

6.4 Implications for Programming

6.4.1 Introducing the priorities

Although this study identified numerous concerns related to developmental risk reduction and humanitarian action, the study team proposes the following planning priorities. These give emphasis to the changing locus of emergencies and the region's dynamic risk profile. They specifically seek to strengthen regional, national and sub-national capabilities to better anticipate and respond to changing risk conditions facing southern Africa. Box 9 lists the seven identified planning priorities:

Planning Priorities for Strengthened Humanitarian Engagement

- Establish institutional mechanisms for multisectoral urban risk management in growing urban centres.
- Support sustainable resourcing for national disaster management authorities.
- Strengthen human capital and capacity in national disaster management centres.
- Strengthen regional efforts in cross-border operational communication and cooperation.
- Improve strategic information management on recurrent emergencies, risks and disasters.
- Revisit the scope and focus of current contingency plans.
- Prioritise measures that protect and advance human and social capital development (i.e. reduce vulnerability).

Box 9: Planning priorities for strengthened humanitarian engagement

Table 6.3.2.2 describes these in greater depth. It summarises the current status of capacities related to each planning priority and highlights the gap to be addressed.

Table 6.3.2.2: Capacity and Gap Analysis

Planning priority	Capacity analysis	Gap to be addressed
Institutional Concerns		
Establish institutional mechanisms for multisectoral urban risk management in growing urban centres	Southern Africa’s population is increasingly urban , with economic, public health, social violence and food security shocks increasingly located in urban areas. Research findings indicate that with the exception of Namibia (Windhoek) and South Africa, there is no budgeted or sustainably staffed disaster/emergency response institutional capacity in southern African cities.	The absence of defined institutional capability with operational responsibility for urban risk management in rapidly growing cities constrains both developmentally-oriented risk management planning and contingency planning for complex emergencies – and risks diverting national disaster management resources to urban areas at the expense of rural locations – if both come under threat simultaneously.
Support sustainable resourcing for national disaster management authorities	Although almost all southern African countries have established national disaster management authorities, with core staff costs covered by government, many remain heavily dependent on co-funding by external assistance partners.	Highly constrained resourcing limits local efforts in disaster risk management and discourages employment /retention of skilled staff. Prolonged provision of external funding simultaneously creates dependency and increases exposure to aid shocks should funding be withdrawn.
Strengthen regional efforts in cross-border operational communication and cooperation	Study results indicate uneven (and often poor) communication between neighbouring countries on emergent risk conditions (e.g. cholera outbreaks, and more recent downstream Limpopo floods) that have cross-border implications. UN and other international and non-governmental partners currently fill this communication gap. As local response capabilities improve, there is also potential for bilateral humanitarian assistance agreements along shared borders.	Given the high levels of cross-border mobility in mainland southern Africa, combined with high likelihood of transboundary threats (especially epidemics and floods), the absence of mechanisms for timely and transparent bilateral communication increases the likelihood of regional emergencies. The focus here is on real-time, operational communication, rather than relying only on pre-planned seasonal consultative fora such as SARCOF. This also underlines a potential role for the SADC DRR Unit.

Planning priority	Capacity analysis	Gap to be addressed
Strengthen human capital and capacity in national disaster management centres	<p>Research findings indicate highly uneven human resource capabilities in national disaster management authorities. While some countries have built strong capability, in part through retention of experienced and skilled staff over many years, others are less experienced (for instance in the Indian Ocean Countries, aside from Madagascar).</p> <p>The region however, is increasingly served by HEIs that have actively engaged with local and national authorities in strengthening risk management capabilities.</p>	<p>There has been limited opportunity for exchange visits between respective national disaster management authorities (e.g. Namibian officials visiting the INGC, Mozambique for shared insights on improved transboundary flood management and management of flood-displaced people).</p> <p>With growing demand for more highly skilled disaster risk management personnel, there are needs to further strengthen links between practitioners and the region's HEI.</p> <p>There are also needs to manage succession planning for younger, less experienced staff.</p>
Improve strategic information management on recurrent emergencies, risks and disasters	<p>Only three countries (Mozambique, Malawi and Madagascar) implement systematic information gathering on nationally significant disasters and emergencies.</p> <p>There is no evidence of systematic transboundary disaster recording (except epidemics) - which is a regional function.</p>	<p>Most countries do not implement any systematic approach to knowledge management for emergencies and disasters. This includes recording the date, type, areas affected, population displaced or affected. This seriously constrains tracking changes in risk profile over time and limits capacity for strategically investing in strengthened disaster risk reduction or planning for humanitarian response.</p> <p>Systematic transboundary disaster recording allows the consequences of a powerful weather hazard or other threat to be traced across multiple countries, to establish its full impact, again underlining a potential role for the SADC DRR unit, in cooperation with other partners.</p>
Revisit the scope and focus of current contingency plans	<p>Almost all countries studied viewed the SARCOF process as their annual contingency planning exercise. However, this only represents a seasonal preparedness planning process, rather than contingency planning for a less predictable and wider range of emergencies including smaller but frequent climate events and climate variability.</p>	<p>Given the dynamic character of emergencies and disasters in southern Africa, contingency planning is needed for both events and more persistent variability, for instance those:</p> <ul style="list-style-type: none"> - with longer return periods (e.g. severe droughts, including events that will affect urban areas, including water supplies) - that include unfamiliar and emerging threats (e.g. severe economic shocks), - that include compound and composite threats (e.g.

Planning priority	Capacity analysis	Gap to be addressed
		<p>sequential emergencies) that result in complex ‘knock-on’ consequences across borders and over time.</p> <ul style="list-style-type: none"> - rapidly unfolding emergencies fuelled by social media.
<p>Prioritise measures that protect and advance human and social capital development (i.e. reduce vulnerability).</p>	<p>In almost all countries studied, purposive efforts have been invested in social protection for vulnerable groups. In addition, externally funded provision of anti-retrovirals has been made widely available. These interventions have markedly reduced social vulnerability in the region.</p> <p>However, seven southern African countries have youth bulges equal to approximately 20% of the population, most combined with low youth employment and poor high school enrolment.</p>	<p>Protecting human and social capital is a crucial vulnerability reduction intervention that minimises the need for or costs of humanitarian operations. However, the withdrawal of support for social protection and ARVs will automatically increase exposure of vulnerable groups to health, economic and natural shocks, and increase the likelihood of humanitarian intervention.</p> <p>Similarly, youth-related social risk reduction measures should be considered, including efforts to increase high-school completion and skill-building.</p> <p>Given its widespread distribution in southern Africa, mobile phone technology offers a range of vulnerability options – neither fully understood nor yet explored.</p>

6.5 To sum up

This study has highlighted the dramatic changes to the region's risk profile in the past two decades. This calls for new thinking, approaches and partnerships to accommodate a wider diversity of interlinked and fast-paced threats.

Based on the findings of field research, secondary data analysis and detailed interrogation of regionally significant humanitarian emergencies, the research team identified six broad clusters of potential threats with implications for humanitarian action. However the team also stresses that these categories should be viewed as *indicative* only, given the highly dynamic risk profile of the region, and urges both disaster risk management and humanitarian actors to be constantly alert to new and unfolding risk configurations.

The broad areas of concern include:

Environmental threats: Shocks and threats that are generated by a primary environmental driver such as severe weather, floods, fires or earthquakes. They may be also known as 'natural' or 'physical' hazards.

Aggregate (economic) threats: Shocks that simultaneously/sequentially affect:

- aggregate or macroeconomic conditions in a particular country or region (e.g. GDP, current account, exchange rate) and,
- a large defined group or groups of people in the same country or region (adapted from Mendoza, 2009)

Socio-political shocks: Complex processes that adversely affect human security, that are generated by tensions between the state and civil society or between different groups

Public health threats: Events with potential to adversely affect the health of human populations, especially those that may spread internationally or present a serious and direct danger. (adapted from the International Health Regulations, WHO).

Aid Shocks: Refers to the volatility in the value of ODA for a specific country (or region), particularly the abrupt reduction or withdrawal of bilateral or multilateral assistance to lower than expected levels.

Compound and composite threats: Refer to the convergence of several shocks or stresses that either simultaneously and/or sequentially compound (amplify) an emergency – and that increase the likelihood of concatenating crises occurring within the region.

Despite numerous areas for potential intervention, the study team proposed seven specific planning priorities. These emphasise the changing locus of emergencies and the region's dynamic risk profile. They specifically seek to strengthen regional, national and sub-national capabilities to better anticipate and respond to changing risk conditions facing southern Africa.

They included establishing institutional mechanisms for multisectoral urban risk management in growing urban centres and supporting sustainable resourcing for national disaster management authorities. They also stressed the need to strengthen human capital and capacity in national disaster management centres as well as regional efforts in cross-border operational communication and cooperation. Other priorities emphasised improving strategic information management on recurrent emergencies, risks and

disasters revisiting the scope and focus of current contingency plans. Last, the team underlined the need to prioritise measures that protect and advance human and social capital development.

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ANNEX ONE: GLOSSARY

Adaptation – “In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate.” (Source: IPCC, 2012)

Adaptive capacity – “The combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.” (Source: IPCC, 2012)

Asylum seeker – “A person who seeks safety from persecution or serious harm in a country other than his or her own and awaits a decision on the application for refugee status under relevant international and national instruments. In case of a negative decision, the person must leave the country and may be expelled, as may any non-national in an irregular or unlawful situation, unless permission to stay is provided on humanitarian or other related grounds.” (Source: IOM, 2012)

Brain drain – “Emigration of trained and talented individuals from the country of origin to another country resulting in a depletion of skills resources in the former.” (Source: IOM, 2012)

Brain gain – “Immigration of trained and talented individuals into the destination country. Also called ‘reverse brain drain’.” (Source: IOM, 2012)

Capacity – “The combination of all the strengths, attributes, and resources available to an individual, community, society, or organization, which can be used to achieve established goals.” (Source: IPCC, 2012)

Catchment – “An area that collects and drains precipitation.” (Source: IPCC, 2012)

Causal chain - “A causal chain is a series of statements that link the causes of a problem with its effects.” (Source: Belausteguigoitia, 2004)

Circular migration – “The fluid movement of people between countries, including temporary or long-term movement which may be beneficial to all involved, if occurring voluntarily and linked to the labour needs of countries of origin and destination.” (Source: IOM, 2012)

Climate – “Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organization. The relevant quantities are most often surface variables such as temperature, precipitation, and wind.” (Source: IPCC, 2012)

Climate change – “A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.¹ See also Climate variability and Detection and attribution.” (Source: IPCC, 2012)

Climate extreme (extreme weather or climate event) - “The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of a range of observed values of the variable.” (Source: IPCC, 2012: 557)

Climate projection – “A projection of the response of the climate system to emissions or concentration scenarios of greenhouse gases and aerosols, or radiative forcing scenarios, often based upon simulations by climate models. Climate projections are distinguished from climate predictions in order to emphasize that climate projections depend upon the emission/ concentration/radiative-forcing scenario used, which are based on assumptions concerning, e.g., future socioeconomic and technological developments that may or may not be realized and are therefore subject to substantial uncertainty.” (Source: IPCC, 2012)

Climate variability - “Refers to variations in the mean state and other statistics of the climate on all spatial and temporal scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic forcing (external variability).” (Source: IPCC, 2012: 559)

Closed low - A low pressure area with a distinct center of cyclonic circulation which can be completely encircled by one or more isobars or height contour lines. The term usually is used to distinguish a low pressure area aloft from a low-pressure trough. Closed lows aloft typically are partially or completely detached from the main westerly current, and thus move relatively slowly (see: Cut-off low). (NOAA, 2012)

Country of origin – “The country that is a source of migratory flows (regular or irregular).” (Source: IOM, 2012)

Cut-off low - A cut-off low is a mid-latitude cyclone that becomes ‘cut-off’, or severed, from the main planetary circulation, and spins off independently. Because it is no longer attached to the westerly pressure wave to the south, it loses all momentum and can just sit for days, or move very slowly before dissipating. Cut-off lows are associated with very strong atmospheric instability and powerful convection. This also brings a range of severe weather, including torrential rainfall, snow in mountainous areas and violent winds. Cut-off lows are one of the main drivers of damaging floods in South Africa, and can also trigger thunderstorms. (Source: DiMP, 2010: 18)

Disaster risk - “The likelihood over a specified time period of severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.” (Source: IPCC, 2012: 558)

Disaster Risk Management - “Processes for designing, implementing and evaluating strategies, policies and measures to improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life and sustainable development.” (Source: IPCC, 2012: 558)

Drought -

Agricultural - The lack of availability of soil water to support crop and forage growth due to the departure of normal precipitation over some specified period of time. (Source: UNISDR, 2011:57 and UNISDR, 2009a:8)

Hydrological - Deficiencies in surface and subsurface water supplies relative to average conditions at various points in time through the seasons. (Source: UNISDR, 2011:57 and UNISDR, 2009a:8)

Meteorological - A precipitation deficiency over a pre-determined period of time. The thresholds chosen, such as 50 percent of normal precipitation over a six-month time period, will vary by location according to user needs or applications. (Source: UNISDR, 2011:57 and UNISDR, 2009a:8). Meteorological drought can be defined on the basis of the degree of dryness in comparison to 'normal' or average amounts of rainfall for a particular area or place and the duration of the dry period. The common practice to date has been to use the percentage of normal rainfall as an indicator of drought. Less than 75% of normal rainfall is regarded as a severe meteorological drought but a shortfall of 80% of normal will cause crop and water shortages which will ultimately affect social and economic factors. Normal rainfall for a particular place is calculated over a 30-year period using rainfall figures for at least 30 years. (Source: SAWS, 2003a)

Early warning system – “The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities, and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.” (Source: IPCC, 2012)

El Niño-Southern Oscillation (ENSO) phenomenon - A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts over many months, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns. (Source: UNISDR, 2009a:13)

Extensive Risk – “The widespread risk associated with the exposure of dispersed populations to repeated or persistent hazard conditions of low or moderate intensity, often of a highly localized nature, which can lead to debilitating cumulative disaster impacts.” (Source: UNISDR, 2009b)

Famine – “Scarcity of food over an extended period and over a large geographical area, such as a country. Famines may be triggered by extreme climate events such as drought or floods, but can also be caused by disease, war, or other factors.” (Source: IPCC, 2012)

Flood – “The overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas that are not normally submerged. Floods include river (fluvial) floods, flash floods, urban floods, pluvial floods, sewer floods, coastal floods, and glacial lake outburst floods.” (Source: IPCC, 2012)

Food insecurity – “A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution, or inadequate use of food at the household level. Food insecurity, poor conditions of health and sanitation, and inappropriate care and feeding practices are the major causes of poor nutritional status. Food insecurity may be chronic, seasonal or transitory.” (Source: FAO, 2012)

Forced migration – “A migratory movement in which an element of coercion exists, including threats to life and livelihood, whether arising from natural or man-made causes (e.g. movements of refugees and internally displaced persons as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects).” (Source: IOM, 2012)

Governance – “The way government is understood has changed in response to social, economic, and technological changes over recent decades. There is a corresponding shift from government defined

strictly by the nation-state to a more inclusive concept of governance, recognizing the contributions of various levels of government (global, international, regional, local) and the roles of the private sector, of nongovernmental actors, and of civil society.” (Source: IPCC, 2012)

Gross Domestic Product (GDP) - “is the sum of the gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.” (Global Finance, 2013)

Hazard - A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability. (Source: UNISDR, 2009b:17)

Hidden hunger – “Refers to vitamin and mineral deficiencies, or micronutrient deficiencies. Micronutrient deficiencies can compromise growth, immune function, cognitive development, and reproductive and work capacity. Somebody who suffers from hidden hunger is malnourished, but may not sense hunger. Micronutrient deficiencies can also occur in people who are overweight or obese.” (Source: FAO, 2012)

Immigration – “A process by which non-nationals move into a country for the purpose of settlement.” (Source: IOM, 2012)

Intensive Risk – “The risk associated with the exposure of large concentrations of people and economic activities to intense hazard events, which can lead to potentially catastrophic disaster impacts involving high mortality and asset loss.” (Source: UNISDR, 2009b)

Internally Displaced Person (IDP) – “Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.” (Source: IOM, 2012)

Malnutrition – “An abnormal physiological condition caused by deficiencies, excesses or imbalances in energy, protein and/or other nutrients.” (Source: FAO, 2012)

Migrant – “At the international level, no universally accepted definition for “migrant” exists. The term migrant was usually understood to cover all cases where the decision to migrate was taken freely by the individual concerned for reasons of “personal convenience” and without intervention of an external compelling factor; it therefore applied to persons, and family members, moving to another country or region to better their material or social conditions and improve the prospect for themselves or their family. The United Nations defines migrant as an individual who has resided in a foreign country for more than one year irrespective of the causes, voluntary or involuntary, and the means, regular or irregular, used to migrate. Under such a definition, those travelling for shorter periods as tourists and businesspersons would not be considered migrants. However, common usage includes certain kinds of shorter-term migrants, such as seasonal farm-workers who travel for short periods to work planting or harvesting farm products.” (Source: IOM, 2012)

“Economic migrant - A person leaving his or her habitual place of residence to settle outside his or her country of origin in order to improve his or her quality of life. This term is often loosely used to distinguish from refugees fleeing persecution, and is also similarly used to refer to persons attempting to enter a country without legal permission and/or by using asylum procedures without bona fide cause. It may equally be applied to persons leaving their country of origin for the purpose of employment

Irregular migrant - A person who, owing to unauthorized entry, breach of a condition of entry, or the expiry of his or her visa, lacks legal status in a transit or host country. The definition covers inter alia those persons who have entered a transit or host country lawfully but have stayed for a longer period than authorized or subsequently taken up unauthorized employment (also called clandestine/undocumented migrant or migrant in an irregular situation). The term "irregular" is preferable to "illegal" because the latter carries a criminal connotation and is seen as denying migrants' humanity.

Skilled migrant - A migrant worker who, because of his or her skills or acquired professional experience, is usually granted preferential treatment regarding admission to a host country (and is therefore subject to fewer restrictions regarding length of stay, change of employment and family reunification).

Temporary migrant worker - Skilled, semi-skilled or untrained workers who remain in the destination country for definite periods as determined in a work contract with an individual worker or a service contract concluded with an enterprise. Also called contract migrant workers.” (Source: IOM, 2012)

Migration – “The movement of a person or a group of persons, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.” (Source: IOM, 2012)

Mitigation - The lessening or limitation of the adverse impacts of hazards and related disasters. (Source: UNISDR, 2009b:19)

Nutrition security – “A situation that exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, in order to ensure a healthy and active life for all household members. Nutrition security differs from food security in that it also considers the aspects of adequate caring practices, health and hygiene in addition to dietary adequacy.” (Source: FAO, 2012)

Push-pull factors – “Migration is often analysed in terms of the "push-pull model", which looks at the push factors, which drive people to leave their country (such as economic, social, or political problems) and the pull factors attracting them to the country of destination.” (Source, IOM, 2012)

Refugee – “A person who, ‘owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinions, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country. (Art. 1(A)(2), Convention relating to the Status of Refugees, Art. 1A(2), 1951 as modified by the 1967 Protocol). In addition to the refugee definition in the 1951 Refugee Convention, Art. 1(2), 1969 Organization of African Unity (OAU) Convention defines a refugee as any person compelled to leave his or her country ‘owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country or

origin or nationality.’ Similarly, the 1984 Cartagena Declaration states that refugees also include persons who flee their country ‘because their lives, security or freedom have been threatened by generalised violence, foreign aggression, internal conflicts, massive violations of human rights or other circumstances which have seriously disturbed public order’.” (Source: IOM, 2012)

Remittances – “Monies earned or acquired by non-nationals that are transferred back to their country of origin.” (Source: IOM, 2012)

Resilience – “The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.” (Source: IPCC, 2012)

Risk accumulation - The incremental (and largely undetected) accumulation of hazardous (i.e. declining rainfall) risk factors, combined with exacerbating vulnerability conditions.

Risk de-escalation - Refers to continued reduction in adverse impacts, plus reversal of hazard conditions (i.e. restoration of rainfall), and down-scaling of emergency response. This phase was indicated operationally by dismantling of emergency structures and mechanisms and the restoration of water to storage systems and normalization of flows within the abstraction systems.

Risk escalation - Refers to the acceleration of risk factors to the point that they are detected and causally linked to an adverse consequence (i.e. acute water shortage). In the case of the Southern Cape drought, this phase was also characterised by the establishment of initial coordination mechanisms and structures – recognizing the urgency for response.

Risk governance – Refers to the identification, assessment, management and communication of risks in a broad context. It includes the totality of actors, rules, conventions, processes and mechanisms and is concerned with how relevant risk information is collected, analysed and communicated, and how management decisions are taken. It applies the principles of good governance that include transparency, effectiveness and efficiency, accountability, strategic focus, sustainability, equity and fairness, respect for the rule of law and the need for the chosen solution to be politically and legally feasible as well as ethically and publicly acceptable. (IRCG, 2008)

Risk intensification - Refers to the occurrence of recognizable first-, second- and third-order impacts and multiplier effects that indicate cross-linkages between socio-economic and environmental conditions. In the Southern Cape drought, this phase was associated with concerted and focused emergency measures by multiple organizations and individuals to contain further progression of water shortages and associated impacts.

Risk stabilisation - Refers to deceleration of the occurrence of the most wide-reaching adverse impacts, mainly through a combination of focused emergency measures (that either increased water supply and/or reduced demand). While exposure to the hazard may not have decreased, the consequences of exposure maybe minimised by focused interventions.

Risk transfer – “The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise, or state authority will obtain resources from the other party after a disaster occurs, in exchange for on-going or compensatory social or financial benefits provided to that other party.” (Source: IPCC, 2012)

Stunting – “Low height for age, reflecting a sustained past episode or episodes of undernutrition.” (Source: FAO, 2012)

Transboundary events - Severe events that affect more than one administrative jurisdiction. (Source: DiMP, 2010:79)

Transboundary risk – refers to the probability of negative outcomes that affect more than one administrative jurisdiction. (Adapted from DiMP, 2010)

Underweight – “Low weight for age in children, and BMI <18.5 in adults, reflecting a current condition resulting from inadequate food intake, past episodes of undernutrition or poor health conditions.” (Source: FAO, 2012)

Wasting – “Low weight for height, generally the result of weight.” (Source: FAO, 2012)

Xenophobia - “At the international level, no universally accepted definition of xenophobia exists, though it can be described as attitudes, prejudices and behaviour that reject, exclude and often vilify persons, based on the perception that they are outsiders or foreigners to the community, society or national identity. There is a close link between racism and xenophobia, two terms that can be hard to differentiate from each other.” (Source: IOM, 2012)

ANNEX TWO: RIASCO PROJECT INTERVIEWS

-January 26, 2013-

SUMMARY

- Interviews lasted on average 2 hours
- Interviews have been completed in 13 study countries
- 209 interviews were completed
- 255 people were interviewed

1. NORTH WEST UNIVERSITY

Country: Botswana

Name	Organisation	Date Interview
Titus Ludzi Makosha	Botswana Red Cross Society	25 September 2012
Gomolemo Rasesing		
Boitumelo		
Maeletso Pego	National Disaster Management Office	27 September 2012
Mr Edger Moyo		
Tebogo		
-	MSB	27 September 2012

Regional

Name	Organisation	Date Interview
Stanley Ndlovu	International Federation of the Red Cross Society.	26 September 2012
Alexander Matheou		
Michael Charles		
Kennedy Masamvu	SADC	September 20112

2. TECHNICAL UNIVERSITY OF MOZAMBIQUE (UDM)

Country: Mozambique

Name	Organisation/Agency	Date Interviewed
De Almeida, Rita	General Directorate Advisor, INGC	October 2012
Ms. Esselina	Prevention & Mitigation, INGC	October 2012
Mr. Alexandrino	Disaster Management Agency (Instituto Nacional de Gestão de Calamidades, INGC)	October 2012
Buque, Sergio	National Institute of Meteorology (INAM)	October 2012
Govate, Egidio	National Directorate of Waters (DNA)	October 2012
Botao, Anacleta	Ministry of Agriculture (MINAG)	October 2012
Honwana, Igor	Disaster Management Agency (Instituto Nacional de Gestão de Calamidades, INGC)	October 2012
Name	Organisation/Agency	Date Interviewed

Jose, Luciano	Ministry of Women and Social Affairs	November 2012
Ms. Elisa	Ministry of Women and Social Affairs	November 2012
Taveira, Renato	National Service of Public Rescue	November 2012
Muianga, Claudio	Ministry of Health, Department of	November 2012
Marcos, Severino	National Directorate of Geology, National	November 2012
Mr. Lázaro	Technical Secretariat for Food Security and	November 2012
Nadia Adriaio	Ministério da Planificação e	January 2013
Jorge Chindela	Ministério das Finanças (DNO)	January 2013
Agostinho Vilanculos	Direção Nacional de Águas (ARA Sul)	January 2013
Viriato Muianga	Ministério das Obras Públicas e Habitação (Urbanismo)	January 2013
Cláudio Muinanga	Ministerio da Saúde (Direcção Nacional de Saúde Pública)	January 2013
Hiten Gentilal	Ministerio da Agricultura (Direcção dos Serviços Agrários)	January 2013
Felizarda Mangoele	Ministário da Coordenação da Acção Ambiental (DINAPOT)	January 2013
Sebastiao Estevão	Ministério da Mulher e Acção Social	January 2013
Anisio P Manuel	Ministerio de Energia	January 2013
Marta Manjate	INGC (DARIDAS)	January 2013
Ana Cristina	INGC (DPM)	January 2013

Country: Swaziland

Name	Organisation/Agency	Date Interviewed
Samkeliso Dlamini	National Disaster Management Agency	13 November 2012
Sunshine Gamedze	National Meteorological Services	08 January 2013
Ambrose Dlamini	Ministry of Agriculture	10 January 2013
Cebisile Dlomo-Kunene	DPMO- Dept of Social Welfare	11 January 2013
Sibongile Hlatshwayo		
Masitsela Mhlanga	Ministry of Health- EPR	15 January 2013
Brian Cindzi		
Kanya Gamedze		
Alvit Fakudze	National Fire and Emergency Services	16 January 2013
Ntombi Dlamini	Geological Survey and Mines	16 January 2013
Sibongile Sigudla	World Vision Swaziland	17 January 2013
Andreas Dlamini	Swaziland Redcross	18 January 2013

3. STELLENBOSCH UNIVERSITY

Country: Namibia

Name	Organisation/Agency	Date interviewed
Mr Itenge	Directorate of Disaster Management (DDRM)	7 August 2012
Judith Malambo, Abel Amutenya, Mekondjo Shanyengange	City of Windhoek Disaster Risk Management Unit (DRMU)	7 August 2012
Mr Karumendu	World Food Programme (WFP)	8 August 2012
Guido van Langenhove	Division of Hydrology	8 August 2012
Nolan van der Ross	United Nations Children's Fund (UNICEF)	8 August 2012
Alex Sikume	United Nations Development Programme (UNDP)	8 August 2012
Ms Neels	United Nations Population Fund (UNFPA)	9 August 2012
Petrus Matha	World Health Organisation (WHO)	9 August 2012
Elham Pourazar	International Organization for Migration (IOM)	9 August 2012
Mr Kwenani	Namibia Redcross Society (NRCS)	9 August 2012
Frans Uirab	Namibia meteorological services	10 August 2012
Paulus Shikongo	Directorate of forestry – remote sensing	10 August 2012
Leon Heyns	Ministry of local government	10 August 2012

Country: Zambia

Name	Organisation/Agency	Date interviewed
Mudenda, Wisford	Zambian Redcross Society (ZRCS)	22 July 2012
	Acting Resident Coordinator	23 July 2012
Chello, Mwiinga	United Nations Development Programme (UNDP) & United Nations Disaster Management Team (UNDMT)	23 & 27 July 2012
Kangwa, Patrick	Disaster Mitigation and Management Unit (DMMU)	24 July 2012
Mwape, Yande		
Kalota, Rodney		
Kyakilika, Martha	Save the Children	24 July 2012
Kattal, Rakesh	Concern Worldwide	25 July 2012
Munyandi, Patricia	Zambian Red Cross Society (ZRCS)	24 July 2012
Kabunda, Teddy	OXFAM	24 July 2012
	Plan International	24 July 2012
Mulando, Allan	World Food Programme (WFP)	25 July 2012
Phiri, Charles	International Organization for Migration (IOM)	25 July 2012
Belemu, Jim	The Food and Agriculture Organization of the United Nations (FAO)	25 July 2012
Zumbe, Walle		
Conteh, Ibrahim	United Nations Children's Fund (UNICEF)	25 July 2012

Name	Organisation/Agency	Date interviewed
Yohondamkol, Sakor	United Nations High Commissioner for Refugees (UNHCR)	26 July 2012
Songolo, Peter	World Health Organisation (WHO)	26 July 2012
Lenganji Sikaona	Disaster Mitigation and Management Unit	30 July 2012
Kapekele, E		
Kangómba, S	Department of Water Affairs	2 July 2012
Dr Mulenga	Ministry of Health	2 July 2012
Ngolwe, Agnes	United States Agency for International Development (USAID) Famine Early Warning Systems Network (FEWSNET)	1 July 2012
Mr Nkomiki	Zambia Meteorological Department (ZMD)	1 July 2012
Mr Kasalwe	Lusaka Disaster Management Committee	1 and 2 July 2012
Zgambo, Bernard	World Vision International	2 July 2012
Mukamba, Miriam	Zambia_NGO_WASH Forum	2 July 2012
Malulu, A	Caritas International	2 July 2012

Country: Zimbabwe

Name	Organisation/Agency	Date interviewed
Gapa Regina	United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)	6 August 2012
Mhandagara, Kudakwashe		
Cuttat, Pascal	International Committee of the Red Cross (ICRC)	6 August 2012
Thomas, Paul Muwani, Sally	United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)	8 August 2012
Kamuzhanje, Joseph	GOAL International	8 August 2012
Dr Charimari	World Health Organisation (WHO)	8 August 2012
Linnette Jonhera	International Federation of Red Cross and Red Crescent Societies (IFRC)	8 August 2012
Noor Pwani		8 August 2012
Munyari, Hope	Zimbabwe Red Cross Society (ZRCS)	8 August 2012
Chimwanza, Sam	World Food Programme (WFP)	8 August 2012
Jovceva, Lijana		
Mariga, Ransom	OXFAM GB	9 August 2012
Brigham, David	Mercy Corps	9 August 2012
Kaendesa, Patson		
Ndlovhu, S	Department of Civil Protection	August 2012
I, Betera		
Ndugu, Patrick	CARE International	9 August 2012
Ngirazi, Daison	United States Agency for International Development (USAID) Famine Early Warning Systems Network (FEWSNET)	15 August 2012
Musiwa, D, Viriri, N	ZINWA	9 August 2012

Name	Organisation/Agency	Date interviewed
Nyahuye, Alleta	Environmental Management Agency (EMA)	15 August 2012
Madziwa, D	Fire and Emergency Services	15 August 2012
Ajay Ziro, Odrie	Environmental Health Alliance (EHA)	16 August 2012
Keogh, Emma	Protracted Relief Programme (PRP)	17 August 2012

Country: South Africa

Name	Organisation/Agency	Date Interviewed
Pillay, Greg	Cape Town Disaster Risk Management Centre (DRMC)	18 July 2012
Veldtman, Roy	Cape Winelands Disaster Management Centre	6 August 2012
Minnes, Shaun		

Regional

Name	Organisation/Agency	Date Interviewed
Olushayo, Olu	World Health Organization (WHO)	September 2012
Tumusiime, Prosper		
Vitalis Chipfakacha	SADC	September 2012
Duncan Samikwa	SADC RVAA Programme	November 2012
Charles Rethman		

4. UNIVERSITY OF ANTANANARIVO

Country: Comoros

Name	Organisation/Agency	Date Interviewed
Mogne Ali Moussa	Observatoire Volcanologique du Karthala (Ovk)	24 October 2012
Aboubakar Ben Allaoui	Ministère De L'environnement	31 October 2012
Chamsoudine Mohamed	Direction Nationale De La Santé	30 October 2012
-	Agence National De L'aviation Civil Et De La Météorologie	1 November 2012
Yao Kassankongo	Organisation Mondiale de la Santé (OMS)	25 October 2012
Isa Coulibally	Unicef	27 October 2012
Bakary Mouze Mogne	Ministère De L'education Nationale Chargé De La Culture, De La Jeunesse Et Des Sports	24 October 2012
Ismael Mogne Daho	Direction Générale De La Sécurité Civile	30 October 2012

Name	Organisation/Agency	Date Interviewed
Mariame Anthoy	Vice Présidence En Charge De La Production, De L'environnement, De L'énergie, De L'industrie Et De L'artisanat	
Said Abdou	Croissant Rouge Comores (Crco)	29 October 2012
Hachime Abderemane	ONG Ulanga	25 October 2012
Anliyat Mze Ahmed Abdallah	Pnud	31 October 2012

Country: Madagascar

Name	Organisation/Agency	Date Interviewed
Rakotoson Rija	UNOCHA	July 16 2012
Ramanantsoa Serge Rasolomampandra Jaotiana	UN Habitat	August 23 2012
Rajaonalison Sitraka	UNICEF	August 28 2012
Isabelle Nirina	PAM	August 24 2012
Lamina Arthur	OMS	August 21 2012
Solomandresy	FNUAP	August 27 2012
Randriamanantenasoa Felicien	CRS	September 11 2012
Alison Clausen	World Bank	August 28 2012
Andriamasinoro Mamy	CARE	August 24 2012
Razafindrakoto Jocelyn	Malagasy Red Cross	August 24 2012
Norotiana Jeannoda	SPDTS	August 17 2012
Razakanaivo Mamy Andrianaivo Jaona	Cellule de Prévention et Gestion des Urgences (CPGU)	August 3 2012
Rajaobelison Josia	Office National de Nutrition (ONN)	August 20 2012
Razafindrakoto Honoré Andrianarisaina benalisoa	Service des Urgences et de Réponse au Catastrophes (SURECA/ Min of Public Health)	August 30 2012
Julien Andriamahazo	Ministry of agriculture	August 23 2012
Ramanoara Haingotiana francky	Fire Brigade Corps	August 24 2012
Rasolonjatovo Auguste	Ministry of Population (MPAS)	August 30 2012
Razafimanantsoa Mbolatiana	Agence pour la Protection contre les Inondations de la Plaine d'Antananarivo (APIPA)	August 23 2012
Rasamoelina Eddy	Institut et Oobservatoire Géophysique d'Antananarivo (IOGA)	August 24 2012
Razanamialisoa Jane	Direction du changement climatique (DCC) / Ministry of Environment	August 28 2012

Country: Mauritius

Name	Organisation/Agency	Date interviewed
Mr Ajay Nundoochan	World Health Organization	
Fanny Lacroix: Coordinatrice de l'Unité Technique Risques Projet Risques Naturels - COI	Commission de l'Océan Indien	
Mr M Beebeejaun	Service de la Météorologie	
Directeur Agricultural Research Unit (AREU)	Ministère de l'Agriculture et de la Sécurité Alimentaire	
Navin Mahadoo Programme Coordinator /Disaster Management coordinator	Croix Rouge of Mauritius	
M. Khemraj Servansing : Commissaire adjoint	Police Headquarters: Special Mobile Force MAURICE: POLICE	
Mrs Sabrina Schirmer	International Organization of Migration	
Mr. Simon Springett	UNDP	
Mrs. Marion Fourtune		
Mrs. Keswar Leelah		
Mrs. Doorgawatee Ram-Gopal		
Mr. Madoo Desha		

Country: Seychelles

Name	Organisation/Agency	Date interviewed
Roland Alcindor Regina (Coordonator)	UNDP	29 October 2012
Brenda Crea (Programme Assistant)		
Barbara Corrlus (President)	Seychelles Red Cross (ICRC)	29 October 2012
Labaleine Paul (General Director) Divina Sabino (Project officer)	DRDM	29 October 2012
Commissioner Ernest Quatre	Police Department	30 October 2012
Marc Naiken (Chief Executive officer)	Ministry of Agriculture	30 October 2012
Dr. Cornelia (Liaison Officer)	WHO	31 October 2012
Vincent Amélie (Deputy Genral Director)	Met. Services / Min of Environment.	31 October 2012
Ms Barrell (Chief of Social Affairs Services)	Ministry of Social affairs	2 November 2012
Florian Rock (Land Use Planning Coordinator)	Ministry of Land Use and Habitat	02 November 2012
Gerard Hoareau (Chief Executive officer)	MLHU	2 November 2012

Name	Organisation/Agency	Date interviewed
Jason Jaqueline (Director Forestry)	National Park Authority	5 November 2012
Rosie Bistouquet	AIDS/Minity of Health	5 November 2012
Sabrina Mousbe		
Myra Nicholas		
-	Public Utilities Commission	6 November 2012
Ronald Fock-Tave (Director General of Immigration)	Ministry of Home Affairs and transport, Immigration and Civil status Department	6 November 2012
Benjamin Choppy (Principal Secretary)	Department of ICT	7 November 2012
Jeffrey Dogley (General Director)		
Andre Morel (Chief of Fire Officer)	Seychelles Fire and rescue Services Agency (Min. Environment)	7 November 2012

5. EXTERNAL CONSULTANT: COLEEN VOGEL

Country: South Africa

Name	Organisation/Agency	Date Interviewed
George Killian and team	Department of Planning and Local Government (DPLG)	17 July 2012
Pillay, Greg	Cape Town Disaster Risk Management Centre (DRMC)	18 July 2012
Francois Engelbrecht	Council for Scientific and Industrial Research (CSIR)	18 July 2012
Eugene Poolman	South African Weather Service (SAWS)	18 July 2012
Janine Moseithi	South African RED Cross Society – Communications and Marketing Manager	22 August 2012

Regional

Name	Organisation/Agency	Date Interviewed
Hein Zeelie	United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)	10 July 2012
Gary Jones	UNAIDS Humanitarian Response Advisor	20 July 2012
Jaoa Manja	World Food Programme (WFP)	1 August 2012
Francesca Erdelman		
Phumzile Mdladla	United States Agency for International Development (USAID) Famine Early Warning Systems Network	2 August 2012
Pierre Vauthier Luchen, Sina Quraisha Merzouk	The Food and Agriculture Organization of the United Regional DRR manager for Southern Africa Regional Emergency Agronomist Regional DRR and Management for Southern Africa	7 August 2012
Yitna Getachew	International Organization for Migration (IOM)	22 August 2012
Sithabiso Gandure	Wahenga	6 September

EXTERNAL CONSULTANT: GIFT MAFULEKA**Country: Malawi**

Name	Organisation/Agency	Date Interviewed
Mr Emmanuel Bambe	District Commissioner, Karonga	October 2012
Mr Ali K. Phiri	District Commissioner, Salima	October 2012
Mr Gasten Macheka	District Commissioner, Mchinji	October 2012
Mr Hamisi Twabi	District Commissioner, Ntcheu	October 2012
Rodrick Mateauma	District Commissioner, Balaka	October 2012
Mr Newton Munthali	for: Director of Planning, Chikwawa District	October 2012
Mr Rodney Simwaka	District Commissioner, Nsanje	October 2012
Mr Cristopher Yohane	DISCOVER Project, Karonga	October 2012
Mr Lazarus Gonani	WFP Country Office	October 2012
Mr Duncan Ndhlovu		
Mr Hassan Mdala	Geological Survey, Zomba	October 2012
Mr Allexandre Castellano	Cooperazione Internazionale, Lilongwe	October 2012
Mr Willaiam Kawenda	Project Concern International, Balaka	October 2012
Mr Charles Kapitapita	Churches Action in Relief and Development (CARD,	October 2012
Mr Lameck Chimphero	World Vision International, Mchinji	October 2012
Mr Casterns Mulume	CADECOM, Lilongwe	October 2012
Mr Chesterman Kumwenda	FAO, Malawi	October 2012
Mr Melton Luhanga	CARD, Head Office	October 2012
Mr John Nyirenda	Save the Children (UK)	October 2012
Mr Flankline Msiska	CADECOM, Karonga	October 2012
Mr James Bwirani	FEWSNET, Malawi	October 2012
Mr James Kalikwembe	Evangelical Association of Malawi	October 2012
Mr Jeffrey Kanyinji	Department of Disaster Management Affairs,	October 2012
Mr Aubrey Sidick	Concern Universal, Ntcheu and Balaka	October 2012
Mr Winston Chimwaza	Department of Climate Change and Meteorological	October 2012
Nyama Village Savings Bank	Nyama Village Civil Protection Committee, Machinga	12 November
Sandama Village Loan	Sandama Village Loan Scheme, Thyolo	13 November
Chilimbi Small Scale	Chilimbi Village Small Irrigation Scheme, Mulanje	14 November
Chabwera Village	Chabwera Village Conservation Agriculture Group,	15 November
Tchodola Villagers	Hope Stove Production Group, Balaka	16 November
Mr Joseph Moyo	Malawi Redcross Society	18 November

EXTERNAL CONSULTANT: MORABO MOROJELE**Country: Lesotho**

Name	Organisation/Agency	Date Interviewed
M. Ntela	Disaster Management Authority	27 September 2012
M. Maloi	Disaster Management Authority	21 September 2012
M. Makhetha	CARE	10 October 2012
M. Moletsane	Disaster Management Authority	16 August 2012
M. France	Lesotho Meteorology Service	19 November 2012
M. Houmayoun	European Commission	-
F Khoanyane	Water and Sewerage Company	19 November 2012
F. Makhotla	World Food Programme	23 October 2012
M. Moletsane	Lesotho Red Cross	28 September 2012
M. Makula		
M. Lesupi	Rural Water Supply	18 October 2012
T. Mohlomi	Ministry of Home Affairs	19 October 2012
M. Hlabana	World Health Organisation	16 October 2012
L. Mathule	UNICEF	10 September 2012
M. Mahomo	Ministry of Health	24 October 2012
B. Migueles	Food and Agriculture Organization	27 September 2012
L. Peshoane	UNDP	27 September 2012
M. Makhoane	Ministry of Home Affairs - Fire Services	30 November 2012
M. Ntela	Disaster Management Authority	27 September 2012

ANNEX THREE: CORE ADVISORY GROUP

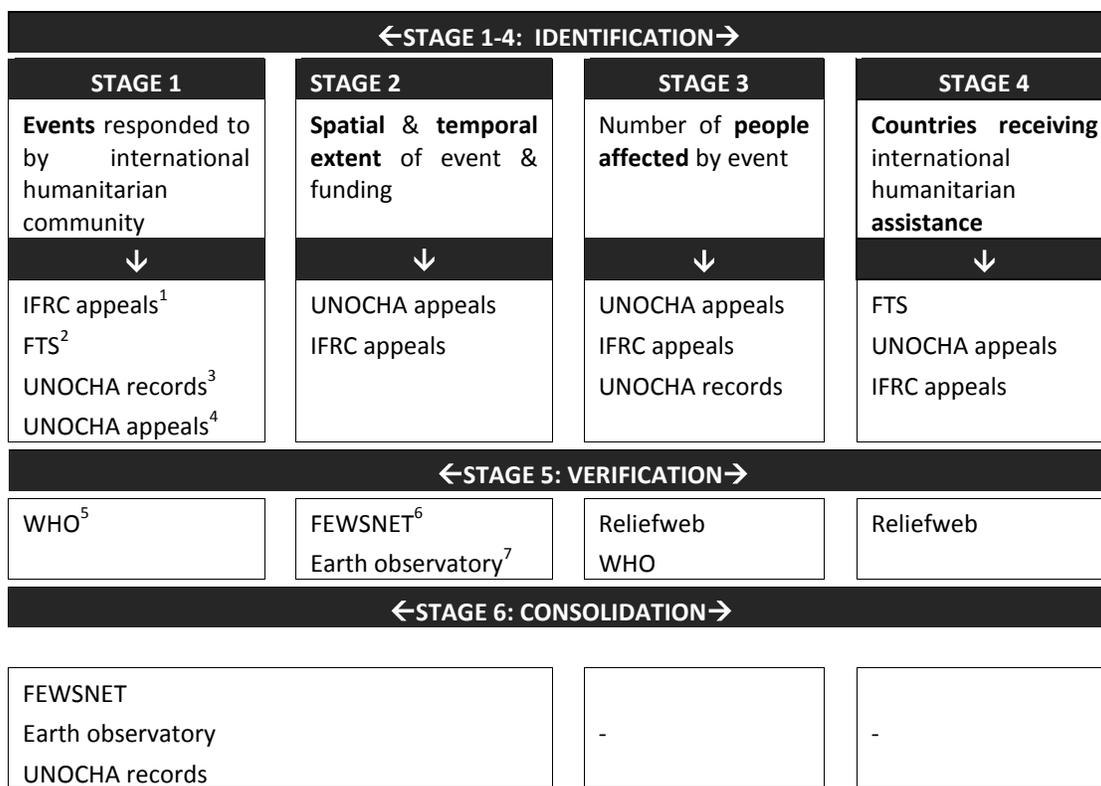
Name	Organisation
Bill Barclay	WFP
Awa Ndiaye Diouf	BCPR
Francesca Elderman	WFP
Darren Harder	IOM
Cindy Holleman	FAO
Gary Jones	UNAIDS
Ignacio Leon-Garcia	UNOCHA
Joao Manja	WFP
Kennedy Masamvu	SADC
Robert McCarthy	UNICEF
Hilary Motsiri	IFRC
Stanley Ndhlovu	IFRC
Daniel Sinnathamby	OXFAM
Eric Ventura	IOM

ANNEX FOUR: LIST OF EMERGENCIES USED FOR RIASCO STUDY

ESTABLISHING BASELINES IN INTERNATIONAL HUMANITARIAN NEEDS AND ASSISTANCE IN SOUTHERN AFRICA 2000-2012

The process of trend generation required a wide-ranging assessment of existing data sources on **international humanitarian assistance provided** for past disasters in southern Africa (from 2000-October 2012). A database was developed to identify **events of civil strife, environmentally induced disasters and epidemic emergencies**. The sequence of steps to generate the trend involved the identification of **recorded events** available to **coordinating agencies only** specifically, the IFRC (for the International Red Cross and Red Crescent Movements) and UNOCHA (for UN agencies and aid organisations). Events that were not flagged by UNOCHA in their record of “Major Emergencies in Southern Africa” or recorded on their and the IFRC’s websites were excluded from this database.

Figure B1 illustrates the steps taken to identify, verify and consolidate the events of international humanitarian concern along with the databases used to generate each record. Three main steps were undertaken. The first step **identified** events and their extent, people affected and countries receiving assistance. The second step **verified** number of and morbidity during epidemic emergencies; as well as, spatial extent and number of people affected by severe weather and flooding events. With the assistance of FEWSNET, Earth observatory and UNOCHA records the final step consolidated event records that were a result of a single severe weather event and protracted humanitarian situations.



NOTES:

¹www.ifrc.org/

²fts.unocha.org/

³UNOCHA, 2012. Major Emergencies in Southern Africa. (13 July 2012)

⁴www.unocha.org/ (appeals that were not available on the internet and from the UNOCHA regional office were sourced from the UNOCHA office in Geneva)

⁵www.who.int/, reliefweb.int/ (for cholera and measles outbreaks only)

⁶www.fews.net/

⁷<http://earthobservatory.nasa.gov/>

Figure A3.1: Sequence of steps for identification and verification of events disasters of international humanitarian concern (2000-2012)

**Table A3.1: Emergencies associated with environmental shocks/
stresses responded to by International Humanitarian actors**

Event type	Event year	Affected	Countries affected*	
Severe weather/ Flood	2000	5 000 000	BWA, NAM, MDG, MWI, MOZ, ZAF, SWZ, ZMB, ZWE	
	2001	500 000	AGO, MWI, MOZ, ZWE	
	2002 ¹	20 000	MDG	
	2002 ²	248 000	MDG, MUS , REU	
	2002 ³	7 500	SYC	
	2003 ⁴	114 500	MDG	
	2003 ⁵	45 000	MDG	
	2003 ⁶	2 040 000	MWI, MOZ	
	2003	12 000	AGO, NAM , ZMB	
	2004	773 000 ⁷	MDG	
		44 190 ⁸	MDG, MOZ, MWI, MUS, REU, SYC	
		50 000	BWA, NAM , MOZ, ZMB, ZWE	
	2005	11 238	AGO	
		1 495 ¹⁰	SWZ	
	2006	14 000	NAM	
	2007	88 468	AGO, NAM, ZMB	
	2007	450 000	MDG¹² SYC¹³, MUS¹⁴	COD, KEN, MWI, ZWE
		285 000	MOZ¹⁵	
		1 738 731	ZMB	
		22 500	NAM	AGO, BWA, ZWE
		1 738 731	ZMB	
	2008 ¹⁶	239 238	BWA, LSO, NAM, MWI, MDG¹⁷, MOZ¹⁸, SWZ, ZMB, ZWE	
		322,400		
		449 000		
	2009	750 000	NAM	BWA
		120 000	AGO	
		54 493 ¹⁹	MDG	
	2010	200 000 ²⁰	MDG	
	2011	80 000 ²¹	MDG	
		134 219	BWA, NAM , MWI, MOZ, ZAF, ZMB, ZWE	
	2012	26 350 ²²	MOZ, MDG²⁵, MWI	
108,048		MOZ, SWZ, ZAF		
148 887		COM		
Volcanic eruption	2005	10 000 ²⁶	COM	
		245 000 ²⁷	COM	
	2006	39 000	COM	
Earthquake	2009	31 220	MWI	
Drought	2000	231,290	MDG	

Event type	Event year	Affected	Countries affected*
	2007	553 000	LSO
		410000	SWZ
Famine/ Food crisis/insecurity ²⁹	2002-2004	14 410 000	LSO, MWI, SWZ, ZMB, ZWE
		7 872 933	LSO, MWI, MOZ, SWZ, ZMB, ZWE
	2005-2006	11 997 574	LSO, MWI, MOZ, NAM, SWZ, ZMB, ZWE
		4 200 000	
	2010	636 881	LSO
		508 088	MWI
		175 000	MOZ,
		1,939,000	ZWE³⁰
	2012	725 000	LSO
	Locust outbreak	2010	2 300 000

Shaded events have different appeal documents but same weather system

- Unspecified number affected

* Bold represents countries that appealed for Humanitarian Assistance

¹ Tropical Cyclone Kesiny

² Tropical Cyclone Dina

³ Tropical depression

⁴ Tropical Cyclone Manou

⁵ Tropical Cyclone Fari

⁶ Tropical Cyclone and Depression Delfina

⁷ Tropical Cyclone Gafilo

⁸ Tropical Cyclone Elita

⁹ Cases of malaria in Dondo

⁰ Record was in HH numbers (230 HHs) 6.5 was used as average HH size in SWZ

¹ An additional 224 cholera related deaths were recorded

² MDG was affected by all cyclones

³ SYC was only affected by Bondo

⁴ MUS was only affected by Gamede

⁵ MOZ was only affected by Favio

⁶ The region was affected by 12 tropical storms between October 2007- April 2008

⁷ MDG received aid for cyclones Fame and Ivan

⁸ MOZ received additional funding for Cyclone Jokwe

⁹ Tropical Cyclone Eric and Fanele

²⁰ Tropical cyclone Hubert

²¹ Tropical cyclone Bingiza

²² Average household size for southern Africa used to convert 5,270 households

²³ Cholera related deaths

²⁴ Cholera cases

²⁵ Tropical cyclone Irina

²⁶ Karthala Volcano - April 2005

²⁷ Karthala Volcano - November 2005

²⁸ Total drought affected people in region 7 892 938

²⁹ The famines recorded here exclude the individual protracted cases in Zimbabwe

³⁰ This was not a distinct/exclusive food insecurity event in Zimbabwe. The country was already receiving food aid in its annual CAP process. 1,939,000

Table3.2: Reported Cases of Cholera 2000 - 2010

	AGO	BOT	COM	LSO	MDG	MWI	MUS	MOZ	NAM	SYC	ZAF	SWZ	ZMB	ZWE	Total
2000	-	-	3 297	-	29 305	2 391	-	17 649	-	-	19 667	141	4 504	1 675	78 629
2001	-	-	226	-	7 219	2 395	-	8 794	-	-	106 159	5 612	3 109	650	134 164
2002	-	-	1 567	-	27	32 618	-	24 375	-	-	10 004	134	339	3 125	72 189
2003	-	-	56	-	5	2 736	-	13 758	-	-	3 901	32	1 049	1 009	22 546
2004	-	-	1	-		675	-	20 080	-	-	2 767	1 075	12 149	119	36 866
2005	0	0	0	0	0	1 105	0	2 226	0	0	3 503	0	1 503	516	8 853
2006	67 257	0	0	0	0	4 148	0	6 306	185	0	0	18	5 360	789	84 063
2007	18 422		1 555	-	-	475	-	2 622	14	178		0	2 286	65	25 617
2008	10 511	8	4	-	-	831	-	9 087	3 496	0	3 907	1	2 061	60 055	89 961
2009	2 019	15	-	-	-	5 751	-	19 679	159		10 520	19	4 712	68 153	111 027
2010	1 484	-	-	-	-	1 155	-	7 430	-	-	-	-	6 794	951	17 814
Total	99 693	23	6 706	0	36 556	54 280	0	132 006	3 854	178	160 428	7 032	43 866	137 107	681 729

ANNEX FIVE: RIASCO Research Team

Institution	Name	Position	Expertise	Area of interest in RIASCO project
Stellenbosch University	Ailsa Holloway	DiMP Director	Project coordination, DRR	Project Coordinator
	Annemi Murray	Project Accountant	Financial Management	Financial Management
	Mark Mulder	Stellenbosch University Legal Advisor	Research contracts	Contracts
	Wilma Roux	DiMP Administrator	Administration	Administration
	Gillian Fortune	DiMP Knowledge Manager	Quantitative + spatial data analysis	Quantitative + spatial data analysis
	Vimbai Chasi	DiMP Disaster Risk Researcher	DRR, public health	Zambia, Zimbabwe
	Jan de Waal	DiMP Disaster Risk Researcher	DRR, climate + weather	Namibia
	Patricia Zweig	DiMP Project Coordinator	DRR, Urban development + poverty	Migration, conflict, urbanisation, population change, HIV
	Prof. Milla McLachlan	Director Research + Information, Division of Human Nutrition	Nutrition + food security	Nutrition + food security
	Prof. Scott Drimie	Visiting Professor, Independent consultant	Food + livelihood security	Food + livelihood security
	Coleen Vogel	Private Consultant	Climate change	Climate Change
	Morabo Morojele	Research Consultant	Research	Lesotho
	Victoria Shifidi	Research consultant	Water research	Namibia Rapporteur
	Regina Gapa	UNOCHA staff member in Zimbabwe	Research support	Zimbabwe Country escort
Ingrid Kahari	Research Consultants	Research support	Rapporteur Zimbabwe	

Institution	Name	Position	Expertise	Area of interest in RIASCO project
Technical University of Mozambique	Rui da Maia	Academic Dean of UDM	PhD in Environmental Sciences (Ecology)	Mozambique, Malawi, Angola, Swaziland
	Benedita Nhambiu	UDM Project Manager	Industrial Engineer (MSc) Project Manager	Mozambique
	Xavier Chavana	Climate Change Coordinator Ministry of Plan & Dev Lecturer/	MSc in Disasters Management	Mozambique
		Researcher Eduardo Mondlane University Geography Department		
	Dulce Chilundo	Director of CENOE (National Emergency Operations Centre) INGC (Disasters Management Authority)	MSc in Information Systems Management	Mozambique
	António Banze	Information Officer CENOE (National Emergency Operations Centre) at INGC (DM Authority)	Physicist and Meteorologist (BSc)	Mozambique & Angola
	Joseph Mutsigwa	Capacity building consultant for Disaster Preparedness and Response Planning with UN WFP	MPhil Sustainable Development Planning and Management, BPhil in Sustainable Development Planning and Management	Swaziland
	Gift Mafuleka	Chief Relief & Rehabilitation Officer Dept. Disaster Management Affairs	MBA, BA Development Admin. Diploma Agriculture	Malawi
University of Antananarivo	Mahefa Randrianalijaona	Coordinator	DRM/R Climate Change	Seychelles, Madagascar, Comoros, Mauritius

Institution	Name	Position	Expertise	Area of interest in RIASCO project
	Julien Salava	Chief of Team	DRM/R	Comoros
	Pierre Lazamanana	Chief of Team	DRM/R	Mauritius
	Thierry Razanakoto	Chief of Team	DRM/R	Seychelles
	Lalaina Andrianjatovo	Assistant Researcher	DRM/R	Comoros
	Faly Aritiana	Assistant Researcher	DRM/R	Seychelles
	Fenitriaina	Assistant Researcher	DRM/R	Mauritius
North West University	Dewald Van Niekerk	Director ACDS	DRM/R	SADC, Botswana
	Michael Murphree	Researcher	Research - futures thinking/planning	SADC, Botswana
	Bradley Shoromoa	Junior Researcher	Research - futures thinking/planning	SADC, Botswana
	Suna Meyer	Administrator	Administration	Administration