



# **SADC REGIONAL RESILIENCE FRAMEWORK 2020-2030**

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## FOREWORD

The Southern African Development Community (SADC) has been facing increasing numbers of high impact climate extreme events in recent years. In 2016, the region experienced a historic El Niño-induced drought, the worst in 35 years. The drought caused loss of lives and livelihood assets, economic losses, population displacement, food insecurity and health-related crises. In 2019 the most devastating floods took over 1,000 lives, inundated vast productive lands, destroying crops and food stock, as well as infrastructure. While a good number of resilience-building activities are being undertaken by SADC Member States, the unique challenge of threats and shocks provide an opportunity for identifying and undertaking actions that could bring complementarities and enhanced efforts being pursued at regional level.

With the region still experiencing the devastating consequences of climate-related crises and other shocks, there is need for timely and coordinated support to assist countries, and vulnerable communities to prepare, respond and restore their economies and regain their livelihoods. Humanitarian responses to past crises in the region have saved lives and assisted to restore livelihoods, but have not always addressed underlying vulnerabilities. A strategic resilience-building approach to programming therefore helps to prepare for and mitigate against the damaging effects of shocks and stressors before, during and after crises, thereby minimizing human suffering and economic loss, which is key to the realisation of the revised Regional Indicative Strategy Development Programme 2015-2020 and beyond.

The overall purpose of this Regional Resilience Framework 2020-2030 is to guide SADC Member States, the Secretariat, International Cooperating Partners (ICPs) and stakeholders in the design and implementation of a broad range of resilience programmes in support of the SADC vision, mission, and goals. The development of a resilience-building framework is premised on extensive consultations with multiple stakeholders across the region. It provides an opportunity for collective efforts in tackling challenges, addressing gaps and scaling up of good practices across the region, to help achieve greater coherence and impact. I hope the framework will provide an impetus for increased adaptive capacities and sustainable and equitable social and economic development in the SADC Region.

**Dr Stergomena Lawrence Tax**  
**SADC Executive Secretary**

## ACRONYMS

AU	African Union
CAS	Complex Adaptive Systems
CBD	1992 Convention on Biological Diversity
CCA	Climate Change Adaptation
DIMSUR	Disaster Risk Management, Sustainability and Urban Resilience
DMIS	Disaster Management Information System
DPR	Disaster Preparedness and Response
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
ICP	International Cooperating Partner
IFRC	International Federation of the Red Cross and Red Crescent Societies
INGO	International non-government organisation
IOM	International Organization of Migration
NGO	Non-governmental organisation
NVAC	National Vulnerability Assessment Committee
REC	Regional Economic Community
RIASCO	Regional Inter-Agency Standing Committee
RISDP	Regional Indicative Strategic Development Plan
RVAA	Regional Vulnerability Assessment and Analysis
SADC	Southern African Development Community
SASDiR	Southern Africa Society for Disaster Reduction
SDGs	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
SIPO	Strategic Indicative Plan of the Organ
TFCA	Trans-frontier Conservation Areas
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework - Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction
VAA	Vulnerability Assessment and Analysis
WFP	World Food Programme

## EXECUTIVE SUMMARY

Resilience is about people and the systems on which their well-being depends. Given the transboundary nature of shocks affecting Southern Africa, a regional approach is required to effectively and equitably tackle deepening vulnerability and poverty to strengthen resilience. Resilience is *“the capacity of the system to experience a disturbance or change and still retain its basic function, structure, and identity; the ability to self-organize; and the ability to increase its capacity to learn and adapt”*.

The SADC Regional Resilience Framework 2020-2030 aligns with a number of international, regional, national and sub-national initiatives relating to resilience-building within the region. It adopts an integrated approach to sustainable development, disaster risk reduction, and climate change adaptation as informed by the Sendai Framework on Disaster Risk Reduction (SFDRR), African Union Agenda 2063, Agenda 2030 for Sustainable Development Goals. SADC Revised Regional Indicative Strategic Development Plan 2015-2020 and the SADC Climate Change Strategy and Action Plan.

The aim of this document is to provide a broad strategic framework, which will allow the Secretariat, Member States, IPCs, and partner organisations to align their resilience strategies. The Resilience Framework should not be viewed as a strategy but rather a first step towards understanding the complexity of resilience in the region.

Resilience is context-specific and thus what it looks like varies from place to place. SADC has a youthful and growing population, projected to increase from approximately 250 million in 2015 to 550 million in 2050. A majority of SADC countries will be over 50% urbanised. The major concern towards building a resilient SADC region remains the lack of adequate sustainable economic development which is viewed as the foundation for building a resilient region.

The SADC region is exposed to a wide range of hazards which can trigger disasters, and it is projected that climate-related hazards will increase in severity and frequency.

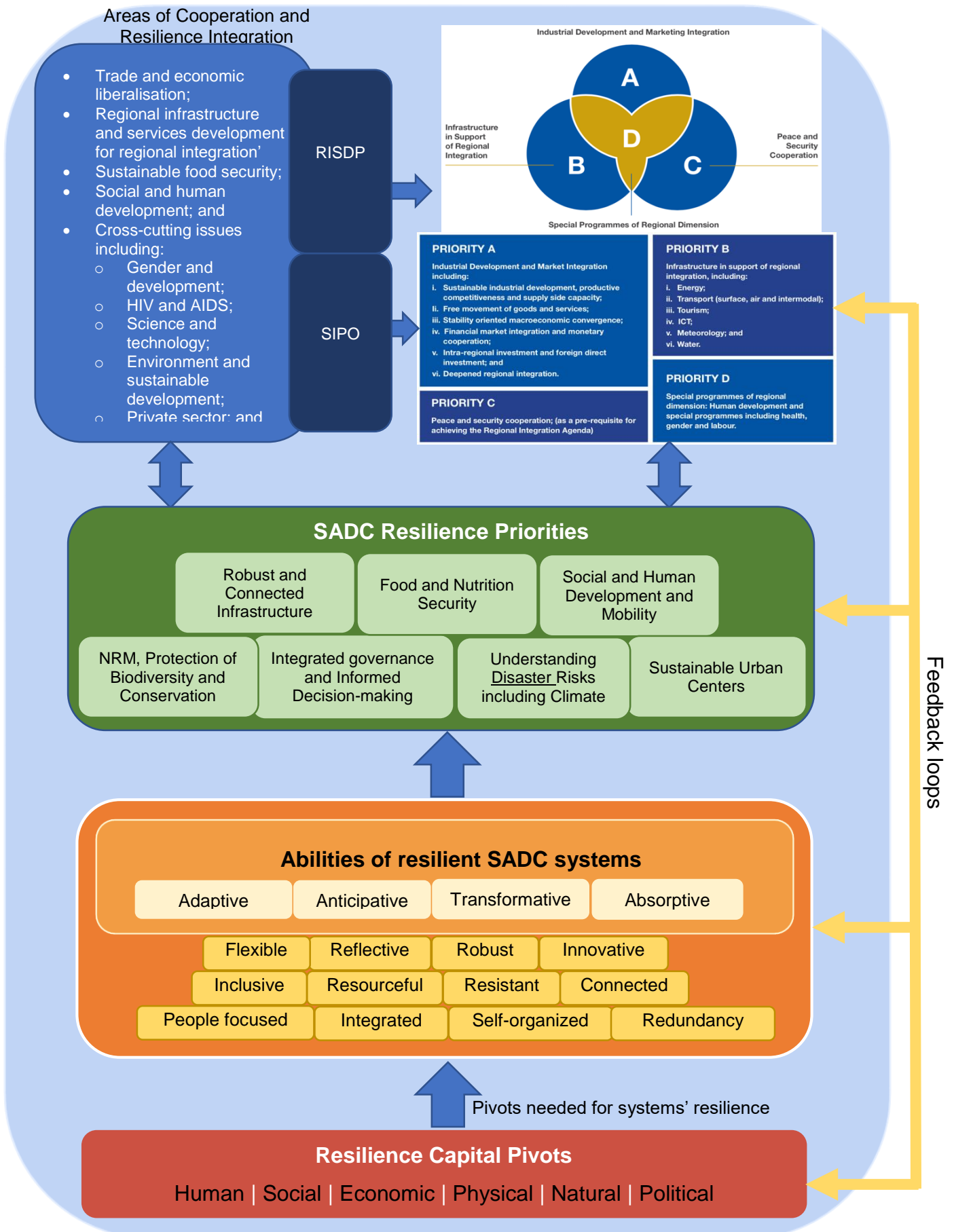
The main hazards experienced in the SADC region are climate-related (drought, floods, tropical cyclones), although diseases (pandemics and epidemics), pest infestations, fires, transport and industrial accidents and, more rarely, conflict and earthquakes also occur. The limited ability to adapt to these hazards is exacerbated by poverty. Poverty increases vulnerability, which is socially-differentiated among the population, and currently exhibits significant gender differences between men and women and boys and girls.

There are also political, institutional and technical capacity challenges that hinder the SADC region from effectively addressing these risks. Disaster risk reduction is currently limited in its ability to reduce current risk and reduce the creation of new risks. In addition, there is disproportionate emphasis on disaster risk management – i.e. preparation for emergency relief and response and recovery, rather than pro-active investment in resilience-building to equitably reduce disaster risk.

The Resilience Framework provides a conceptual model for, and characteristics of, a resilient SADC region through the multi-sectoral and multi-dimensional interconnected elements that contribute to the regional aspirations of integration and industrialisation. This is in line with the commitments to regional coordination and alignment to maintain peace and political stability, reduce poverty, create wealth and achieve sustainable social and economic transformation, as outlined in the revised RISDP (2015-2020) and the Strategic Indicative Plan for the Organ on Politics, Defence and Security Cooperation (SIPO II).

Figure 1 illustrates that the resilient regional system is founded on capital pivots that form an indispensable core and are key to its integrity. The capital pivots-human, social, economic, physical, natural and political-are required for resilience capabilities, namely being adaptive, anticipative, transformative and absorptive. To achieve these resilience capabilities, the system must be people-centred, inclusive, focused, innovative, self-organised, integrative, flexible, interconnected, reflective and resourceful. When the capital pivots and resilience capabilities are in place, the system is able to promote regional integration and therefore contribute to the industrialisation goals.





**Figure 1: Conceptual Framework of Resilience-building in the SADC Region and Member States**

The **purpose** of this Regional Resilience Framework 2020-2030 is to provide a broad strategic charter towards creating an understanding, and building of resilience in the SADC region. Such resilience-building is multiscale and transboundary within the context of sustainable development and the heightened disaster risk profile of the SADC region, in particular droughts, floods, severe weather and chronic food insecurity.

The **scope** of the Framework is the entire SADC region and is aimed at the Secretariat, Member States, ICPs and other partner organisations operating from regional level down to community level.

The **aim** of the Resilience Framework is to provide a stepping stone towards a complex adaptive systems-based approach, allowing Member States (at national and sub-national level) to develop and/or review their own resilience strategies within a broader coordinated environment, including inclusion of gender-responsive resilience thinking within all sectors in the region and in Member States.

The objectives of the Framework are to enhance resilience in the following priorities:

**Priority 1:** Integrated governance and informed decision-making

**Priority 2:** Social and human protection and mobility

**Priority 3:** Food and nutrition security

**Priority 4:** Robust and connected infrastructure

**Priority 5:** Sustainable Urban Centres

**Priority 6:** Natural Resources management and, protection and conservation of biodiversity

**Priority 7:** Understanding disaster risks including climate change

In building resilience, all systems and stakeholders are interconnected and therefore it is imperative that the Secretariat, all Member States, ICPs and partner organisations (including the private sector) recognise the importance of, and resources for, resilience-building at various levels by different stakeholders. The SADC Disaster Preparedness and Response Strategy and Fund 2016 – 2030 calls for the

establishment of the regional Disaster Preparedness and Response Fund to facilitate resilience-building in the region.

The SADC Secretariat with the assistance of Member States should establish structures and mechanisms, which will facilitate the coordination of resilience-building and also provide a central connecting point for resilience knowledge and information. Annexure A contains an Action Plan with broad priority activities to inculcate a more coordinated approach to resilience-building in the region. This Action Plan would serve as a monitoring and evaluation (M&E) instrument for the Framework. This Framework proposes that SADC Disaster Risk Reduction Peer Review Mechanism also contributes to tracking resilience-building in the region.

## 1. BACKGROUND AND CONTEXT

Resilience is about people and the systems on which their well-being depends. Given the transboundary nature of shocks affecting Southern Africa, a regional approach is required to effectively and equitably tackle deepening vulnerability and poverty to strengthen resilience (FAO 2018). Resilience is *“the capacity of the system to experience a disturbance or change and still retain its basic function, structure, and identity; the ability to self-organize; and the ability to increase its capacity to learn and adapt”*. This makes resilience not a static goal to achieve, but instead a ‘moving target’ that changes constantly as the variables that make up the systems change.

Efforts to produce resilient societies have proved one of the most complex challenges of sustainable development endeavours, because much of the traditional policies and models aimed at building resilience are based on a linear and oversimplified understanding of resilience (Coetzee, van Niekerk, & Raju, 2017). For instance, the Malawi National Resilience Strategy 2018-2030 (GoM 2016; GoM 2018) and draft Implementation Plan (2018-2023) emphasises breaking the cycle of poverty and food insecurity, the Eswatini Resilience Strategy (GoS 2018) has a specific focus on addressing hazards and disaster risk drivers, the Lesotho National Strategic Resilience Framework (GoL 2017) emphasises resilient livelihoods, while the Zimbabwe Resilience Strategic Framework (Government of Zimbabwe, 2015) focus is on household well-being and community development. On the other hand, the FAO Resilience Strategy 2018-2021 (FAO, 2018) emphasises the full value chain of food security.

During the Third World Conference on Disaster Risk Reduction in March 2015, member states through the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) *“reiterated their commitment to disaster risk reduction and the building of resilience to disasters to be addressed with a renewed sense of urgency in the context of sustainable development and poverty eradication and, as appropriate, to be integrated into policies, plans, programmes, and budgets at all levels and considered within relevant frameworks.”* Stressing the importance of resilience-building, the SFDRR also emphasises that *“this requires the strong*

*commitment and involvement of political leadership in every country at all levels in the implementation and follow-up of this framework and in the creation of the necessary conducive and enabling environment.”*

The Regional Inter-Agency Standing Committee (RIASCO) and its members initiated dialogue on building regional resilience in recent years, including through hosting two workshops in 2014. Following the second technical workshop on Building Resilience in Southern Africa in June 2014, solid indications emerged from the governments, UN, NGOs and other participants for coordinated efforts towards defining a resilience agenda. The main findings of the consultations showed that SADC should be a key actor and regional efforts should target the harmonisation of policies and coordination interventions by the Secretariat, Member States, ICPs and partner organisations (including the private sector and NGOs).

## **2. RATIONALE**

The Regional Resilience Framework 2020-2030 aligns with a number of international, regional and national (and sub-national) initiatives relating to resilience-building within the SADC region. It adopts an integrated approach to sustainable development, disaster risk reduction, and climate change adaptation.

***At the international level***, this Framework is guided by: Target 1.5 of the SDGs; the SFDRR: “Priority 3: Investing in disaster risk reduction for resilience”; Agenda 2063 Aspiration 7 (2015); the Paris Agreement to the United Nations Framework Convention on Climate Change (2015) and in particular Articles 2(1)(b), 7(1), 7(9)(e), 8(4)(h), and 10(1); the Rome-Based Agencies’ Collaboration to Strengthen Resilience for Food Security and Nutrition (2015); the Core Commitments from the World Humanitarian Summit (2016); the UN Plan of Action: Disaster Risk Reduction for Resilience (2016); UN’s New Urban Agenda (2016); and the Aichi Biodiversity Targets (Target 15) (2011).

***At the regional level***, the Framework aligns with: the SADC Common Agenda; the Revised Regional Indicative Strategic Development Plan 2015-2020 (RISDP); the

2015 Strategic Indicative Plan of the Organ (SIPO II); the RIASCO 2014 Regional Resilience Framework; The SADC Climate Change Strategy and Action Plan, 2015; the Windhoek Declaration for Enhancing Resilience to Drought in Africa; FAO Resilience Strategy for Southern Africa 2018; and SADC Industrialization Strategy and Roadmap 2015 – 2063.

**At national level**, the Resilience Framework acknowledges: The Zimbabwean “*Building Resilience in Zimbabwe: Towards a Resilience Strategic Framework*”, 2015; the Lesotho National Resilience Strategic Framework, 2017; the Malawian National Resilience Strategy, 2018, and the Eswatini Resilience Strategy and Action Plan, 2017.

**At sub-national level**, the Resilience Framework takes cognisance of a number of existing metropolitan-based resilience strategies (e.g. Durban and Cape Town), and other urban-based resilience frameworks (e.g. the Resilience Assessment Frameworks of 15 medium to big cities in SADC<sup>1</sup> under the CityRAP programme designed by DIMSUR).

## 2.1 Purpose

The purpose of this Regional Resilience Framework 2020-2030 is to provide a broad strategic charter towards creating an understanding, and building of resilience in the SADC region. Such resilience-building is multiscale and transboundary within the context of sustainable development and the heightened disaster risk profile of the SADC region, in particular droughts, floods, severe weather and chronic food insecurity.

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<sup>1</sup> These include: Morondava in Madagascar; Zomba and Lilongwe in Malawi; Chokwe, Vilankulo, Mocuba and Dondo in Mozambique; Moroni and Fomboni in Comoros; Lusaka and Chipata in Zambia; Mutare in Zimbabwe; Potchefstroom, George and Port Alfred in South Africa.

## 2.2 Scope

The scope of the Framework is the entire SADC region and is aimed at the Secretariat, Member States, ICPs and other partner organisations operating from regional level down to community level.

## 2.3 Aim

The aim of the Resilience Framework is to provide a stepping stone towards a complex adaptive systems-based approach, allowing Member States (at national and sub-national level) to develop and/or review their own resilience strategies within a broader coordinated environment, including inclusion of gender-responsive resilience thinking within all sectors in the region and in Member States.

## 2.4 Objectives

The objectives of the Framework are to enhance resilience in the following priorities:

**Priority 1:** Integrated governance and informed decision-making

**Priority 2:** Social and human protection and mobility

**Priority 3:** Food and nutrition security

**Priority 4:** Robust and connected infrastructure

**Priority 5:** Sustainable Urban Centres

**Priority 6:** Natural Resources management and, protection and conservation of biodiversity

**Priority 7:** Understanding disaster risks including climate change

## 2.5 Stakeholder Consultation

The Resilience Framework has been informed by desktop research and consultations undertaken, in the SADC region from September 2018 to March 2019. In total 306 individuals from 195 ministries, departments, organisations and sectors in 15 SADC Member States provided inputs through an online survey, key informant interviews, focus group interviews and workshops (see Table 1 below).

**Table 1: Summary of Consultation Methods and Inputs**

Method	Participants
Focus groups (members of national disaster risk reduction platforms) and key informant interviews	Botswana, Malawi, Mozambique, Zambia and Zimbabwe
Online Survey	162 respondents from across SADC member states; 30 respondents from 9 countries outside SADC
Regional DRR workshops (17-19 December 2018 in Swakopmund and 26-28 June 2019 in Windhoek)	DRR focal points and other stakeholders from government and NGOs across all member states

### 3. RESILIENCE CONTEXT OF SADC

SADC has a young and growing population with a growth rate of 2.68 projected to increase from approximately 250 million in 2015 to 550 million in 2050 (SADC, 2011). Female and male distribution is almost equal at 50% each, however projected figures slightly favours more females in the region in the years to come. The majority of the SADC population is youthful, falling within the aged group 15-24 years, and the youthful population is estimated to double. The proportion of the population living in urban areas is also increasing. By 2050 the majority of SADC countries will be over 50% urbanised, with Angola and Botswana being over 80% urbanised (UN Habitat, 2010; Crush et al., 2012).

The SADC economy is growing, with a rate averaging from 1.6%-5.1%, compared with 2.5%–3.2% globally for the period 2013–2017 (World Bank, 2015). Population, urban and economic growth provides opportunities but there can be negative feedbacks/consequences which can reduce the resilience built over the years. For example, population growth increases density and creates higher urban agglomeration, which is critical for achieving sustained growth and increasing economies of scale. The downside of “growth” is that it can increase the numbers of people and extent of infrastructure exposed to hazards which can trigger disasters. In



addition, the benefits of economic growth are rarely equally distributed, increasing the likelihood that certain groups of the population are left behind.

The existing nature of gender inequality, combined with gender-blind approaches to development that do not take into account the different needs of women and men, means that inequalities are often perpetuated with women typically benefiting less than men. Gender-responsive approaches to sustainable development should equitably increase resilience for all vulnerable groups, thereby reduce gendered vulnerability and inequality.

The region is highly dependent on rain-fed agriculture which has a significant impact on food and nutrition security and GDP contributions. This is urgently being addressed through the SADC Industrialization Strategy and Roadmap 2015 – 2063 which aims to promote investment, trade, and industrial regionalisation between Member States. There is however a lack of public (e.g. good governance and capacitation) and private sector institutions (i.e. financial institutions for economic growth) needed to support sustainable development objectives.

Degradation of the environment due to short-sighted exploitative and extractive practices are on the rise resulting in loss of biodiversity and productive ecosystems in the region. These practices are not geared towards aggressively utilising the region's comparative advantages for economic growth and industrialisation. Environmental degradation also increases biophysical vulnerability to climate extremes, including droughts, floods and tropical cyclones.

There is a clear need for reliable, functional and connected infrastructure in the region. Without such connectivity the movement of goods and people are hindered, causing a significant impact on regional economic growth, innovation and cultural connections. Sustainable development should be viewed as the foundation for building a resilient region, and importantly are consideration for integrated planning and coordinated/aligned execution.

### 3.1 Disaster Risk Profile

Disaster risks are increasing in the SADC region, resulting from increasing frequency and intensity of hazards, increasing vulnerability, and limited adaptive capacity. The main climate hazards experienced in the SADC region are drought, floods, and tropical cyclones, which are occurring more frequently and of greater magnitude as a result of climate change (as evidenced in the successive major cyclones that affected the region in 2019). Other hazards include diseases (pandemics and epidemics), pest infestations, fires, transport and industrial accidents and, more rarely, conflict and earthquakes. Disaster events have been exacerbated by, among others: the negative impact of climate change, poverty, population growth and movements, HIV/AIDS, gender inequality, food insecurity, stress on natural resources, and increasing urbanisation. There are further challenges in the political, institutional and technical capacity of the SADC region to deal with these risks.

Climate extremes and the resulting disasters have long affected the SADC region, and undermine many development gains. The 1992 drought which cost US\$4 Billion was said to be the most extreme drought of the 20th Century (Manatsa et al., 2008). In 2015-2016, the SADC region experienced an historic El Niño-induced drought, the worst in 35 years. To cope with the disaster, SADC declared a state of a regional disaster and appealed for US\$2.4 Billion to support 40 million people who needed humanitarian assistance. This was aimed at reducing the loss of lives and livelihood assets, economic losses, population displacement, food insecurity and health-related crises.

Setting up such a 'crisis ad hoc team' would suggest the 2016 drought-induced disaster was first of its kind. However, the 2016 El Niño-induced drought was not: To the credit of the SADC region, some Member States drew from the 1992 drought experience, and developed drought mitigation, preparedness, response and recovery plans. However, the declaration of a regional disaster and formation of a crisis team to respond to the 2016-drought disaster, exposed some of region's political and institutional capacity challenges.

Despite the long history of exposure to climate extremes, the SADC region has struggled with effective implementation of disaster risk reduction. SADC developed a Disaster Management Strategy in 2001, which was the first of its kind on the African continent. However, developing a successor to take over from 2011 was subject to challenges. Following the regional El Niño appeal, and because of limited institutional and technical capacity at the SADC Secretariat, the multi-stakeholder SADC El-Niño Logistics and Coordination Team was established to coordinate regional response (SADC, 2016).

Disaster risk reduction is currently limited in its ability to reduce current risk and reduce the creation of new risks. In addition, there is disproportionate emphasis on disaster risk management – i.e. preparation for emergency relief and response and recovery, rather than pro-active investment in resilience-building to equitably reduce disaster risk.

### **3.2 Existing Resilience Frameworks in the Region**

The adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), brought the concept of resilience thinking into the planning domain of a number of Member States. Notably Eswatini (Kingdom of Eswatini 2017), Malawi (Government of Malawi, 2018), Lesotho (Government of Lesotho 2017) and Zimbabwe (Government of Zimbabwe 2015) have already developed national resilience strategies. Furthermore, some ICPs and development partners have also developed a number of resilience related plans and strategies, which also informed this Resilience Framework (FAO 2018,) International Organization for Migration 2016, Regional United Nations Development Group 2017, UNCCD 2016).

The Resilience Framework aims to allow for, and find alignment and coherence with, these existing strategies and plans. Such integration therefore places a significant emphasis on integrated governance and informed decision-making for resilience-building in the context of equitable sustainable development, disaster risk reduction and climate change adaptation.

### 3.3 Defining Resilience

Resilience is a complex concept. It is a transdisciplinary, multi-sectoral, multi-dimensional, multi-faceted and multi-layered concept, and a sustainable development outcome.

Resilience is *“the capacity of the system to experience a disturbance or change and still retain its basic function, structure, and identity; the ability to self-organize; and the ability to increase its capacity to learn and adapt”*.

The definition makes provision for two important aspects of resilience: a complex system’s ability to adapt and facilitate change when exposed to shocks and stressors due to foresight and anticipative ability (Poli 2010, 2014).

## 4. PRIORITY AREAS

This Framework proposes a number of priority areas aligned with the current development trajectory of the SADC Region. These priority areas emerged from the qualitative data analysis from the research and consultation and are as follows:

- Priority 1: Integrated governance and informed decision-making
- Priority 2: Social and human protection and mobility
- Priority 3: Food and nutrition security
- Priority 4: Robust and Connected infrastructure
- Priority 5: Sustainable Urban Centres
- Priority 6: Natural Resources management and protection of biodiversity and Conservation
- Priority 7: Understanding disaster risks including climate change

If achieved, these priority areas will significantly contribute to the resilience profile of the region, in turn ensuring that the system is able to promote regional integration and therefore contribute to the industrialisation goals.

## 4.1 Integrated Governance and Informed Decision-making

The structures, institutions, actors and processes by which societies share power shape individual and collective actions, are important for resilience, and adaptation and learning. Building an adaptable and flexible socio-political infrastructure to ensure meaningful and equitable participation by stakeholders in planning and policy decisions, and achievement of equity in the face of socio-economic change and disturbances, is key. Systems must be understood and integrated so that policy and practice can address issues as a whole. Elements such as graft and corruption, and bureaucratic inertia must be rooted out. Integrated and informed decision-making also relate to the need for political will leading to tangible actions. Access to the correct and timely information on which to base decisions at all levels are needed. An example of such within SADC is the vulnerability assessment and analysis (VAA) processes that informs national and regional food and livelihood security decision making.

Resilience challenges demand a higher level of inter-, multi- and transdisciplinary collaborations. Equitable participation builds trust, and deliberation leads to the shared understanding needed to mobilise and self-organise. Polycentric and multi-layered institutions improve the fit between knowledge, action, and social-ecological contexts in ways that allow societies to respond more adaptively at appropriate levels. Accountable authorities that also pursue equal distributions of benefits, resources and involuntary risks enhance the adaptive capacity of vulnerable groups and society as a whole.

### **Objectives:**

- (i) To address underlying issues which hampers development (poverty, weak governance, corruption, sluggish economies, gender inequalities, conflict, migration and poor use of natural resources) and create conducive corporate and innovative environments in which resilience can be fostered;

- (ii) To enhance mainstreaming of resilience in development sectors and thematic programme in the region and in Member States;
- (iii) To identify and institute appropriate structures for the coordination of resilience-building in the Secretariat and Member States;
- (iv) To establish transdisciplinary evidence-based systems for equitable resilience and sharing of best practices in the region; and
- (v) Resilience agenda has resources for activities' implementation.

## **4.2 Social and human development and mobility**

A key element is social development in putting people at the heart of resilience-building. Such development aims to benefit people across multiple economic and social identifiers considering their interaction with the various systems in which they depend for their health and well-being. Resilience must recognise the need to ensure inclusive participation of both men and women in development so as not to reinforce existing power imbalances.

Social development involves both formal and informal mechanisms which must be understood for resilience-building. As a formal mechanism, social protection is actions to address the vulnerability of people through contributory social insurance and non-contributory social assistance, or safety nets. This may include distributing food assistance; subsidising prices for foodstuffs; providing vouchers, coupons or school meals; and providing support through cash transfers to support the chronically poor. Social protection can also assist to build in the element of “shock-responsiveness” or “adaptiveness” in existing instruments such as cash transfers, pensions and employment guarantee schemes.

Given the prevalence of poverty and hunger in rural areas, direct and well-targeted safety nets and social protection programmes, based on legal guarantees and solid entitlements, would improve rural incomes. What is important though, is to make sure that the majority of those supported through transient social protection must ultimately graduate and become self-reliant. As such, social protection programmes must only provide temporary support whilst promoting sustainable livelihoods instead of

promoting dependence on handouts. Informal social protection mechanisms exist throughout the region, for example community savings and loans schemes, and these must also form part of the basket of solutions for resilience-building. These need to be understood and enhanced, with a particular focus on ensuring inclusion of vulnerable groups.

Meanwhile, risk transfer is another instrument that can significantly assist to build resilience. There is increasing evidence of risk transfer mechanisms, such as index-linked weather insurance and forecast-based financing, being used at grassroots level. As FAO, IFAD, UNICEF, WFP and WHO (2018) note, such innovative solutions can help to formally or informally shift the financial consequences of particular risks from one party to another, at the level of the household, community, enterprise or state.

The mobility consequences of prolonged crisis in many regions of the world shows how large-scale movements (forced or not) of people can have significant economic, social and environment impacts. Human mobility can open up diversified livelihood opportunities. Building resilience will also directly address and reduce the existence of forced migration (conflict and climate related). Political and material obstacles in the way for freedom of movement must be removed to allow for the expansion of livelihood options and market access, paying particular attention to commodity value chains. Connections between populations must be enhanced for mutual benefit, learning and inclusive economic enhancement.

**Objectives:**

- (i) To foster inclusive sustainable development with socio-cultural considerations for enhanced resilience building;
- (ii) To promote access to productive resources for resilience-building at local level, in particular for women, youth and other vulnerable groups;
- (iii) To ensure inclusive access to basic services is aligned to regional and national development plans; and,
- (iv) To implement reliable formal and informal inclusive social safety nets/programmes that are risk-sensitive and shock-responsive.

### 4.3 Food and Nutrition Security

Building stronger and more resilient agriculture-based livelihoods is crucial for reaching the objectives of the revised RISDP. Agriculture in the SADC region should be seen as a “sunrise” industry aligned with the SADC Industrialization Strategy. This requires an in-depth understanding and monitoring of the SADC food chains and possible food chain crises, taking into account both the production and consumption ends of the food value chain.

Food and nutrition insecurity relate to structural societal factors such as limited access to land, credit, appropriate markets, education and employment, and access to affordable agricultural inputs such as fertiliser, water and seeds, over and above the climatic and weather-related shocks. Currently these structural societal factors exhibit gender differences which lead to different levels of opportunity and ability to access and benefit from agricultural development between women and men.

Food insecurity is closely related to poverty and vulnerability and therefore addressing poverty, inequality and inadequate access to productive assets and decent employment, as the main and persistent drivers of hunger, food insecurity and malnutrition, will go a long way. Strengthening food security monitoring and EW through agro-climatic monitoring, crop production forecasting, animal and plant disease monitoring and surveillance, profiling and monitoring vulnerable population groups and their livelihood must be improved. This can build on the strengths of the existing work coordinated through National Vulnerability Assessment Committees (NVACs) and the Regional Vulnerability Assessment and Analysis (RVAA) Programme. Enhance social justice by tackling its underlying social and political causes – such as exclusion and marginalisation based on gender, economic status and age.

The impact that emerging trends and challenges have on food and agricultural systems, including the impacts of climate change, urbanisation, changing dietary patterns and lifestyles, changes in demographic structures, continued rapid population



growth in a number of resource-constrained countries and heightened competition over natural resources must be addressed.

Empowering commercial production, cooperatives and smallholder farmers—particularly women—through the provision of safety nets and risk transfers, research, extension services and means to organise is key to resilience-building in the region.

**Objectives:**

- (i) To develop robust multi-hazard early warning systems for all weather-related hazards;
- (ii) To enhance technology/ innovation driven diversified livelihoods, food chains and systems as “sunrise industries”, with specific attention to communities at risk, including women, youth and other vulnerable groups;
- (iii) To maintain up-to-date analyses and risk surveillance for food security and vulnerabilities;
- (iv) To develop and manage strategic grain reserves; and,
- (v) To increase access to market and establish regional special agricultural export zones.

#### **4.4 Robust and Connected Infrastructure**

Modern economies rely on the ability to move goods, people, utilities and information safely and reliably and in this regard, infrastructure becomes critical. Making infrastructure systems inherently safer when stressed requires more than just improved engineering and technology, it needs collaboration within social, physical and political domains. Within the SADC region there are also particular differences in infrastructure vulnerability between continental and island states. There are also differences in the access to, and use of, infrastructure between women and men. Drawing from the SDGs, there is a need to develop quality, reliable sustainable and resilient infrastructure including regional and trans-border infrastructure to support equitable economic development and human well-being. Thus, significant investment

of public and private resources at Member State level must be committed to upgrade, retrofitting and maintenance of existing stock of infrastructure while building new networks to support industrialisation and equitable economic growth. This infrastructure development must take account of the changing nature of climate risk in its location and design. It should also be subject to appropriate legal and regulatory standards. To ensure it is sufficiently robust, has sufficient redundancy and allows for sufficient resourcefulness to resolve issues with sufficient rapidity to continue operating at normal or near normal performance levels.

An understanding of the linkages between infrastructures, their interdependencies, and possible failure mechanisms must be created. SADC in its 2027 Vision for infrastructure aims to guide the development of seamless, cost-effective trans-boundary infrastructure. This vision is anchored on six pillars consisting of energy, transport, information and communication technologies (ICT), meteorology, trans-boundary water resources and tourism (including TFCAs), which constitute the SADC Regional Infrastructure Development Programme. The six infrastructure pillars are established on a solid foundation of harmonised policies and regulations, capped by a joint pool of human resource capacity development and a concerted effort to engender public awareness and commitment to these goals. In achieving the goals of the 2027 Vision, SADC will already be on a solid path to infrastructure resilience.

**Objectives:**

- (i) To develop and implement regional and national transport and information and Communication Technology infrastructure standards which are future-focused and climate- and disaster- resilient;
- (ii) To foster research and innovation application (products and services) for transport and information and Communication Technology management for resilience building;
- (iii) To manage water safety and adequacy, water services management; and,
- (iv) To adapt energy demand and supply patterns to climate resilient path.

## 4.5 Sustainable Urban Centres

As the urban centres in SADC grow, it is important that provision of shelter and basic services such as water and sanitation, education, electricity, public health, employment and transport, keep up with growth. However, it is not only the bigger metropolitan areas which need attention. The fastest urban growth in the region is within small to medium-sized cities. If well managed, cities offer important opportunities for cost-effective economic growth and social development. Thus, redressing the political, social and economic problems that can result from rapid and unplanned urbanisation is one of the most pressing governance challenges confronting Member States in the SADC Region.

Viewing cities as systems that perform functions is important to ensure their resilience. To make cities sustainable, issues of consumption, living conditions, carbon emissions and pollution and the environmental footprint must be addressed. Redundancy and modularisation are key aspects for resilience-building in urban centres. This can be achieved when multiple elements or components provide the same, similar, or backup functions and thus spread risks across time, geographical areas, and across multiple systems. With finite resources, urban centres in SADC must strive towards multi-functionality, including gender-sensitive urban design. Connectivity is arguably a primary generator of sustainable urban form – built around blue-green networks that support biodiversity, hydrological processes, pedestrian transportation, climatic modification, neighbourhood identity and aesthetic enhancements.

Designing sustainable and resilient cities typically requires modified response ability that enables them to adapt to change and socio-economic disturbance. Ensuring urban resilience considerations require a new culture of innovation, monitoring and assessment of plans and built works.

Although urbanisation is partly brought about by population growth, it also results from mobility among existing populations. SADC still experiences significant migration to urban areas from rural areas. These population movements are often gendered. And

thus to complement urban growth, focus on rural areas and people left behind, typically women, is also essential for building equitable resilience.

**Objectives:**

- (i) To adopt resilience in urban planning;
- (ii) To integrate nature-based solutions (e.g. ecosystem-based disaster risk reduction) into urban planning and development;
- (iii) To promote socio-economic urban prosperity sustainability; and,
- (iv) To ensure accessibility in urban infrastructure and services (physical and social).

## **4.6 Natural Resources Management and the Protection of Biodiversity and Conservation**

Natural resources, biodiversity and ecosystem services underpins efforts towards sustainable development. The 1992 Convention on Biological Diversity (CBD) calls for active biodiversity protection measures. With the SADC region, rich in biodiversity, the majority of which is diminishing due to population pressures, due to rapid urbanisation and agricultural expansion amongst others, the importance of conserving biodiversity for consumptive use value, productive use value and non-consumptive use value, cannot be overemphasised. SADC recognises that the region's rich biodiversity and ecosystem services are important to the regional economy (in particular tourism), human livelihood and well-being. Any loss of biodiversity in the SADC region will result in the social and economic deprivation of the citizens of the member states.

The SADC Regional Biodiversity Strategy of 2006 identifies key biodiversity sectors namely forestry, wildlife, aquatic life and agriculture. Statehood, territory and sovereignty have a major impact on the consumption and conservation of biodiversity. With all SADC members being party to the CBD, each member has obligations to protect and conserve biodiversity within their jurisdiction, while the SADC Secretariat serves as a platform for sub-regional coordination, cooperation and reporting on biodiversity issues. It is thus important for governments of Member States to identify

the biodiversity and ecosystem ‘hotspots’ which should be considered a protection priority. In doing so, the governments must strike a balance between the needs of local people and the need for conservation. Most importantly, governments must put in place robust policy frameworks for biodiversity conservation and have coherent and integrated development planning, and mainstream biodiversity and conservation considerations into economic and social decision making. With biodiversity within the SADC sub-region transcending national boundaries of Member States, TFCAs have been demarcated in order to connect ecological networks that were previously divided by international borders. The management of these TFCAs has to be in sync with social, ecological and economic impulses and mobility, and therefore these requires harmonising laws and policies, recognising traditional knowledge and engaging in equitable conflict resolution between communities and conservation managers. Such TFCAs have the potential as significant drivers of industrialisation through tourism.

**Objectives:**

- (i) To enhance legislative and policy instruments for the use and regulation of natural resources in line with regional and national development sustainability goals;
- (ii) To engage and cooperate in transboundary natural resources management;
- (iii) To strengthen the capacity of communities, civil society and government in sustainably and equitably managing natural resources; and,
- (iv) To protect biodiversity through regional species, communities and landscape management.

## **4.7 Understanding disaster risks and climate change**

Understanding disaster risk is a key priority of the SFDRR, which also states that all policies and practices for DRR should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Since climate hazards are already a major driver of disasters in SADC, and climate change is going to alter the frequency and

magnitude of these hazards, understanding the role of climate change in risk is essential.

Solutions require increased partnerships, particularly between the DRR, humanitarian assistance and climate change adaptation communities. Together, they can support enhanced risk management capacities and multi-year, predictable large-scale funding of DRR and CCA policies, programmes and practices that build resilience for women and men. Disaster risk mapping should take into account the role of climate change in altering hazard exposure along with gendered vulnerability analysis. Interaction among scientists and policy makers is critical to translate science-based knowledge into DRR, CCA and resilience policies and the practices through establishing and/or strengthening periodic and frequent communications. Early warning systems should be linked to longer-term climate risk monitoring as they can identify the likelihood of climate risks to livelihoods, food security and nutrition. They are particularly useful when timely alerts help trigger accurate decision-making and early actions at all institutional levels, including in communities.

**Objectives:**

- (i) To review and develop regional and national disaster risk and climate-risk assessment frameworks;
- (ii) To invest in risk-based climate change adaptation and build resilience;
- (iii) To develop appropriate tools, methodologies, products and services for risk assessment and management;
- (iv) To promote gender responsive climate change adaptation programmes; and,
- (v) To investigate and adopt innovative financial mechanisms for risk transfer and management.

## 5. INTEGRATING RESILIENCE-BUILDING IN SADC

The RISDP and SIPO are the blueprints for SADC's regional integration whereby Member States agree to integrate their markets, cooperate and work closely together to achieve peace and stability, create wealth, and attain sustainable development (SADC, 2017). The RISDP is engrained in the ideals of the Sustainable Development Goals (and the earlier Millennium Development Goals), Agenda 2030, as well as Africa's Agenda 2063 (AUC, 2015). The RISDP has a number of focus areas which include: Trade and economic liberalisation; Regional infrastructure and services development for regional integration'; Sustainable food security; Social and human development; and Cross-cutting issues including: Gender and development; HIV and AIDS; Science and technology; Environment and sustainable development; Private sector; and Statistics.

For the implementation of its last five-year phase, the RISDP was revised to align the existing priorities with available resources. The Revised RISDP groups these focus areas into four (4) priorities which are: a) Industrial development and market integration; b) Infrastructure in support of regional integration; c) Peace and security cooperation; and d) Special programmes of regional dimension.

All of the Member States agreed to the focus national development foundations on the RISDP and SIPO II. Therefore, the priorities of this Framework aim to integrate with the existing priority areas. To achieve the above, each sector and their related systems must be investigated within the context of the conceptual model (in Annexure B) and the abilities of a resilient complex adaptive system as proposed in the Resilience Framework. Beside the integration at SADC level, resilience planning is needed at national and sub-national level as well.

## 6. RESOURCE MOBILISATION

### **Regional level**

The SADC Council of Ministers, at its meeting held on 14-15 August 2015 in Harare, Zimbabwe, observed the inadequate funding of DRR and agreed to establish a SADC

Disaster Preparedness and Response Strategy and Fund, 2016-2030 which was approved in 2017. This would include the development of a Disaster Resource Mobilisation Strategy and a Disaster Fund together with a Sustainability Plan to strengthen regional domestic capacities for preparedness, response, post-disaster recovery and reconstruction. The Resilience Framework also proposes implementation of actions for improved integration of the CCA and DRR for resilience-building to prevent risk and natural hazards graduating to disasters.

Global climate adaptation financing mechanisms can be explored for the Disaster Risk Reduction Strategic Plan Strategy Priority Area 5: Integrated DRR and CCA. This can be achieved through the development and submission of programme proposals to funds under the UNFCCC, for example the Global Climate Fund, Least Developed Countries Fund, Special Climate Change Fund and Adaptation Fund.

### **Member States**

The Resilience Framework Action Plan also proposes adoption and alignment of resilience frameworks in Member States (and therefore the relevant domestic investments in resilience-building) to the Regional Framework.

### **International Cooperating Partners**

There are various sources from international partners and donors to support different aspects of DRR. This includes co-financing, grants and technical assistance under DRR, CCA and resilience-building umbrellas.

### **Other partner organisations**

#### **Private sector**

Far from purely acting in response and recovery through the provision of goods and services, the private sector is a key sustainable development player. Insurance companies (risk insurance and reinsurance), for example, are critical for risk transfer mechanisms at sovereign and local level. However, incentive-based mechanisms are critical in ensuring the interest of the private sector.



Overall, the approach to development must be modified so that all activities take into account climate and disaster risk and build equitable resilience. As a result, implementation of many activities outlined in the Resilience Framework Action Plan might not require additional funding but rather the application of a “resilience lens”.

## **7. IMPLEMENTATION AND COORDINATION**

One of the key success factors to addressing resilience in the region will be solid partnerships and coordination mechanisms. The nature of resilience-building does not allow for a framework of this nature to propose any implementation strategies because they will be context-specific and unique to the various changing environment in the region. However, the SADC Secretariat with the help of Member States can put in place structures and mechanisms which will facilitate the coordination of resilience-building and also provide a central connecting point for resilience knowledge and information at national level.

At Secretariat level oversight will be provided by the SADC Resilience and Emergency working group. At Member States level a national competent authority, structure and or mechanism will coordinate national resilience programming.

## **8. MONITORING AND EVALUATION**

Annexure A contains an Action Plan with priority activities necessary for a more coordinated approach to enhance equitable resilience-building in the region. This Action Plan can also serve as a monitoring and evaluation (M&E) instrument. Progress made with implementation of the Framework Action Plan can be reviewed under the SADC Secretariat’s proposed DRR Peer Review Mechanism.

To effectively create an understanding of resilience within complex adaptive systems in the SADC region, a standardised monitoring, evaluation and reporting framework for resilience measures needs to be integrated in line with the 2015 SADC Climate Change Strategy and

Action Plan as well as the Disaster Preparedness and Response Strategy and Fund, 2016-2030.

This can include:

- (i) Ensuring the collection and analysis of sex-disaggregated data for all activities.
- (ii) Harmonising the various M&E systems, format and reporting channels in SADC.
- (iii) Strengthening capacity of SADC Member States in M&E of development, DRR, and CCA programmes.
- (iv) Developing mechanisms for investigation and recognition of good practices for resilience-building.
- (v) Undertaking regular reviews of development, DRR, and CCA programmes and their impacts on economy and different groups within society, and report through the established mechanisms.

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## Annexure A: Action Plan for the implementation of the SADC Resilience Framework

Priority Area 1: Integrated Governance and Informed Decision-making				
Priority Objectives		Performance Indicator	Responsibility	Time frame
1.1: To address underlying issues which hampers development (poverty governance, corruption, weak economies, gender inequalities, conflict, migration and poor use of natural resources) and create conducive corporate- and innovative environments in which resilience can be fostered.	1.1.1	Reviewed and developed regional and national frameworks including policies, strategies in line with global, continental and regional DRR and CCA instruments for resilience building	SADC Sec. Member States	2022
	1.1.2	SADC Region Biennial Programme of Action Report for tracking the implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR).		
1.2 To enhance mainstreaming of resilience in development sectors and thematic programme in the region and in Member States.	1.2.1	Multi-sectoral resilience strategies, plans and programmes, in particular for the most at-risk communities.	SADC Sec. Member States	2030
		Add indicator for mainstreaming e.g tools and guidelines		
1.3 To identify and institute appropriate structures for the coordination of resilience-building in the Secretariat and Member States.	1.3.1	Existence of business models with modern approaches, creating environments in which innovation coordination partnerships supports resilience-building.	SADC Sec. Member States Academia	2022
1.4 To establish transdisciplinary evidence-based resilience building and sharing of best practices in the region.	1.4.1	Evidence-based policies, investments and programmes on resilience-building.	SADC Sec Member States	2022
	1.4.2	Advocacy and knowledge management for resilience best-practices in the region.		
	1.4.3	Existence of DRM and resilience building information management systems in the region.		
	1.4.4	Multi-disciplinary platforms and networks research and sharing information and building knowledge through best practices for		

<b>Priority Area 1: Integrated Governance and Informed Decision-making</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
	resilience-building - Centres of Excellence and Networks, research hubs. 1.4.5 Integrated traditional practice and knowledge in development and resilience building. 1.4.6 Regional exchange of expertise and peer collaboration, learning and support.		
1.5 Resilience agenda has resources for activities' implementation.	1.4.7 Adequate levels of technical and financial resources allocation in risk reduction and resilience development. 1.4.8 Public resources transparency indices developed and utilised.	SADC Sec Member States	2023

<b>Priority Area 2: Social and Human Protection and Mobility</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
2.1 To foster inclusive sustainable development with socio-cultural considerations for enhanced resilience building.	2.1.1 Environment for social connectedness (respect, engagement, dignity) promoting mutual assistance amongst Member States and communities - evidence for mutually reinforcing regional integration aligned efforts. 2.1.2 Regional and national development planning and programming. building social capital and promoting inclusivity for all ethnic groups (AU63). 2.1.3 Participation of women and youth in regional and national development planning.	SADC Sec Member States ICPs	2030
2.2 To promote access to productive resources for resilience-building at local level, in particular for women and the youth.	2.2.1 Investments in inclusive human capital development in the region. 2.2.2 Evidence of national and community models for access to credit and productive resources, in particular women and the youth. 2.2.3 Institutions foster individual welfare and sustainable societal robustness towards future crises and disasters.	SADC Sec Member States	2030



<b>Priority Area 2: Social and Human Protection and Mobility</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
2.3 To ensure inclusive access to basic services is aligned to regional and national development plans.	2.3.1	Access to benchmarked basic services package in the region. aligned with regional and national development plans.	SADC Sec Member States	On-going
	2.3.2	Investments and adequate national allocation for access to basic services in the region.		
2.4 To implement reliable formal and informal inclusive social safety nets/programmes that are risk-sensitive and shock-responsive.	2.4.1	Developed social protection frameworks together with supportive national investments.	Member States ICPs	2030
	2.4.2	Formal and informal safety nets developed and supported and cushion the impact of shocks and stressors on all vulnerability communities.		
	2.4.3	Link humanitarian response plans and social protection transfers to development.		

<b>Priority Area 3: Food and Nutrition Security</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
3.1 To develop robust multi-hazard early warning systems for drought and flood risk.	3.1.1	Multi-level, multi-role-player and multi-sectoral early warning systems (EWS) developed and functioning.	SADC Sec Member States	2022
	3.1.2	People-focused and risk-based EWS linked to multi-hazard contingency measures.		
	3.1.3	Strengthened national and regional acute and chronic food security, nutrition and livelihoods assessment and analysis through NVACs and the SADC RVAA Programme.		
	3.1.4	Enhanced resilience linkages to NVAC VAA ( and other programmes) information products critical to influence national policies, strategies and programmes.		
3.2 To enhance technology/ innovation driven diversified livelihoods, food chains and systems as “sunrise industries”, with specific attention to communities at risk, women and youth.	3.2.1	Climate-based integrated food systems developed (RAIP, SADC)	SADC Sec Member States ICPs	2030
	3.2.2	Evidence for technology integrated agriculture and food systems - climate smart agriculture, conservation agriculture		
	3.2.3	Diversified food systems are adaptable to changing condition and can absorb shocks and stressors.		

<b>Priority Area 3: Food and Nutrition Security</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
	3.2.4 Approaches meets the requirements for human nutrition (availability, access and utilisation) and dietary health for all in a stable manner 3.2.5 Urban and rural agriculture develops to a 'sunrise industry'. 3.2.6 Integrated land-use and watershed management.		
3.3 To maintain up-to-date research, analyses and risk surveillance for food security and vulnerabilities.	3.3.1 Research and analysis for tracking evidence in resilience-building in food and nutrition security. 3.3.2 Uniform measuring instrument (such as RIMA II) is implemented and informs decision-making. 3.3.3 Vigilance in food security risk (drought, epidemics and outbreaks) management and trend analysis for acute and chronic food and livelihood	SADC Sec Member States	
3.4 To develop strategic grain reserves.	3.4.1 Enabling frameworks for national strategic grain reserves management. 3.4.2 Infrastructure for management of grain reserves.	Member States	
3.5 To increase access to market for agricultural products.	3.5.1 Promotion of food-based value chains and their access to trade and markets. 3.5.2 Small-holder farmers and communities value chains promoted together with enhanced access to markets. 3.5.3 Creation of formal and informal markets: rural-urban linkages; special agricultural export zones.	SADC Sec Member States	

<b>Priority Area 4: Robust and Connected Infrastructure</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
4.1 To develop and implement regional and national transport and telecommunications infrastructure standards which are future-focused and climate- and disaster-resilient.	4.1.1 Benchmarked transport and telecommunications infrastructure standards. 4.1.2 Affordable and equitable access transport and telecommunications for all.	SADC Sec Member States	2023

<b>Priority Area 4: Robust and Connected Infrastructure</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
	4.1.3	Established strategic resilience approach in recovery planning especially 'building back better'.		
	4.1.4	Selected economic and industries infrastructure retrofitted for sustainable development.		
4.2 To foster research and innovation application (products and services) for transport and telecommunication management for resilience building.	4.2.1	Leapfrog technologies are identified, adopted and implemented for resilient transport and telecommunication infrastructure.	SADC Sec Member States	2030
	4.2.2	Green and sustainable technologies application.		
4.3 To manage water safety and adequacy, water services management.	4.3.1	Multi-hazard Contingency Planning for the water sector.	SADC Sec Member States	2030
	4.3.2	Climate Change Adaptation planning for secure water supply and sanitation - Integrated Water Resources Management.		
	4.3.3	Risk-proof Dam Management and Inundation Maps.		
4.4 To adapt energy demand and supply patterns to climate resilient path.	4.4.1	Adapt energy infrastructure under various risk scenarios.	SADC Sec. Member States	2030
	4.4.2	Support partnerships (PPPs) and investment in clean energy, transmission and use.		
	4.4.3	Behavioural change in use of energy.		

<b>Priority Area 5: Sustainable Urban Centres</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
5.1 To adopt resilience in urban planning.	5.1.1	Cohesive and engaged urban communities and stakeholders.	Member States	2030
	5.1.2	Fostered long-term and integrated planning.		
5.2 To integrate nature-based solutions (e.g. ecosystem-based disaster risk reduction) into urban planning and development.	5.2.1	Urban Areas Risk/Disaster Profiling	Member States	2030
	5.2.2	Locally-based multi-hazard contingency planning (Evacuation plans and regular simulation exercises.		
	5.2.3	Resilient lifestyles and consumptive patterns – environmental footprint		

<b>Priority Area 5: Sustainable Urban Centres</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
5.3 To promote socio-economic urban prosperity sustainability.	5.3.1 Access to basic needs requirements and services. 5.3.2 Robust urban-based brown and green economies.	Member States	On-going
5.4 To ensure accessibility in urban infrastructure and services (physical and social).	5.4.1 Integrate resilience principles in urban planning and building codes along principles of 'build back better'. 5.4.2 Various urban infrastructures are spatially distributed and decentralised for system redundancy and robustness	Member States	2030

<b>Priority Area 6: Natural Resources Management and the Protection of Biodiversity and Conservation</b>			
<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
6.1 To enhance legislative and policy instruments for the use and regulation of natural resources in line with regional and national development sustainability goals.	6.1.1 Enhanced legislative and policy instruments for the use and regulation of natural resources in line with regional and national development sustainability goals. 6.1.2 Long term protection of natural resources for current and future generations is in place. 6.1.3 Establishment and development of Multi-hazard Contingency Plan for Biodiversity and Ecosystem DRR Cluster	SADC Sec Member States	On-going
6.2 To engaged and corporate on transboundary natural resources management.	6.2.1 Ecosystem-based 'user pays' principle cross-border issues (e.g. through TFCAs). 6.2.2 Research and knowledge management and sharing on national and transboundary natural resources 6.2.3 Supportive partnerships for natural resources sustainable management.	Member States	On-going
6.3 To strengthen the capacity of women and men at community level, civil society equitably managing of natural resources.	6.3.1 Improved application of the, 'access and benefit' principle in the equitable utilisation of natural resources by communities.	SADC Sec Member States	On-going

<b>Priority Area 6: Natural Resources Management and the Protection of Biodiversity and Conservation</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
	6.3.2	Incentivised community natural resources management - conserving landscapes and ecosystem services (biodiversity, water catchments, soil protection including reforestation and wildlife).		
	6.3.3	Financing and investments for payment for ecosystem services.		
6.4 To protect biodiversity through regional species, communities and landscape management.	6.4.1	Biodiversity research and conservation.	SADC Sec	2030
	6.4.2	Alien and invasive species management frameworks and programmes.	Member States	

<b>Priority Area 7: Understanding Disaster Risks Including Climate Change</b>				
<b>Priority Objectives</b>	<b>Performance Indicator</b>		<b>Responsibility</b>	<b>Time frame</b>
7.1 To review and develop regional and national climate-risk assessment frameworks.	7.1.1	Reviewed and developed climate-risk based framework.	SADC Sec	2022
	7.1.2	Improved early warning coordination amongst regional and national stakeholders.	Member States	
7.2 To invest in risk-based climate change adaptation and build resilience.	7.2.1	Climate-based national disaster profiling	SADC Sec	2022
	7.2.2	Multi-hazard risk analysis and strengthening of early warning systems at regional and national levels.	Member States	
7.3 To develop appropriate tools, methodologies, products and services for risk assessment and management.	7.3.1	Improved research and innovation in developed tools, methodologies for climate risk assessments	SADC Sec	2022
	7.3.2	Evidence of collective trans-boundary action.	Member States	
7.4 To promote gender differences in vulnerability and climate change adaptation and management.	7.4.1	Participation of women and the youth in climate change adaptation frameworks and programme formulation, implementation and lesson learning.	SADC Sec	On-going
	7.4.2	Disaster Risk Management Gender Mainstreaming Guidelines.	Member States	
	7.4.3	Gender-responsive climate risk analysis and climate change adaptation programme.		

**Priority Area 7: Understanding Disaster Risks Including Climate Change**

<b>Priority Objectives</b>	<b>Performance Indicator</b>	<b>Responsibility</b>	<b>Time frame</b>
7.5 To investigate and adopt innovative financial mechanisms for risk transfer and management.	7.5.1 Adopt innovative financial mechanisms for risk transfer and management such as the Africa Risk Capacity and other insurance instruments (e.g. weather-indexed crop and livestock insurance)	SADC Sec Member States	2030

## **Annexure B: Characteristics of a resilient SADC: A conceptual framework**

Although there are a number of resilience measurement instruments, the complex nature of resilience and the systems in which it manifests does not allow for a uniform application of these. One can also debate the logic and value of “measuring” resilience because it is neither an input nor output to a system. However, a much more valuable way of thinking about resilient systems is to understand the characteristics which makes CAS resilient. By focussing on the characteristics, one is in a much better position to determine the variables which constitute the characteristics, and how to enhance (or reduce) them. This allows for practical action in enhancing, or creating, these characteristics, which in turn will lead to a resilient system. These characteristics should be understood as the inherent requirements towards resilience. They are not linear nor interdependent or sequential. Rather they are necessary aspects which makes systems resilient. However, as much as these characteristics build resilience, they can also contribute to “negative resilience”. Figure 1 provides a graphic depiction of the broader conceptual understanding of the elements contained in this Framework.

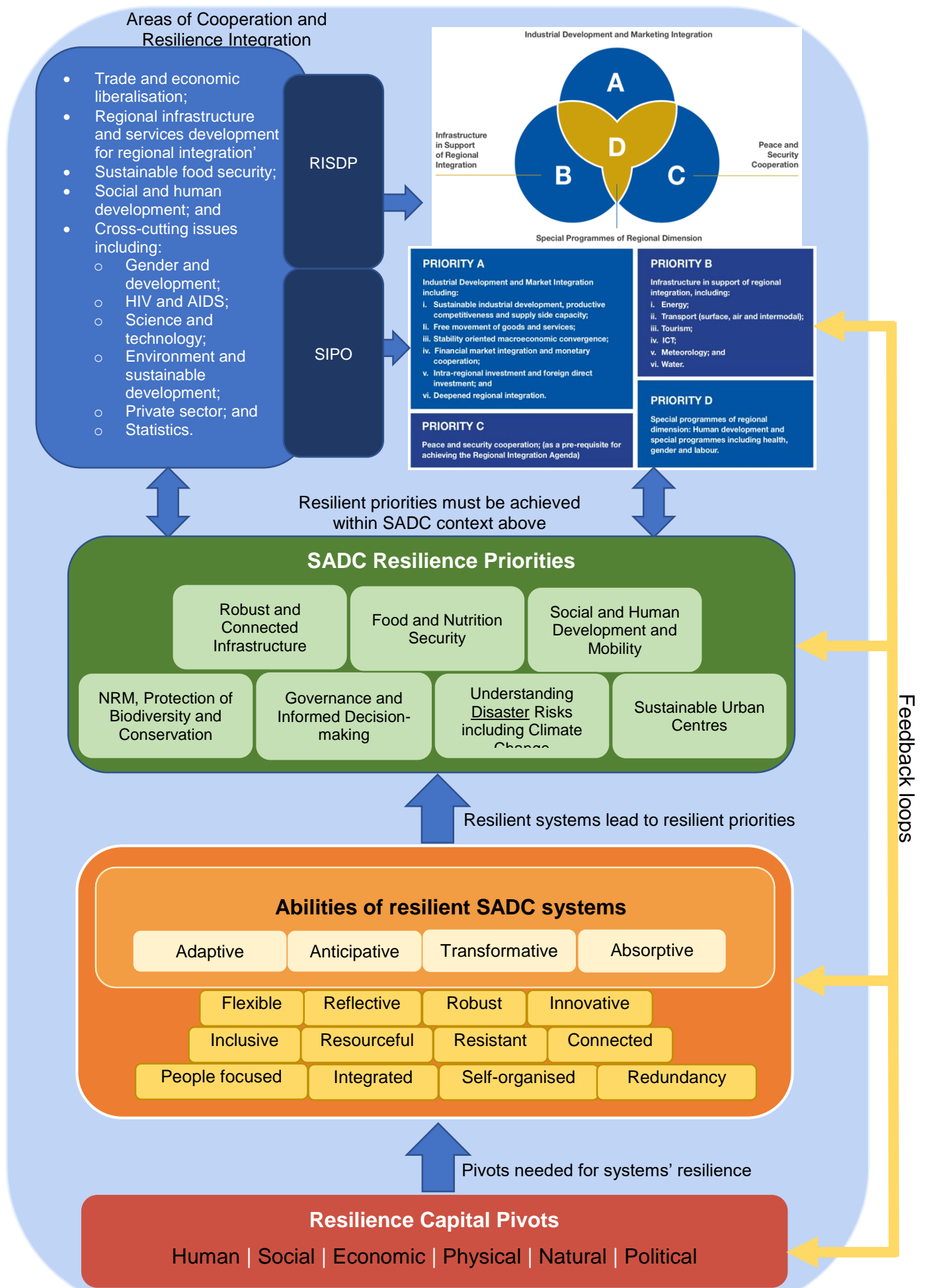


Figure 1: Conceptual Framework of Resilience-building in the SADC Region and Member States



## A. Resilience pivots

Resilience pivots are those elements of a resilient system that need to remain present despite adaptation or even transformation of other elements of that system, and in doing so support the maintenance of the system's distinctive identity (Rotarangi and Stephenson 2014). It is thus "a person, thing, or factor having a major or central role, function, or effect" on the functioning of a system. Pivots can thus be an indispensable part of a system key to its integrity, and/or its presence becomes an indispensable part to the functioning of the system. These pivots in themselves need to adhere to the requirements of a resilient system as they can be systems in themselves. Rotarangi and Stephenson (2014) refers to this phenomenon as the "stable core of a system". In some instances, one can argue that a core law or rule of a system is to protect and ensure the continued existence of its pivots. The loss of such pivots might mean the integration of the system into an undesirable state. The complexity of resilience in the SADC region allows for the creation of an understanding of pivots. Knowledge of the local context in terms of its geography (physical, social, economic, environmental, spatial and political characteristics) helps to reveal the relations between the different elements of a system thereby identifying factors that contribute to emergent patterns of vulnerability and resilience (Moench, 2014). However, one will still want to judge progress in these efforts. Resilience being ingrained into the development of the SADC region should manifest itself once one considers the components which leads to development in the region. This Framework proposes the use of the six capital domains.

The term capital implies a usable productive resource that can be harnessed for human development (Šlaus, & Jacobs 2011) which also gives meaning to a person's world (Bebbington, 1999). The literature identifies six main capitals including human, social, economic, physical, political and natural capitals. All the six capitals are important although the extent of their importance in any system will change over time (Morse and McNamara, 2013). Most importantly these capitals interact across space and time and may reduce or increase at the expense of others (Morse and McNamara, 2013). As such, systems may sacrifice some capital for others if it deems it more appropriate for survival, and that switching may reverse at another time (Bebbington,

1999). Weighing the trade-offs between these types of capital is an ongoing process for a complex adaptive system. However, a system is assumed to need a balance of these capitals in order to maintain anticipatory, adaptive, absorptive, and transformative abilities and well-being (Jacobs et al., 2015).

## A1 Human capital

Human capital is the aggregate of innate abilities, an individual's intrinsic potential to acquire skills. It relates to the knowledge and the skills that individuals acquire and develop throughout their lifetime and this include, physical, intellectual and psychological capacities that individual possess (Laroche et al., 1999). Resilience of human capital can be measured by considering:

- Level of education;
- Capacity development initiatives;
- Access to correct technical skills;
- Access to correct labour;
- Collective general health status;
- Individual physical and mental health;
- Intergenerational linkages;
- Investment in education;
- Investment in health infrastructure;
- Access to quality social services;
- Evidence of individual and community innovation.

## A2 Social capital

Social capital is the aggregate of the actual or potential resources which are linked to possession of durable networks of more or less institutionalised relationships of mutual acquaintance and recognition, which provides each of its members with the backing of the collectively-owned capital (Bourdieu, 1985). According to Twigg, (2001), social capital refers to the social resources upon which people draw in pursuit of livelihood objectives such as networks and connections, membership of groups, relationships of

trust, reciprocity and exchanges. Resilience of social capital can be assessed by considering the vulnerability and capacities and opportunities present in a system. Note should be taken that these elements varies in their level of existence and functioning. Resilience of social capital can be measured by considering:

- Basic needs fulfilment such as food, shelter, sanitation, and water.
- Food security and stunting;
- Child mortality rate;
- Level of disaster preparedness;
- Education status;
- Access to financial resources;
- Varied livelihood options;
- Access to transport and infrastructure;
- Social networks and integration;
- Decentralisation of power and decision-making (polycentric organisation);
- Ownership of local assets;
- Fulfilment of personal, community or country aspirations;
- Attainment of self-realisation goals; and
- Spiritual satisfaction and fruitful living.

### A3 Economic capital

Economic capital denotes financial resources including savings, income, investments, and credit that people use to achieve their livelihoods (Mayunga, 2007). According to Twigg, (2001) economic or financial capital includes savings and credit, and other inflows of money other than earned income such as pensions, remittances. Economic capital according to Bhamra (2015) should be measured by moving beyond a GDP measure and also consider other indices (e.g. Social Progress Index, Gross National Happiness, Index of Social and Economical Welfare). Resilience of economic capital can be measured by considering:

- Access to cash (and other liquid resources such as savings, credit, remittances, pensions, and unemployment benefits);

- Access to micro finance;
- Access to risk transfer mechanisms such as insurance;
- Access to and participation in saving schemes (community-based, such as farmers cooperatives)
- Use of green technologies;
- Inclusion of environment costs in market price;
- Lifestyle patterns;
- Per capita consumption footprint;
- Employment figures;
- Access to formal and informal markets; and
- External assistance (government and civil society).

#### A4 Physical capital

Physical capital is the basic infrastructure which includes affordable transport, secure shelter, adequate water supplies and sanitation, access to information and producer goods needed to support livelihoods such as the tools and equipment that people use to function more productively (Twigg, 2001). Resilience of physical capital can be measured by considering:

- Access to utilities (electricity/power, waste management, communication etc.);
- Alternatives to utilities (redundancy systems such as self-generated electricity, rain water harvesting etc.);
- Access to correct infrastructure;
- Infrastructure supports of key services (such as education, health, economic activity, and safety)
- Transboundary infrastructure connections;
- Access to information and communication technology (including mobile phones and the Internet);
- Availability and diversity of goods and services;
- Access to appropriate production equipment; and
- Appropriate local skills for maintenance of physical capital (e.g. community-based mechanisms for maintenance).

## A5 Natural capital

Natural capital is essential in sustaining all forms of life (Mayunga, 2007). It includes natural resources on which users depend and these cover a wide range of tangible and intangible goods and services (Pandey et al. 2017). Twigg (2001) refers to natural capital as the natural resource stocks from which resource flows and services are derived such as land, forests, marine/wild resources, water, protection from storms and erosion. However, nature also provides one of the catalysts to disaster: natural hazards. Resilience of natural capital can be measured by considering:

- Sustainable use of natural resources;
- Resources boundaries;
- Resources quality (e.g. soil, forests, pastures, fishery stock, riverine and coastal habitats, surface and sub-surface water quality and supply);
- Management of ecosystem services;
- Quality of air (including household air pollution), water and soil;
- Waste treatment;
- Frequency of hazards/disasters;
- Disaster preparedness measures;
- Loss or damage post-disaster;
- Inclusion of environment costs in the market pricing mechanism;
- Maintenance, conservation and protection of biodiversity;
- Resource efficiency in production and consumption systems; and
- Ecological footprint.

## A6 Political capital

Political capital refers to the individual or group's ability to utilise their influence to foster attitudinal and behavioural change in systems (Booth and Richard 1998), and allow for citizen-state engagements in channeled ways. It is therefore the ability of the individual (or collective group) to influence government performance, motivate regime actions, ensure citizen participation, convey interests and preferences and also demands to the regime. It relates to the accumulation of resources and power built

through relationships, trust and goodwill (Coppedge et al 2011). Resilience of political capital can be measured by considering:

- Transparency and accountability - rule of law, Judicial independence;
- Religious freedom;
- Inclusive citizenship: Youth involvement, Gender and ethnic equality.
- Checks and balances in government (vertical and horizontal accountability) - Free, fair and contested elections, Veto power of government, Political culture i.e. popular support for democracy and Electoral turnout, Polycentric and devolution of governance;
- Civil society independence;
- Existence and protection of property rights; and
- Integrated development planning.

## **B Main abilities required to enhance resilience**

Building resilience is about building the abilities and capacity for people to make optimal choices about the risks they face, and those they are responsible for. It should however be noted that resilience is highly contextual and pathways to enhancing it vary greatly from one location to the next (Bahadur et al. 2015). Resilience should be seen as an **outcome**, and not as an **output**. Thus, a systems' ability to deal with shocks and stresses is advanced by strengthening interlinked capacities which include anticipatory-, absorptive-, adaptive- and transformative abilities. These four abilities are the core features of this Framework supported by a number of sub-abilities.

### **B1 Anticipative ability**

Anticipatory ability of social systems is to foresee and reduce the impact after a disturbance through preparedness and planning (Bahadur et al. 2015). Such a system can take anticipative action in order to achieve the envisaged future state of itself (van Niekerk and Terblanché-Greeff 2017). When a resilient system is anticipatory it has the ability to expect both known and unprecedented shocks with the ultimate goal of minimising adverse effects (Kerner and Thomas, 2012). Thus, anticipatory resilient

systems avoid reliance on reactive strategies that often prove costly to cash-strapped governments and communities. The importance of preparedness activities is not to resist change but rather a preparation to live with. For instance, building redundancy in the system so that partial failure does not lead to total system collapse (Béné et al., 2012). Relevant, accurate, and timely information and knowledge is a prerequisite to preparedness for coping with shocks and stressors.

## B2 Absorptive ability

Absorptive ability or persistence is, the various (coping) strategies by which a system (individuals, households, nations and/or regions) moderate or buffer the impacts of shocks on their livelihoods and basic needs (Béné et al., 2012). According to Bahadur et al. (2015) absorptive ability of social systems entail using available skills and resources to face and manage adverse conditions, emergencies or disasters. Whereas anticipatory ability is developed before a shock or stress, absorptive ability is exercised during and after a disturbance has occurred to reduce the immediate impact on people's livelihoods and basic needs (Bahadur *et al.* 2015).

Absorptive ability involves intentional protective action (Jeans et al 2017) against known shocks and the ability to quickly return the system to its core functions. The absorptive characteristic ensures a measure of stability in a system, and prevents the system from reaching its system thresholds. This capacity is associated with medium to long term actions and putting in place necessary mitigation measures against known shocks and stressors. Absorptive ability can be quantified by the robustness of the system, the strength of the system to resist disruption, and can be enhanced by improving system redundancy, which provides an alternative way for the system to operate. System robustness and reliability are prototypical pre-disruption characteristics of a resilient system. At community level what is key is the ability to substitute one critical asset or resource with another.

## B3 Adaptive ability

Adaptive ability is the capacity to learn, combine experience and knowledge, adjust responses to changing external drivers and internal processes, and continue operating

(Berkes et al., 2003). Usually, the adaptive ability of the individual or system arises when its absorptive ability of a shock is exceeded, requiring instead that incremental adjustments be made (Cutter et al., 2008). Being adaptable applies experimental or experiential learning to make the necessary adjustments to exploit opportunities or respond to shocks without loss of core functions (Berkes et al., 2003). It is the capacity to take deliberate and planned decisions to achieve a desired state even when conditions have changed or are about to change (Bahadur et al., 2015). The adaptive ability of social systems depends on the nature of their institutions and the ability to absorb shocks (Joseph, 2013). Actions to improve adaptive ability aim to improve wellbeing regardless of shock and stressful events will affect the system in the near future. It is important to note that adaptable resilience can be continuous and multi-scalar, ranging from smaller intra-household to larger community-wide adaptive capacity given the idiosyncratic and covariate shocks.

#### B4 Transformative ability

Transformability is the ability “to create a fundamentally new system when ecological, economic or social structures make the existing system untenable” (Walker et al., 2004: 5). Thus, this is the ability to create a fundamentally new system so that the shock will no longer have any impact. Transformation pertains to the holistic and fundamental ways in which people’s capacity to adapt to, anticipate and absorb shocks can be built, reshaped and enhanced (Bahadur et al., 2015). Béné et al. (2012) argues that the capacity of social systems to adapt to, anticipate and absorb disturbances is influenced by transformational policy shifts that fundamentally change the institutional rules of the game. From this point of view, transformative capacity can be viewed as the governance mechanisms, policies/regulations, infrastructure, community networks, and formal and informal social protection mechanisms that constitute the enabling environment for systemic change. In order to be transformative, resilience systems require political will and leadership from various disciplines, entrenching home-grown, contextualised transformative pathways. Most importantly, transformation requires changes in social structures that influence decision-making and changes in individual values, capabilities and choices (Bahadur et al., 2015).



## C Secondary abilities

Beside the main abilities discussed above, there are a range of other characteristic of resilient systems.

### C1 Resistant ability

A system that exhibits a resistant characteristic is a system able to withstand all stressors, shocks or impacts without suffering any loss (Lake 2012), thus remaining unchanged. Resistance also related to the ease of which a system can be changed (or not). This concept aligns closely with the ability of robustness. Resistance in CAS can take on many forms. Resistance to change are often addressed in terms of recovery (Folke 2006). Thus, the focus is on the time it takes a system to return to a previous state following a disturbance. However, focussing on one singular event is deceptive. The frequency and extent of disturbances needs to be understood in the context of system resistance. A CAS might well exhibit resistant characteristics for frequent idiosyncratic risks and shocks, yet be less well adapted to resist longer-terms stresses. Although this ability can have major positive benefits for a system, it can also be undesirable. This is particularly true if a system needs to be changed to allow for resilience to occur. Certain systems are so ingrained in our development that changing them to unleash resilient potential for other systems might not only be problematic but almost impossible. In such case additional adaptation is needed to circumvent the negative resistance of such systems.

### C2 People focussed ability

For resilience to have any meaning it must be people focussed. Thus, the ideal of resilience-building should start with a primary focus on the individuals which will benefit and the systems on which they depend for their existence. No resilience-building can occur without the direct involvement of those it seeks to help. The “people constituency”, as with CAS, is multi-layers and multi-focussed. It ranges from communities to high level decision-makers. Much of the characteristic in socio-ecologically linked CAS is due to the design and creation of humans. All social, political

and economic systems are created by humans. Therefore, it stands to reason that the starting point of addressing resilience in CAS should be with the people directly involved in these systems. Benefits in directly involving communities in their resilience decision-making has already been recorded in, for instance in social protection mechanisms in Botswana through their Ministry of Local and Rural Development working with small scale farmers.

### C3 Reflective ability

Resilient systems can learn from their past to inform the future (Béné et al., 2012). These learning experiences are both positive and negative. It could have been a significant event, such as a devastating drought, for which institutions and communities were ill prepared, from which lessons can be drawn. Past experiences also create opportunities for improvements when individual Member States, or the Region at large, is presented with similar future shocks. While not limited to drawing lessons from previous challenges, in being reflective, resilient systems can make use of good practices as well. The merits of reflective resilient systems are that it creates opportunity for active learning (Kerner and Thomas, 2016) and room for review of the effectiveness and efficiency of existing processes, standards, policies, decision-making and plans in the face of possible new shocks. For the SADC region, in being reflective, resilience efforts thus equip individual member states and the region at large to be better able to respond to emerging and changing catastrophic contexts and situations. Ultimately, this improves future responses and reactions to shocks and stressors in the region.

### C4 Resourceful ability

In an environment where there are limited resources in terms of time, human, financial, technological and natural resources, systems which are resilient are also resourceful. The limited available resources are allocated and used effectively, and where possible best alternative pathways for resource use are identified and pursued in resilience-building (Kerner and Thomas, 2014). In addition, in being resourceful systems are able to make provision for the required materials without any devastating disruptions in

service provision or resource access in the event of a shock. In that regard it is important to note the need of time as a resource to be used efficiently. Inefficient problem solving to shocks achieved over a short space of time often prove costly in the long-term (Harper and Sparr, 2017), and wastage of resources may be recorded. Therefore, a resourceful resilient system ensures there is sustainable use of resources and innovative ways of mobilising additional resources. Closely linked is the notion of requisite variety in order for a system to adapt. Besides having the correct type and amount of resources, as CAS also needs variety in resources.

## C5 Inclusive ability

It is critical to note that good leadership and governance within the SADC region should offer opportunity for wide consultations to be made, while at the same time acknowledging the value of contributions from a variety of stakeholders. Thus, in being inclusive, resilient systems realise that while approaches and strategies may be developed and disseminated in a top-down route, there needs to be provision for bottom-up consultative processes that feed into the strategies, planning and decision-making for resilience-building in the Region. Inclusiveness also requires that at all rungs of society there is cognition of the diversity of social groups and their specific needs especially in times of crisis (Béné et al., 2012). Resilience-building in the region should endeavour to include contributions from key population groups such as women, youth, people living with disability or HIV/AIDS and children. Mainstreaming and participatory processes can be applied to ensure that contributions are drawn from all sectors of society, regardless of gender, wealth status, religion, level of education or any other form of stratification in a society. Inclusiveness builds a sense of ownership and belonging where individuals and institutions all realise they have a mandate to fulfil, and are contributing to a shared common vision. Furthermore, inclusive resilient systems can be achieved through creation of equal opportunities, promotion of participatory governance and social justice (Harper and Sparr, 2017). For the SADC region this may mean for example, adopting wide consultative and feedback processes to tackle certain vulnerabilities endemic in the region (which could be trans-boundary and multi-scalar), such as high youth unemployment or social inequalities between the few elites and the majority poor. Thus, inclusiveness contributes to

resilience-building in the region though opportunities to bring peripheral issues that could have otherwise been missed by traditional top-down processes to the centre-stage.

## C6 Innovative ability

More than ever, the region needs innovative solutions to complex problems. These complex problems do not have easy solutions, nor does one actor or set of actors have all the answers. Innovative resilience is thus needed in CAS and there is numerous ways to enhance resilience through innovation. Being innovative means a CAS can draw on “un-like-minded” individuals and structures to solve issues. Innovation also means unanticipated outcomes (positive and negative). Innovation in CAS requires constant iteration. Resilience strategies must therefore be aligned with non-conventional partners to make a difference and impact. Such actors in the Region could include the private sector, regional think tanks, community projects, new and locally developed technology and non-government organisations. Reinmoeller and van Baardwijk (2005) emphasises four innovation strategies leading to more resilient organisation, that is, knowledge management, exploration, cooperation, and entrepreneurship. These strategies must be encouraged within the Region.

## C7 Integrated ability

Due to their complexities and intricacies, shocks and stressors may reinforce or confound each other's effects. This means that for systems to be resilient, diverse actors from across geographic space and disciplines need to work together. Thus, an integrated resilient system holistically brings together institutions, stakeholders and different actors across the diversity of their disciplines in a polycentric management and implementation approach (Béné et al., 2016). Additionally, integration contributes to efficient resource use as it taps into the resource-pool of the various actors working together to achieve desired resilience goals, which in some cases could be too difficult to be achieved by a single actor (Kerner and Thomas, 2014). While integration can be intra-state, it also needs to be intra-regional taking into cognisance the transboundary nature of some shocks (Harper and Sparr, 2017). Furthermore, to fully realise the

benefits of intra-state or intra-regional integration, there is need for co-ordination structures to be put in place (Walker and Salt, 2012) to enhance connectivity and smooth flow of information and knowledge.

## C8 Robust ability

When a resilience system is said to have robustness, it means it is well designed to function within its given set of boundaries or parameters, given its inputs values. It adapts to changes in its environment and also resist shocks and hazards (Walker and Salt, 2006) and function under such changing circumstances (whether slow or rapid). This “design” is aligned with its core and many objectives. Robustness also relates to the CAS having many feedback loops distributed at its local level. However, robustness can come with trade-offs. For instance, a rural community who are self-sufficient under certain circumstances might need to introduce alternative crops varieties to mitigate drought. The principles of their farming practice remain the same, however, the new variety might need different ways of cultivation (e.g. no-tilling) and care (e.g. more irrigation), and the community might need time to adapt. More farmers might adopt this practice if they see the benefits for others through information supplied by cooperatives. Robustness therefore relates to a CAS’ ability to resist change but also adapt to it.

## C9 Flexible ability

Resilient systems should have flexibility, diverting from business-as-usual and making appropriate adjustments in relation to emerging changes in their social, economic and environmental contexts. Flexibility allows resilient systems to accommodate newly developed knowledge and technological innovations, and may mean paying attention to local realities and opening up to local and traditional knowledge where this was previously limited (Béné et. al., 2012). Furthermore, flexibility means having the ability to strike a healthy balance between change and stagnation. More importantly in flexibility is political will to transition towards new, different alternative approaches and strategies. Ultimately, flexibility in resilient systems in the Region allows for relevant,

effective and efficient adjustments to be made as and when necessary in relation to the contextual settings.

## C10 Redundancy ability

Redundancy in resilient systems means the ability to offer numerous options to achieve desired goals or functions. It also means putting in place alternative options to deal with potential disruptions that may arise due to a shock, or simply having options that may be undisturbed in the event of shocks (Kerner and Thomas, 2014). Thus, presence of diverse options or actors with overlapping functions ensures that when one area or component fails there is no detrimental system collapse as other components may be able to compensate for the failure or loss (Harper and Sparr, 2017; Béné et al., 2012). Through the diversity of actors and options, various response options can be explored and implemented. Redundancy may be multi-scalar, starting at the very localised household scale where it may mean households explore various livelihood options relevant to their contexts. Yet at another scale, manufacturing industries could consider different energy sources apart from the traditional thermal power, such as hydro-power, solar-energy or natural-gas. At national level economic diversification options could be considered to ensure resilience to shocks. For example, a country that was traditionally reliant on rain-fed agricultural production may move towards improving its tourism industry, or sustainable exploitation of its extractives. Thus, for such a country in the event of an extensive drought, income could still be earned from the tourism or extractives industries.

## C11 Self-organise ability

Self-organisation refers to a system's ability to make its own structure more complex given its system's rules. Positive self-organisation allows for the creation of heterogeneity. When a CAS self-organise, it comes up with new structures and ways of achieving its objectives. Thus, a measure of freedom and experimentation is needed. Disorder and "bounded chaos" must be permissible and this relates to the concept of systems functioning at the "edge of chaos". Examples of urban growth in the Region can be used. Urban planning cannot keep up with the rate of expansion.

Thus, urban fringe communities are forces to find new ways of settling, building and connecting. Self-organising can also have negative consequences in the sense that if a CAS becomes overly organised it starts to erode its robustness and becomes less flexible to change and adaptation. This phenomenon is called self-organised criticality. This means that a system becomes so organised that a small change can have massive implications (for example the global financial crisis of 2007-2008).

## C12 Connected ability

Connectedness describes the quantity and quality of relationships between system elements. It also relates to the paths of interaction between system elements and other systems and their elements. Connectedness can be social or physical. Connectedness in, and between, CAS allows for the flow of information and knowledge, goods and services. It contributes to the linkages between systems and in many instances enhances innovation and inclusiveness. As a resilient characteristic, connectedness allows for expansion of heterogeneity and diversity. As with almost all other characteristics, too much connectedness can have negative consequences. Over connectedness within and between systems hinders adaptation, transformation and flexibility. High and weak connectedness imparts diversity and flexibility to the system, whereas low and strong impart dependency and rigidity.

## Annexure C: Urban and other resilience frameworks in the region

The growth of urban centres has become a serious and concerning challenge in the SADC region. Within the region, only two urban centres have developed and published urban resilience strategies - the City of Cape Town and Durban (both in South Africa). In both cases these urban centres formed part of the “100 Resilient Cities Programme”. These two will enjoy attention in this framework as it provides evidence which can be used to replicate strategies in other urban centres in SADC.

### Durban: Resilience Strategy 2017

The development of the Durban Resilience Strategy began in 2013 as part of the 100 Resilient Cities Programme. The aim of the Strategy is to focus on preparing Durban for both current and future change, and ensuring that the required partnerships and institutional flexibility are in place to respond more effectively to challenges. The Strategy is driven by six “levers” which are:

- a) Lever 1: Strengthen local communities and build social cohesion;
- b) Lever 2: Improve the effectiveness of education and skills development;
- c) Lever 3: Promote economic growth in line with 21st century trends and opportunities;
- d) Lever 4: Manage environmental assets more effectively;
- e) Lever 5: Create a more inclusive and integrated spatial plan; and
- f) Lever 6: Improve municipal effectiveness.

In order to address these six levers simultaneously, the city considered specific areas where these levers could be addressed simultaneously. Two resilience-building options (RBOs) were identified by a range of different stakeholder groups which are: ‘*Collaborative Informal Settlement Action*’ and ‘*Integrated and innovative planning at the interface between municipal and traditional governance systems*’. The reason for choosing two options is to ensure that transformative change focuses on a specific area of issue, which uses the levers to ensure resilience-building will ultimately have a catalytic impact across the broader local government system. “Durban’s specific focus



on these two RBOs, rather than on multiple macro-level challenges, reflects its emerging understanding that in complex contexts where a range of systemic resilience challenges need to be addressed simultaneously” (eThekweni Municipality, 2017).

## City of Cape Town Resilience Strategy

The City of Cape Town’s Resilience Framework (preliminary resilience assessment of 2018) provides a lens through which the complexity of cities and the numerous factors that contribute to a city’s resilience can be understood. Cape Town’s resilience relies on a broader approach that requires individuals, communities, institutions, and all spheres of government, including the City of Cape Town, to play a variety of resilience-building roles (City of Cape Town, 2018). The City of Cape Town’s preliminary strategy has four dimensions of urban resilience which are:

- a) Leadership and strategy;
- b) Health and wellbeing;
- c) Infrastructure and environment; and
- d) Economy and society.

These dimensions are supported by 12 drivers:

1. Meets basic needs;
2. Supports livelihoods and employment;
3. Ensures public health services;
4. Promotes cohesive and engaged communities;
5. Ensures social stability, security and justice;
6. Fosters economic prosperity;
7. Provides and enhances natural and manmade assets;
8. Ensures continuity of critical services;
9. Provides reliable communication and mobility;
10. Promotes leadership and effective management;
11. Empowers a broad range of stakeholders; and
12. Fosters long-term and integrated planning.

In addition to 50 sub-drivers to achieve each of the drivers is also identified. To utilise the drivers and sub-drivers to achieve the four resilience dimensions, this preliminary resilience strategy proposes four “enablers” and four “discovery areas” namely:

- Enabler 1: Social cohesion;
- Enabler 2: Mainstream resilience into City decision-making;
- Enabler 3: Knowledge management and data;
- Enabler 4: Resourcing and funding resilience;
- Discovery area 1: Connected, climate adaptive city
- Discovery area 2: Compassionate, holistically health city;
- Discovery area 3: A capable, job-creating city;
- Discovery area 4: Collectively, shock-ready city

Besides the resilience plans, frameworks and strategies within the Member States sector, a number of ICPs and stakeholders have also developed resilience strategies. The most salient will enjoy attention below.

### **RIASCO Regional Resilience Framework**

The RIASCO Regional Resilience Framework was one of the first frameworks to take a holistic approach to resilience in the region. This framework has three overarching pillars:

- a) Livelihoods, production, productivity: Strategies for action
- b) Access to social and basic services; and
- c) Social protection.

Each of these pillars are addressed by a number of entry points which are:

- a) Policy support;
- b) Institutional support (regional, national and subnational); and
- c) Community, household support.

Although novel in its approach the framework did not attain the necessary traction mostly because of the limited and weak understanding of resilience in the region at that given point in time.

### **FAO Southern Africa Resilience Strategy 2018-2021**

The FAO Resilience Strategy for Southern Africa (FAO, 2018) aims to “increase the resilience of agricultural livelihoods to contribute to enhanced food security and nutrition in Southern Africa through multi-sectoral, multi-hazard and multi-stakeholder consultations and joint interventions”. The strategy seeks to increase the resilience of agriculture-based livelihoods to enhance food security and nutrition within the region. It has four main outcomes which are:

- Outcome 1: Risk-informed policy, regulatory, institutional and investment frameworks developed and supported;
- Outcome 2: Disaster risks monitored and early warning information provided for potential, known, and emerging threats;
- Outcome 3: Vulnerability to crises reduced and disasters prevented; and
- Outcome 4. Preparedness for and response to crises and disasters improved through effective sub-regional coordination.

This strategy is mostly aligned with the conventional disaster risk reduction thinking in terms of resilience as espoused by the SFDRR and is informed by the Rome-based Agencies resilience partnership.

### **IOM Strategic Work Plan on Disaster Risk Reduction and Resilience 2017-2020**

The IOM Strategic Work Plan on Disaster Risk Reduction and Resilience outlines IOM's strategic approach to disaster risk reduction and resilience within the broader frame of IOM's global mobility mandate. It presents a set of concrete actions that IOM will undertake over the course of 2017-2020 to assist Member States' efforts to reduce risk and strengthen resilience. The Plan is built on five strategic outcomes which are:

- a) Strategic outcome I: Reduce risk of disaster-induced displacement through effective disaster prevention – ‘having the choice to stay’.
- b) Strategic outcome II: Improve capacity of States and communities to effectively anticipate, respond to, and recover from, the mobility consequences of disasters, through strengthen disaster preparedness – ‘building capacity for response’.
- c) Strategic outcome III: Rapid, effective and risk-informed emergency response that addresses the immediate needs of disaster-affected populations, as well as secondary risks generated as a result of prolonged displacement – ‘managing mobility in a disaster’.
- d) Strategic outcome IV: Improved disaster resilience in recovery and reconstruction – ‘fostering resilience in recovery’.
- e) Strategic outcome V: expanded and strength and partnerships to promote integration of mobility in efforts to reduce risk and build resilience

### **Strategic Framework to Support Resilient Development in Africa: Regional United Nations Development Group (R-UNDG) Eastern and Southern Africa (ESA) and Western and Central Africa (WCA)**

The purpose of this Framework is to support UN country teams (UNCT) to better adapt their programmes, tools, and staff capacity to be “fit for context”, in order to help countries and their people achieve the SDGs and targets of the Agenda 2063 through resilient development. This Framework proposes a number of principles which need to inform programming by UNCTs:

- a) Principle 1: Take context as the starting point
- b) Principle 2: Act early to prevent.
- c) Principle 3: Act fast, but stay engaged long enough to give success a chance
- d) Principle 4: Focus on system-building as the central objective.
- e) Principle 5: Think state-building and recognise and promote government leadership.
- f) Principle 6: Promote equitable development, equality and non-discrimination, and a human rights-based approach as the basis for inclusive, stable and resilient societies.

- g) Principle 7: Be accountable to affected populations.
- h) Principle 8: Engage catalytic, broad-based partnerships for sustainable development.
- i) Principle 9: Design, test and iterate.

It further contains common key elements of resilience development:

- a) Resilient state:
  - a. Strengthening governance and state-building; and
  - b. Reinforcing transparency, accountability and oversight of public finance.
- b) Resilient systems:
  - a. Building risk-sensitive and shock-responsive social protection systems;
  - b. Strengthening systems for continued delivery of social services; and
  - c. Developing integrated UN programmes for emergency preparedness and response and resilient development at community, national, and regional levels.
- c) Resilient economy and livelihoods:
  - a. Diversify the economy and production;
  - b. Promote and facilitate market-based solutions;
  - c. Support the creation of youth employment; and
  - d. Support labour migration.
- d) Resilient environment:
  - a. Climate change adaptation; and
  - b. Human mobility and climate change.

This Framework recognises various entry points to resilience-building as well as the different context in which resilience occurs.

## **World Food Programme's Policy on building resilience for food security and nutrition**

This policy reflects the WFP's strengths in resilience-building and identifies areas that require increased attention and investment for resilience in food and nutrition security.

The policy proposed six principles:

- a) People, communities and governments must lead resilience-building for improved food security and nutrition;
- b) Assisting vulnerable people to build resilience is beyond the capacity of any single institution;
- c) Planning frameworks should combine immediate relief requirements with long-term development objectives;
- d) Ensuring protection of the most vulnerable is crucial for sustaining development efforts;
- e) Effective risk management requires an explicit focus on the decision-making of national governments, as well as integration of enhanced monitoring and analysis; and
- f) Interventions must be evidence-based and focused on long-term results.

Through this policy the WFP, with its partners, aims to achieve resilience programming to make zero-hunger a reality. It recognises the long-term perspective needed for this type of resilience-building through multi-year programming and commitments by donors.

## Annexure D: Glossary of terms

Absorptive ability	The various (coping) strategies by which a system (individuals, households, nations and/or regions) moderate or buffer the impacts of shocks on their livelihoods and basic needs.
Adaptability	Adaptability is the capacity of actors in a system to manage resilience, either by moving the system toward or away from a threshold that would fundamentally alter the properties of the system, or by altering the underlying features of the stability landscape (change the positions of thresholds, and the ease of movement of the system).
Anticipation	The ability of a system to expect both known and unprecedented shocks with the ultimate goal of minimising adverse effects.
Complex adaptive systems	Systems of people and nature in which complexity emerges from a small set of critical processes that create and maintain the self-organising properties of the system.
Disaster	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.
Disaster risk	The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.
Disaster risk assessment	A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.
Disaster risk management	Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.
Disaster Risk Reduction	Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.
Early warning system	An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.
Ecosystem services	The benefits that people derive from the ecosystem. These might include the production of goods e.g., food, fiber, water, fuel, genetic resources, pharmaceuticals, etc.; regeneration processes e.g., purification of air and water, seed dispersal and pollination; stabilizing processes e.g., erosion control, moderation of weather extremes; life-fulfilling functions e.g., aesthetic beauty, cultural value; and conservation of options e.g., maintenance of ecological systems for the future.
Hazard	A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.
Resilience	To sustainably develop in dynamic environments faced with true uncertainty and the unexpected, like steering a vessel in turbulent waters.
Resilience pivots	Elements of a resilient system that need to remain present despite adaptation or even transformation of other elements of that system, and in doing so support the maintenance of the system's distinctive identity.
Social-ecological systems	Social-ecological systems are complex, integrated systems in which humans are part of nature.

Transformability	The capacity to create a fundamentally new system when ecological, economic, or social (including political) conditions make the existing system untenable.
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.