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DiMSUR
Disaster Risk Management, Sustainability and Urban Resilience

BUILDING URBAN RESILIENCE IN SOUTHERN AFRICA: Dialogue of Mayors and City Leaders

Discussion paper

Building Disaster Resilience in Sub-Saharan Africa

An initiative of the African, Caribbean and Pacific Group of States funded by the European Union

Implemented by/Mis en oeuvre par:

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24.NOV.2020

ACKNOWLEDGEMENTS

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CONTENT

BACKGROUND

This paper is a summary of findings and lessons learned by UN-Habitat as a result of implementing the consulting assignment "Strengthening Capacities for Reducing Urban Vulnerability and Building Resilience in Southern Africa" which is housed within the program "Building Disaster Resilience to Natural Hazards in Sub-Saharan African Region, Countries and Communities", financed by the ACP – EU through the 10th EDF Program, Result Area 2, and managed by GFDRR / World Bank.

The consulting assignment, which was launched in April 2018 and will close in December 2022, has two main objectives:

(i) To facilitate capacity building for Southern African Development Community (SADC) and its Member States related to urban vulnerability and resilience, and

(ii) To support SADC in identifying policies and guidance on collaboration with cities and local governments for strengthening urban resilience in southern Africa.

To achieve these objectives, UN-Habitat pursued two parallel tracks:

- First, research was undertaken and consolidated in the Regional Assessment Report on Urban Vulnerability and Resilience in SADC Member States (referred to as the "Regional Assessment Report") which establishes an evidence base, defines the challenges and opportunities in the SADC region related to building urban climate resilience, and presents an analysis and recommendations at the regional, national, and local levels.
- Second, a participatory resilience planning tool called CityRAP (City Resilience Action Planning) was implemented in six different countries within the SADC region. The CityRAP tool was developed by UN-Habitat and the Centre for Excellence for Disaster Management, Sustainability and Urban Resilience in Southern Africa (DiMSUR). CityRAP develops the capacity of city managers, municipal technicians, and key urban stakeholders to understand urban risk and plan practical actions aimed at reducing risk and progressively building resilience to natural and other hazards in the city. The output of this tool is a Resilience Framework for Action (RFA).

This paper, therefore, presents a synthesis of findings and insights from the Regional Assessment Report (section 2), an overview of lessons learned arising from implementing the CityRAP tool, and findings from the RFA's that were developed by different cities/ neighbourhoods (section 3) which can be considered as indicators of some common concerns in the region's urban areas. The paper also looks at the implications of the current COVID-19 pandemic in cities, then concludes with a set of recommendations and suggestions for a possible way forward with regards to improving urban resilience in the SADC Region.

INSIGHTS

FROM THE REGIONAL ASSESSMENT REPORT

Introduction:

Africa is undergoing rapid urbanisation. Projections indicate that by 2050, almost 1.3 billion Africans will be living in areas classified as urban, compared to the current 470 million today. But due to the lack of local capacity to manage this rapid urban growth, much of this urban expansion has been taking place outside or in the absence of formal planning frameworks. As a result, the continent has experienced a sprawl of urban settlements characterized by high vulnerability and high risk, due to poor living conditions with a lack of basic and social services.

At the same time, the southern Africa region is highly susceptible to the impacts of extreme climate events, in particular floods, droughts and cyclones. Urban risks are frequently exacerbated by the increasing unpredictability and severity of such events due to the influence of climate change, affecting a range of urban sectors including water, food supply systems and health. People with low incomes, women and girls, youth, the elderly, persons with disabilities and other marginalized groups tend to be particularly vulnerable and often disproportionally affected. Urban resilience is an area that requires critical attention in the southern Africa region and its integration in current SADC policies and programmes is essential.

It is important to highlight that hazards and vulnerabilities faced by urban areas transcend national boundaries and are shared by cities in multiple countries, for instance, cities in the drought-prone semi-arid and sub-humid areas that cover parts of Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, or cities along the cyclone threatened south-eastern coast of the Indian Ocean in Madagascar, Mozambique and the Indian Ocean islands. Therefore, taking a regional approach to building urban resilience and establishing effective multi-jurisdictional coordination mechanisms is critical amongst the SADC Member States, particularly in areas with high levels of urbanization. Essential infrastructure planning, such as the development and maintenance of transport, water, and energy networks is often better carried out by governing bodies that operate at the regional or sub regional levels, contributing to economies of scale, as well as facilitating the integration of disaster risk reduction (DRR) and climate change adaptation (CCA) considerations into the design and operation of such networks.

The insights presented in this section first highlights the state of urban disaster risk in the region, then examine the current DRR and policy framework before concluding with key findings and recommendations.

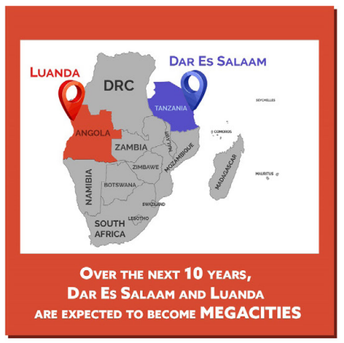
Overview of urban disaster risk in the region

Presenting the context

The 16 Member States of the SADC region are among the world's fastest urbanising countries. Two of Africa's four largest city regions are situated here (Kinshasa and Gauteng – the Johannesburg-Pretoria area). A striking aspect of urbanisation in the region is the dichotomy of city-size. Only 11 urban settlements have a population exceeding two million, hosting around 40per cent of the total urban population of the region. At the same time, a majority (around 60per cent) of the urban settlements in the region have less than 30,000 inhabitants. Hence, it is important to keep in mind that megacities and small cities have differentiated needs and prospects when it comes to addressing disaster risk and adapting to climate change. In fact, given the trend of expanding secondary cities of smaller size and the socioeconomic benefits that come with encouraging population movements away from primary towards secondary cities, these cities actually hold the key to building urban resilience in the SADC region.

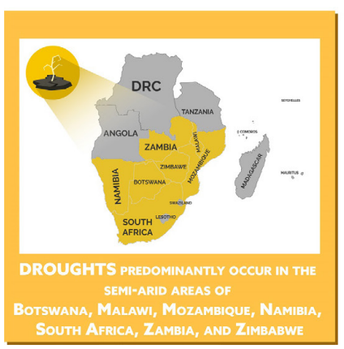
Although the SADC member countries have very diverse economies, some of the countries are among the world's least developed. The region continues to suffer from high unemployment, weak commodity prices, chronic fuel and food shortages, fiscal strains, increasing debt and high inflation. The COVID-19 crisis is already leading to additional economic losses. Gender inequality in the labour markets and gender-related issues also remain a serious concern.

South Africa, Botswana and Angola are currently the three **most urbanized** countries in the region

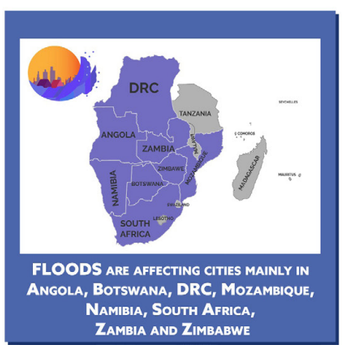


Over the next **10** years, Dar Es Salaam and Luanda are expected to become **megacities**

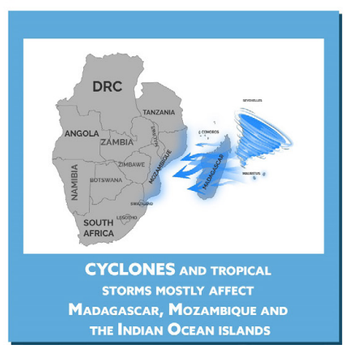
More than **half** the population in the region survive on less than **one dollar** per day



Droughts predominantly occur in the semi-arid areas of Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia, and Zimbabwe

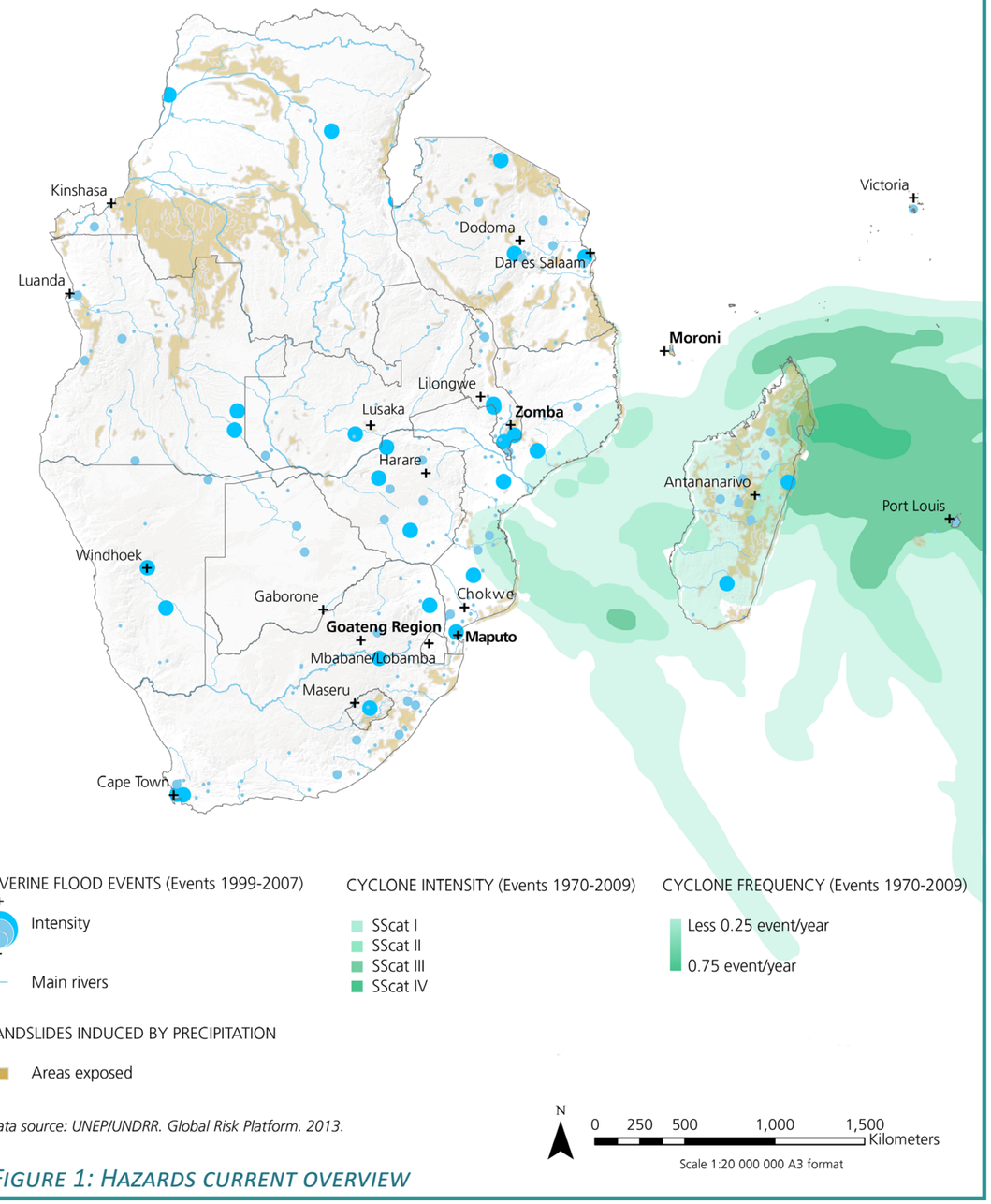


Floods are affecting cities mainly in Angola, Botswana, DRC, Mozambique, Namibia, South Africa, Zambia and Zimbabwe



Cyclones and tropical storms mostly affect Madagascar, Mozambique and the Indian Ocean islands

Meanwhile, the region is affected by the impacts of climate change, and trends show an increasing frequency and severity of all kinds of hazards, most notably (in decreasing order of exposure) drought, floods, cyclones and earthquakes. The map below shows a significant overlap between the geographical distribution of human settlements in southern Africa and the areas of high exposure to natural hazards.



Data source: UNEP/UNDRR. Global Risk Platform. 2013.

Figure 1: Hazards current overview

Disaster risk at national and regional levels

Disaster risk is a function of the probability of a hazard becoming an actual disaster event, and the vulnerability of the exposed communities, systems, or assets to cope with the disaster that may occur. The vulnerability analysis indicates that:

- Madagascar and Mozambique are the most vulnerable countries to cyclones
- Mozambique, Malawi, Zimbabwe and Namibia are the most vulnerable countries to drought and
- DRC is the most vulnerable country to both floods and earthquakes

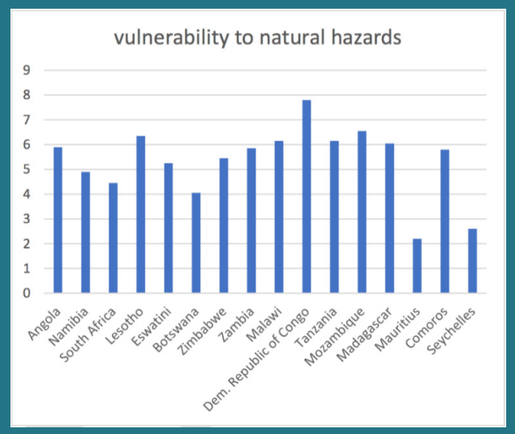


Figure 2: Vulnerability to natural hazards

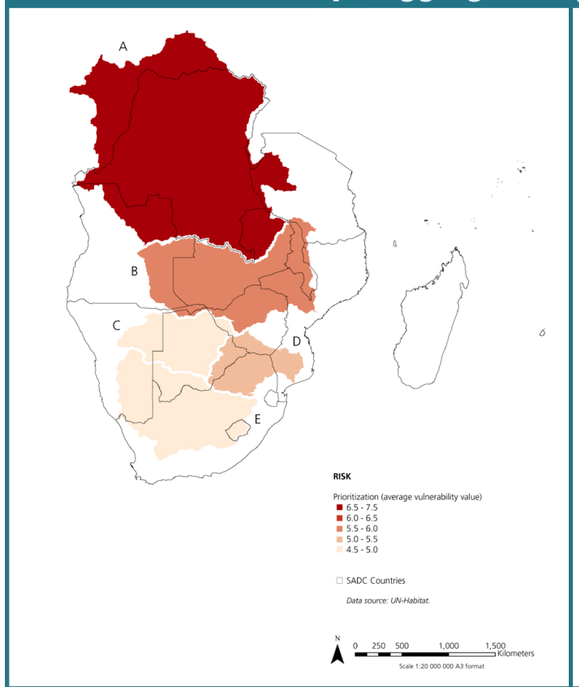
The risk considers both vulnerability and the probability of hazard. While the probability of a hazard to occur depends mainly on natural causes and climate change, vulnerability is highly dependent on how a country and a city are organized. If we classify countries by risk, instead of by vulnerability, the two countries most at risk in the entire SADC region are Madagascar and Mozambique. If the analysis is disaggregated by type of hazard:

- Countries most at risk of drought are Zimbabwe and Namibia
- Countries most at risk of floods are the DRC and Madagascar
- Countries most at risk of cyclones are Madagascar and Mozambique
- Countries most at risk of earthquakes are Tanzania and Malawi

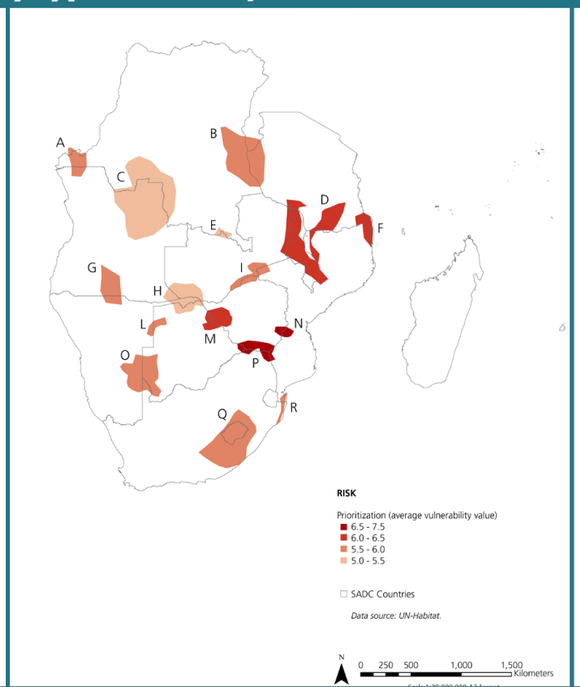
The fact that countries more at risk and countries with highest vulnerability do not overlap means that even when the probability of hazard is high (due to climate change) for a certain country, the vulnerability of the country can still be low, or vice-versa.

Based on this approach, transboundary hotspots per hazard type were identified. One major transboundary hotspot was identified for cyclones, five for floods, fifteen for droughts, and one for earthquakes[1]. It might be interesting to explore how countries and cities within the identified hotspots can possibly organize themselves to coordinate prevention, mitigation, preparedness and resilience efforts thematically, based on the shared hazard, and whether there is a need for a mechanism within SADC that can support this. In addition, the SADC region has increasingly been experiencing multi-tiered hazards, such as the case today with the COVID-19 pandemic. This scenario further reinforces the need for regional coordination in the face of transboundary hazards.

Transboundary hotspots of risk
(disaggregated by type of hazard)

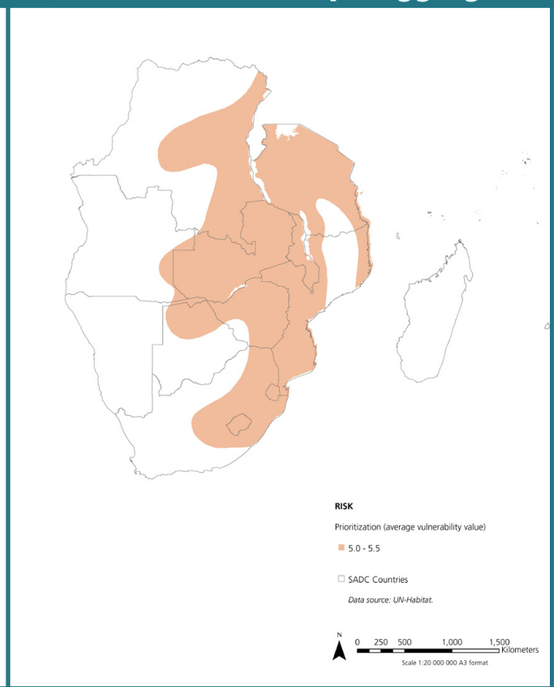


Floods

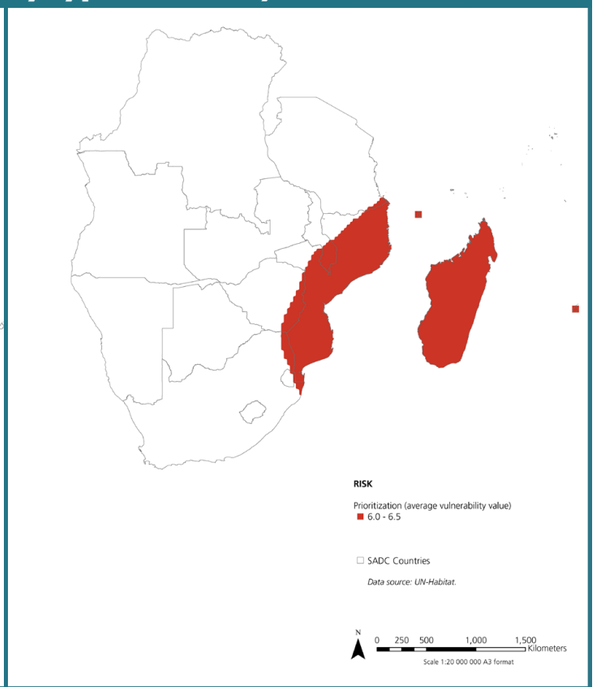


Droughts

Transboundary hotspots of risk
(disaggregated by type of hazard)



Earthquakes



Cyclones

Institutional and policy analysis

Dedicated policy instruments and regional disaster risk governance mechanisms with a focus on urban areas can assist the SADC countries in facing future risks and disasters, in a more efficient and coordinated way.

1 The DRR policy framework

DRR has become an important topic on the SADC agenda, as shown by the increasing number of dedicated policies and strategies. Figure 5 below presents a broad overview.

Figure 3: DRR frameworks, strategies, policies, and plans

Although many protocols, policies and strategies now implicitly incorporate disaster risk reduction, they still suffer from the 'silo syndrome'. Because of this, disaster risk reduction is still viewed as a mandate of the Organ on Politics, Defence and Security Cooperation, rather than a cross-cutting matter to be applied across directorates and units. The multi-disciplinary nature of disaster risk management presents an opportunity by which collaboration through several existing SADC protocols relevant to DRR, could be harnessed to achieve significant synergies (among these, the Protocol on Health and the Regional Water Policy).

It is important to note that the SADC region has not yet developed a protocol on disaster risk reduction or management. However, during the 21st SADC Ministerial Committee of the Organ on Politics, Defence and Security Cooperation, the SADC Executive Secretary Dr. Stergomena Lawrence Tax stated[1] that the region has taken the lessons learnt from the devastating impacts of Cyclones Idai and Kenneth seriously and that measures to operationalise the SADC Disaster Preparedness and Response Mechanism were ongoing. These tools under the SADC Disaster Preparedness and Response Mechanism, are meant to be complimented with the activation of the SADC Contingency Operations Plan (COP) for early warning under the SADC Standby Force. The Secretariat is also mapping the entire disaster management value chain, with a view to putting in place a comprehensive and well-coordinated response mechanism. Discussions are progressing on the establishment of a SADC Humanitarian, Emergency Operations and Resilience Centre (SHEORC).

1 https://www.sadc.int/news-events/news/21st-sadc-ministerial-committee-organ-politics-defence-and- security-cooperation-held-lusaka-zambia

2 Awareness, resource mobilization, and risk financing

SADC Member States are aware that disaster risk financing and insurance instruments/strategies can help them to increase their financial resilience to disasters. The EU, World Bank, and GFDRR fund the Africa Disaster Risk Financing Initiative, which was launched in 2015 to support Risk Financing Strategies at the country-level. In November 2016, SADC established the SADC Preparedness and Response Strategy and Fund 2016-2030. Overall, funding mechanisms and allocation of budgets for DRR, climate change adaptation and resilience are working within national frameworks.

Financial challenges in risk management in the SADC region are huge: a transition to fiscal consolidation is crucial, with a specific focus on strengthening the financial resilience of the region to disasters. Africa has seen considerable innovation in the last years in new contingency mechanisms to cover disaster-related losses, but adequate capacity to contain the fiscal impact of disasters is key. The World Bank has been promoting risk financing approaches, and countries are driving innovation in this space.

3 Regional networks

Regional, multilateral and bilateral initiatives and networks exist that complement the efforts of the SADC Secretariat and its Member States. Among these, there are trans-national network, and African networks which include SADC Member States.

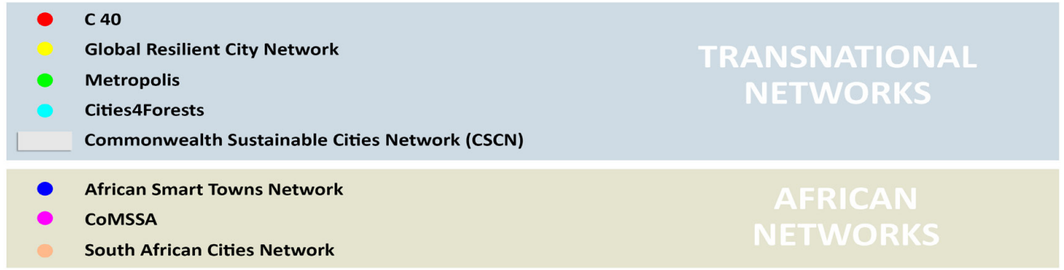


Figure 4: Cities networks

In parallel, countries and cities have been taking steps towards developing their own DRR strategies (e.g. Malawi, Lesotho, Eswatini and Zimbabwe have already developed national frameworks, and Cape Town and Durban in South Africa have developed their own city-level resilience strategies). While some areas of synergies can be observed from the resilience policy instruments developed, a worrying non-alignment between the strategies from regional to city level can be observed. For example, by comparing SADC Resilience Strategy Priority Areas and strategies at national or city level, it emerges that: i) priority one (Integrated governance and informed decision-making) suggested by the region, is not included at national or city level; ii) priority two (Social and human protection and mobility) is incorporated at national level, but not at local level; iii) priority six (Natural resources management, protection of biodiversity and conservation), is not considered at national level but it is at city level. This shows that thinking on these issues is not yet aligned at the different levels of governance, which keeps the region from fully achieving urban resilience. In addition, the lack of coordination on these issues, highlights the general weaknesses of vertical coordination.

4 PRIVATE SECTOR, ACADEMIA, AND OTHER RESILIENCE BUILDING EFFORTS IN THE SADC REGION

For DRR in general, but in urban areas in particular, the private sector is a critical stakeholder. The Private Sector Alliance for Disaster Resilient Societies (ARISE) is a network of private sector entities led by the UN Office for Disaster Risk Reduction (UNDRR). Different aspects and possibilities to engage the private sector within urban dimensions such as micro-insurance, healthcare, waste and sanitation, water management, affordable housing, off-grid renewable energy, microfinance and ICT should be further analysed by the Association of SADC Chambers of Commerce and Industry (ASCCI) and the SADC Business Forum. The importance of private sector in DRR has been highlighted after the Sendai Framework for Disaster Risk Reduction was adopted in 2015. Private sector engagement in building urban resilience is particularly important, as the need is vast while grant funding from governments and donors is limited. There are unmet market needs, consequently, opportunities for private enterprise interventions exist. In addition, the private sector can ensure that innovative technical solutions for disaster risk reduction are a core business and can promote social responsibility activities. That said, this is still an area where further efforts need to be invested. The DiMSUR initiative represents an example of a Centre of Excellence focusing on urban resilience initiated by four Member States (Madagascar, Malawi, Mozambique and Comoros), which still lacks formalization with the SADC Secretariat. Academic networks also play an important role, such as PeriperiU, a partnership of African universities that spans across the continent and is committed to building local disaster risk related capacity. For better coordination of all stakeholders and initiatives, the SADC Regional Resilience Framework 2020- 2030 proposes that the SADC Secretariat puts in place structures and mechanisms that will facilitate the coordination of resilience building and also will provide a central connecting point for resilience knowledge and information. To this end, this Framework proposes the establishment of a regional resilience hub for capacity development, research and knowledge management and cites established networks (such as PeriperiU or DiMSUR) as possible locations to house such a hub.

KEY FINDINGS AND RECOMMENDATIONS FROM THE REGIONAL REPORT

Below are the recommendations emerging from the Regional Assessment Report. They can be clustered into six main subgroups:

a) Enhanced policy, strategic and institutional frameworks with a stronger urban focus;

b) Capacity building, increased local knowledge and improved data management;

c) The importance of regional and urban planning for building resilience;

d) Financial and socio-economic considerations;

e) Promoting durable urban solutions and;

f) Strengthened inter-country and inter-city cooperation

A Enhanced policy, strategic and institutional frameworks with a stronger urban focus

In general, the urban dimension of disasters is still not sufficiently reflected in regional policies, strategies and plans of action. Clearly, as it occurs in most sub-Saharan African countries, urbanization is not yet seen as an opportunity for achieving structural transformation. This is problematic considering the realities of rapid urbanisation and the high exposure of cities and towns to different types of hazards.

The institutional capacity of SADC, given the complexities and cross-cutting nature of disaster risk management, remains weak: the DRR Unit has to be able to influence policies, strategies and processes across the SADC Secretariat, which is much needed considering that urban resilience is an inter-sectoral agenda. Furthermore, a better alignment of related strategies and plans at the different administrative levels (i.e. local; sub-national; national and regional) and targeted capacity building at the local (city/district) levels would benefit all SADC Member States.

To build urban resilience at the regional level, there is a need to further advance the emergency response-development nexus. For this purpose, the establishment of regional centres of excellence or operation, such as DiMSUR, or the SHEORC which is still being discussed, or academic networks such as PeriperiU, which can closely collaborate with the SADC DRR Unit, is part of the solution.

Overall, the policy shift from disaster response to a more proactive, holistic and integrated disaster risk management (DRM) approach with emphasis on the whole prevention, mitigation, preparedness and resilience spectrum, needs to be accelerated and institutionalized.

B Capacity building, increased local knowledge and improved data management

Resilience building must start with improved coping capacity of local populations. This can be achieved through awareness raising and community involvement and empowerment. Improving disaster-risk education is essential, by gradually integrating age-appropriate educational messages about disaster risk preparedness/responses and urban resilience into formal curricula. The development of a regional body of knowledge and expertise to tackle urban risks and to identify and implement concrete solutions is urgently needed. The involvement of academic and training institutions is key.

In general, in southern African countries there is a notable data gap when it comes to disaster risks. The latter can be addressed through the establishment of regional centres of excellence/operations as mentioned above. Urban data are especially needed considering the rapid urban trends observed in the region and the increased vulnerability accompanying it.

Based on proper data sets and data management, there is a need for developing future risk scenarios of the potential impacts of climate variability and change on urban areas, which would contribute towards enhancing regional and national governments' understanding of their risk profiles and their capacity to integrate resilience-building considerations into their respective development planning processes.

C The importance of regional and urban planning for building resilience

An urban system is a socio-ecological system and its underlying components exhibit multiple linkages across spatial and temporal scales[2]. Spatial planning efforts for enhancing urban resilience, therefore, should neither be restricted to city boundaries nor to current scenarios. This is particularly important for planning at a greater geographic scale for cities/towns falling within the defined boundaries of ecosystems such as river basins. Better inclusion of local authorities in national/sub-national planning processes is critical.

In addition, establishing/reinforcing city-to-city cooperation and collaboration mechanisms for exchange of DRM best practices can lead to more integrated and effective responses, especially to transboundary hazards, as well as a better use of natural resources.

It is important to reinforce the system of cities by delocalising some socioeconomic functions of primary cities to secondary and tertiary cities to reduce migration of rural youth towards the capital cities. Prevention of urban sprawl and informal development is essential to effectively reduce vulnerabilities in larger urban centres.

At the city scale, urban plans should systematically integrate environmental, risk reduction and resilience dimensions and be implemented through effective compliance and enforcement mechanisms.

It is of critical importance that vulnerable groups such as women, children and youth, the elderly, migrants, ethnic minorities and persons with disabilities are actively involved in DRM planning and decision-making processes, and that their needs and aspirations are taken into consideration. In addition, adequate urban planning and proper guidance/control of urban development is key to attracting private investors to cities, and gradually shifting from the subsistence and informal economic dynamics towards increased participation in manufacturing, industrial production, and service sector-related jobs.

2 Wilkinson, 2012

D Financial and socioeconomic considerations

It has been observed that there is a chronic funding dependency on external partners for supporting policy, institutional capacity and programme development and implementation in most of the SADC region. There is a need for establishing mechanisms that enable endogenous capacity development and institutional strengthening. From this perspective, the establishment of a Regional Resilience Fund, which could pool donations from SADC Member States, the private sector, NGOs, international development partners and ordinary citizens for relief efforts, is certainly something to be pursued. Cost-saving is a key aspect to consider, especially to address the impacts that macro-disasters have at the household scale. Despite this, insurance penetration remains extremely low: there is urgent need for crafting context-based mechanisms, thinking beyond risk financing and investing in adaptation. SADC and the African Union can help develop innovative approaches to ensure that climate related risks are covered.

To be sustainable, cities are supposed to provide decent job opportunities and/or regular sources of income, especially targeting the youth and the low-income class. Therefore, addressing informality requires developing pro-poor urban policy frameworks (see first set of recommendations) that enable not just physical upgrading but especially socioeconomic upgrading by creating better income opportunities for low-income groups.

Importantly, resilient cities, powered by the region's abundant clean energy, should follow greener development paths, thus creating jobs linked directly or indirectly to virtuous green economy cycles, as well as inclusive public and green spaces where people can mix and socialize.

E Promoting durable urban solutions

To be effective, urban resilience strategies must relate closely to the local level. In particular, adopting "a learning by doing" approach and engaging a broad range of stakeholders in urban planning is an effective social learning strategy. It also helps to deal with the uncertainties inherent to social systems and with achieving adaptive planning and design. It should be appreciated that engineering approaches that seek to eliminate risk factors through physical planning interventions and applying technological fixes such as, for instance, construction of coastal walls and embankments, may not be sufficient for safeguarding communities. There is a need to promote nature-based solutions for urban climate adaptation, such as leaving green buffer areas in flood-prone zones, planting trees to prevent erosion and facilitating the retention & infiltration of rainwater, developing green infrastructure, etc.

F Strengthened inter-country and inter-city cooperation

SADC has developed inter-country cooperation to strengthen its weather forecast capabilities, which helps improve contingency planning ahead of the rainy and dry seasons, as well as reinforcing early warning and information management systems. Increased collaboration among countries and between cities is absolutely essential for mitigating transboundary/common hazards.

Importantly, in the context of risk reduction and resilience building for urban areas, a number of city network exists which include SADC countries. Cities can learn from each other on these important topics, sharing knowledge, lessons learned and best practices, considering that they are at the forefront of prevention, preparedness, response and recovery when a disaster strikes.

CityRAP tool

A STEP TOWARDS EFFECTIVE PARTICIPATORY URBAN RESILIENCE PLANNING

''THIS TOOL IS BUILT ON PARTICIPATORY METHODS AND CONSENSUS-BUILDING TECHNIQUES WHICH INVOLVE ALL CONCERNED STAKEHOLDERS WITH THE AIM OF IDENTIFYING ENTRY POINTS TO START BUILDING A CITY'S RESILIENCE WITH MINIMAL EXTERNAL SUPPORT''

MARK PELLING*

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Introduction:

Building urban resilience in the SADC region is an enormous and complex undertaking for which there is no blanket formula or solution. It requires both horizontal and vertical coordination between a vast number of actors from the community level to regional disaster risk governance mechanisms. UN-Habitat and DiMSUR developed a tool, called CityRAP, which can be applied as part of the solution in certain contexts. In particular, this tool responds to the following recommendations of the Regional Assessment Report:

- Strengthening capacity building, increasing local knowledge and improved data management
- Applying participatory and inclusive urban planning for building resilience that gives voice to the most vulnerable populations
- Unlocking opportunities for risk and resilience financing at the city level
- Leveraging local knowledge to identify and implement durable urban solutions

As stated in the introduction to this paper, CityRAP has not only been implemented to support the project objectives but also to directly reinforce the key findings and recommendations of the Regional Assessment Report with regard to mainstreaming city level resilience.

Essentially, CityRAP is a participatory planning process through which city managers and municipal technicians are trained and empowered to work with communities and local stakeholders to plan actions aimed at reducing risk and building resilience. CityRAP targets small to intermediate cities, or municipal districts within bigger cities, so it links directly with the finding of the report that primary and secondary cities have differentiated resilience building needs and prospects, and that in the SADC region secondary cities hold the key to reducing risk vulnerabilities and building urban resilience. In addition, CityRAP also tackles the issue of urban resilience holistically, and can be applied in a multi-tiered hazard scenario such as in today's context of the COVID-19 pandemic aggravating the effects of other hazards. However, CityRAP is not the only available tool for urban resilience planning, nor is it appropriate for all contexts, such as megacities. It is simply one approach that is offered and has been tested through this consultancy.

CityRAP is delivered over a three-/ four-month period and it consists of four inter-related phases (see figure 6). During each phase activities and exercises are conducted with municipal authorities and communities, such as a municipal self-assessment, participatory mapping and prioritization through focus group discussions. The aim is to build local capacity, leverage and harness local knowledge and support improvements in data management at the city level.

The final outcome of CityRAP is a plan or the City Resilience Framework for Action (RFA) which contains the 4-6 most pressing issues that were prioritised in a consensual manner to define where to start in progressively building the city's resilience and why. The RFA is structured in a way that makes it easy for a municipality to transform each priority into a bankable project proposal to attract donor funding or private sector investment. The RFA is a plan, a starting point. The hard work of financing and implementation comes next.

It is anticipated that as more and more cities use this tool many intra-city and city- to-city benefits would emerge: such as the integration of environmental, risk reduction and resilience dimensions into urban plans and; stimulating the establishment/reinforcing of city-to-city cooperation and collaboration mechanisms for exchange of DRM best practices, which could lead to more integrated and effective responses, as well as a better use of natural resources.

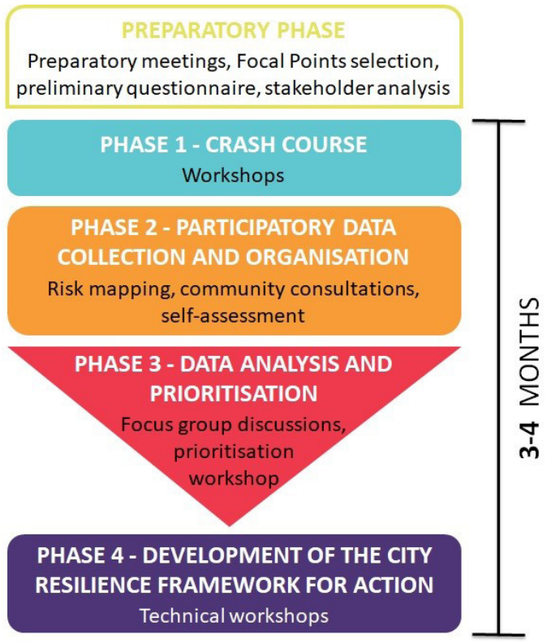

Figure 5: CityRAP overview

CityRAP also offers opportunities for enhancing partnerships and policy cohesion between DRR and CCA at the city level. Although policy coherence between these closely linked practices in sub-Saharan Africa appears to be rather incidental and not structural[3], it is now sufficiently clear that the SADC region would contribute more effectively to sustainable development through deliberately enhanced policy coherence in these practices. UN-Habitat draws upon participatory planning through the CityRAP tool to identify priority areas of intervention to enhance urban resilience. This process allows various stakeholders to analyse the underlying conditions of vulnerability without labelling them in specific domains such as DRR or CCA, thereby fostering coherence[4]. Section 3b, highlights some of these common underlying conditions of vulnerability in cities within the SADC Region.

3 UNDRR (2020), Disaster Risk Reduction and Climate Change Adaptation, Pathways for policy coherence in Sub-Saharan Africa.
4 Ibid

The CityRAP tool and its RFA (Resilience Framework for Action)

Starting from the first CityRAP pilot implementation , which was delivered in Maputo in 2013, the tool has continued to evolve, taking on valuable insights and lessons, which have been incorporated as it has been delivered in each of the cities since then. So far, CityRAP has been carried out in 34 locations in 12 countries across Africa, whether in its full implementation or using the Training of Trainers modality.

As anticipated in the sub-section above, the stock of implementations has become, year after year, a powerful archive of best practices and potential solutions to common emerging issues. Highlighting common emerging issues, is interesting for two aspects. On one hand, to identify where cities need particular support from national governments and capacity-building institutions. On the other hand, to identify channels of city-to-city knowledge sharing. For example, in the case of CityRAP implementation of Adama in Ethiopia, it was useful for the community to learn how towns in Zambia and Mozambique already addressed drainage and waste collection issues.

Under the consulting assignment "Strengthening Capacities for Reducing Urban Vulnerability and Building Resilience in Southern Africa", CityRAP was conducted in six different countries in the SADC region, delivering the full CityRAP implementation in six cities and using the Training of Trainers (ToT) modality in South Africa for three different municipalities. To date, five RFAs have been drafted. The full implementations were held in: Chipata and Lusaka- Zambia; Lilongwe – Malawi; Dondo- Mozambique; Mutare- Zimbabwe; and Fomboni- Union of Comoros (where the process has been delayed due to limitations arising from the COVID-19 pandemic and it is now in its finalization stage), while the ToT was held in South Africa for the municipalities of George, Port Alfred and Potchefstroom.

Common emerging issues
From the RFAs

The city RFAs contain the priority actions for building urban resilience that the municipal authorities and communities identified and agreed on through the CityRAP process. From the RFAs which were drafted under this consulting assignment in six SADC cities, it is possible to identify common issues which can be seen as indicators of possible common urban vulnerabilities in SADC Member States. These trends could serve as an input for discussing and crafting regional initiatives on DRR and fostering more structured and targeted cooperation between cities, countries, cooperation partners and the private sector. This also speaks directly to the recommendation to promote durable urban solutions that stems from the Regional Assessment Report. Below are some of these key issues:

1 POOR OR NON-EXISTENT DRAINAGE SYSTEMS

This is a major human-induced exacerbator of the flooding experienced in the region and was identified as a priority in all the cities where CityRAP was implemented through this consultancy. Most urban centres (mostly informal settlements) have no drainage systems and rely on natural drainage channels. In addition, because of inadequate capacity to enforce building regulations, it is common for buildings and other infrastructure to be built on drainage channels. This is in addition to an increase in concrete surfaces, due to rapid urbanisation, which has contributed to reduced percolation of water.

Examples of solutions identified by the CityRAP cities: In the Mtandire neighborhood of Lilongwe, the project developed on the roads and drainage priority area proposes the following actions:

SHORT TERM

- Establish a Chiefs Committees road drainage management project in their areas comprising of 46 chiefs, forming a committee of 10 members
- Develop a roads and drainage management plan with assistance from the City Council.
- Establish a Roads and Drainage subcommittee under existing ward development committee.
- Improve main and feeder roads in the areas of Chitsukwa, Makhalira, Mphanje, and Nkhwazi.
- Pay compensation to landowners near Chimbalame bridge, to allow for ease of access during evacuation.
- Conduct awareness-raising meetings on care and management of drains through the subcommittee.

LONG TERM

- Construct and open new roads in areas of Block leaders and Chiefs; White, Chakhwima, Matumbo, CheJoni, Sanudi, Mtelera, and Chingwalu.
- Improve Pearson road to serve as an option for transportation during evacuations.
- Construct drains in all roads.
- Construct crossover slabs and walkways along the roads and accesses to premises.

2 POOR WASTE MANAGEMENT SYSTEM

This is one of the anthropogenic factors contributing to and worsening the already difficult flooding problem in the urban centres of the SADC region. Drainage blockages linked to poor waste management practices are common. Dumping along roadsides, canals and in drains is commonly practiced among a large proportion of urban dwellers mainly living in informal settlements.

Examples of solutions identified by the CityRAP cities: In the Kenyama neighborhood of Lusaka, the project developed on the roads and drainage priority area proposes the following actions:

- Develop and implement an innovative solid waste management strategy that ensures an effective value chain and creates jobs.
- Raise awareness of existing legislation.
- Raise awareness of the impacts of littering in drainage systems and on the five (5) Rs
- Engage stakeholders such as CBEs and community members to have an effective waste management system.
- Ensure CBEs employ a data base for all residents/ households in their catchment areas
- Introduce a small levy on street vendors.
- Enhance community understanding of solid waste management legislation in order to improve compliance.
- Enhance coordination of solid waste management players and encourage eco-friendly innovations and mechanisms both at community and institution levels such as recycling, reducing, reusing and separation at source.
- Develop a monitoring system of the CBEs in Kanyama to ensure effective collection, transportation and disposal of solid waste to designated areas.
- Set-up waste bays in different zones for easy collection of waste by the CBEs.
- Establish public composting facilities in markets and community gardens.
- Set-up a commercial waste management company that will only be focused on waste management.

3 WEAK IMPLEMENTATION OF PLANNING LAWS AND REGULATORY FRAMEWORK

This presents major limitations. Political interference, understaffing and inadequate equipment are factors that negatively impact effective planning and the execution of duties by the planners contributing to unsustainable urban growth.

Examples of solutions identified by the CityRAP cities: The entire CityRAP process itself helps to address this issue through several activities, such as the municipal self-assessment and the baseline assessment which consists of the collection and analysis of existing plans, rules and regulations, strategies or policies related to the identified priority issues. By compiling all these documents and gathering data on the strengths and weaknesses of municipal capacities through the municipal self-assessment then discussing them with stakeholders and community members through focus group discussions, the municipality and the community members raise awareness of these weaknesses, open channels for discourse, build trust and generate pollical buy-in for filling the gaps in the legal and regulatory frameworks.

4 UNREGULATED URBANISATION

This has been a major contributor to vulnerability in the urban centres of this region. More than half of the population (54% - WB,2018) live in these rapidly growing informal settlements characterised by poor housing and inadequate or no basic services. Inadequate planning capacity or leverage has been identified as the primary cause.

Examples of solutions identified by the CityRAP cities:

- In the Kanyama neighbourhood of Lusaka the RFA proposes to developing an integrated local area plan by conducting a planning survey for Kanyama and preparing a survey report on the priority issues identified for Kanyama, then hold a public and stakeholder consultation process for the formulation of the Local Area Plan for Kanyama. It also includes developing a framework for addressing land use, environmental protection and other related social and economic development projects and policies, and developing an implementation programme for the Kanyama Local Area depicting a comprehensive financial plan and a proposal for monitoring and review of the plan including key performance indicator.
- In Mutare local economic development was identified as a priority for addressing informality, and the proposed solution is to formulate a local economic development policy that creates an enabling environment for economic development plans and poverty alleviation through construction and equipping of an Innovation Hub that promotes knowledge sharing, research and development and creates employment opportunities which improve the quality of life for vulnerable communities.
- The RFA for Fomboni contains a priority on reducing the community vulnerability of informal settlements to reduce the impact of climate change in relation to flooding.

5 STRENGTHEN CAPACITY OF DRR AND URBAN RESILIENCE

This is a major concern, especially in Sub-Saharan countries subject to climatic hazards, where climate change is even exacerbating its effects.

The city of Dondo, in particular, suffered the devastating effects of Cyclone Idai in 2019.

To tackle this priority, Dondo Municipality proposed the following activities:

- Create a municipal multi-sectoral team working on DRR and Climate Change
- Elaborate the City Contingency Plan in coordination with the National Institute for Disaster Management
- Integrate the DRR principles in all the urban plans
- Organize training on DRR
- Realize regular awareness campaigns on DRM

LESSONS LEARNED
FROM CITYRAP IMPLEMENTATION

While the outcomes of the CityRAP process, the city RFAs, help shed light on some of the common emerging issued related to building urban resilience in cities of the SADC region, the process itself has a lot of learning to offer as well. In this section some of the main challenges and lessons learned are presented to inform future CityRAP processes as well as other participatory planning activities in the region.

Challenges during implementation and solutions on the ground. Different cities that have undertaken the CityRAP process have experienced different successes and challenges. The successes have generally strengthened relationships between the community and local leaders while the challenges have provided lessons learned for improving the tool. For example, at the beginning of the **CityRAP process in Lusaka**, the relationship between Lusaka city administration and Kanyama informal settlement representatives was filled with tension, mistrust and accusations because of multiple experiences of poor service delivery. But during the process, a gradual understanding of each other's strengths and limitations created a more united front towards the common enemy: dealing with the vulnerability of their city. **In Chipata,** the CityRAP process provided a platform for strengthened communication and interface between the authorities (duty bearers) and beneficiaries (rights holders) and exposed community perceptions on the level of service delivery. **In Dondo** city, similarly as in Chipata, the tool provided an opportunity of better dialogue between the municipality and the communities and a better understanding for municipal staff of city and community needs. During the implementation in Dondo, the value of the CityRAP tool as a flexible tool emerged, as in some circumstances the tool needs to be trailored to the specific context in order to achieve better involvement and understanding of the participants. **In Lilongwe** community members organised themselves to work on drainage. However, the partnership of Chipata and Lilongwe, which was initially envisaged because the CityRAP processes for the two cities were implemented sequentially, didn't work as planned as each city encountered its own challenges and fell into its own cycle while preparing the RFA and Concept Notes. Below is a summary of some of the main best practices and lessons learned from implementing CityRAP through this consultancy:

1 **CityRAP has been instrumental in promoting meaningful dialogue** on urban resilience between city administration and communities/local stakeholders, allowing them to gain a shared understanding of the priority areas requiring quick intervention. This has not only resulted in sustainable evolving relationships but has also facilitated community empowerment, local ownership of prioritised interventions and an opportunity for "reverse learning" among city administration officials.

2 **Through the CityRAP process, partnerships have been established with Academic networks,** such as PeriperiU, a partnership of African universities that spans across the continent. Universities in this partnership, have been part of the CityRAP development evolution process and are committed to playing a critical role in building local disaster risk related capacity. In addition to participating in the South Africa ToT, they have been exploring how the CityRAP tool could be incorporated in current DRR/CCA courses. This could be the beginning of **influencing the mainstreaming of urban resilience in the academic curriculum in the region.**

3 **It is however worth noting that, in some cases, during the CityRAP implementation, it took time to achieve the buy-in of local authorities, who are, in most cases, accustomed to making decisions only with "experts" outside the participation of local stakeholders.**

4 **It is also critical to ensure that the stakeholder mapping,** which is expected to be conducted in the pre-CityRAP implementation phase, to establish the "voices to be heard" is done well, otherwise voices of the most vulnerable who may have the greatest stake may not be heard, leading to misguided priorities and ineffective actions.

5 **Because the CityRAP process involves support from external trainers, its comes with some costs,** not only financial, such as those related to implementing the solutions proposed in the Resilience Framework for Action (RFA) but also the environmental costs related to the carbon footprint resulting from the travel of **external facilitation teams to the target cities.**

6 **The lack of city/national budget to implement resilience building activities to take the RFAs from plan to reality** has, perhaps, been the main barrier towards city resilience. Opportunities that may be available multi-lateral or bi-lateral agencies including UN agencies, may take time to access.

7 **Finally, a critical reflection of power relations in the city/community is key.** This reflection will clarify among all stakeholders the key institutions, their influence and how power and authority is exercised in the city/community. Without this reflection, it may be difficult to identify areas of influence that would make or break implementation.

TIPS AND TRICKS for Effective CityRAP Implementation

(i) Establish a clear understanding of the CityRAP Process with senior city authorities.
(ii) Regular communication with the Municipal Focal Points is essential, mobile technology and Whatsapp groups were useful for this.
(iii) It is important to phase the transfer of leadership of the process from the facilitators to the Focal Points in an intuitive and systematic way – the process can be quite complex, especially at the beginning, which necessitates guidance. For example, in Phase 3, the trainers facilitated the first one or two Focus Group discussions, but then encouraged the Focal Points to facilitate the rest. By the end of the process the Focal Points felt more ownership over the process.
(iv) Allowing interventions by community members in a language they are comfortable with during the CityRAP processes encouraged not only inclusion but greater engagement and participation among participants.
(v) In order to improve participation of women and other vulnerable groups, the trainers made this a requirement in all invitation letters and it was discussed with the municipality at the preparatory stage.
(vi) In order to encourage participation of local communities and make sure focal points were not disturbed with their daily tasks, all CityRAP meetings were held outside government premises.
(vii) It is important to keep potential partners engaged from the beginning of the process as they may have specific on-going projects on resilience.

WHERE TO TAKE CITYRAP NEXT?

As already indicated, so far, CityRAP has been carried out in 34 locations in 12 countries across Africa, this includes the six cities in the SADC region, under this consultancy assignment. It is clear that the tool is useful and there is a rising demand from cities for its implementation. In this section cities in SADC countries that are ideal candidates for CityRAP are identified based on the findings of the Regional Assessment Report. Main criteria for proposing these cities were exposure, vulnerability and city size. The suggested cities are vulnerable to multiple disasters which may include floods, droughts, cyclones, heavy snowfall, earthquakes, epidemics, volcanic eruptions, wildfires, rising sea level, coastal erosion, storm surges, deforestation and land degradation.

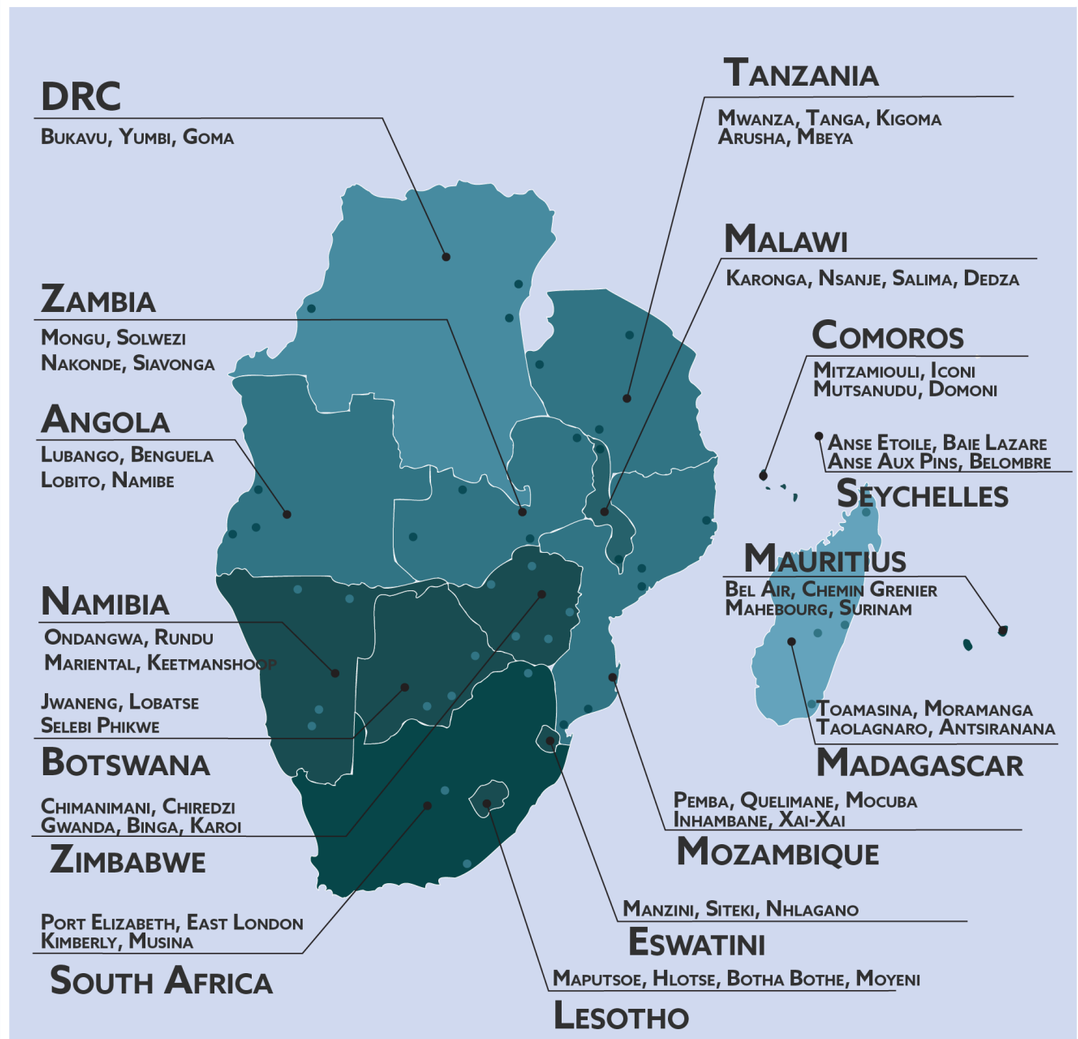

FIGURE 6: SADC TOWNS WHERE CITYRAP CAN BE IMPLEMETED NEXT

COVID

RELATED IMPLICATIONS

Southern Africa, which remains one of the African regions most exposed to natural hazards, frequently experiences multi-tiered hazards such as the case today with the COVID-19 pandemic, which compounds the impacts of cyclones, seasonal floods and droughts.

Globally, urban areas are the epicentre of the pandemic, accounting for most of the confirmed COVID-19 cases[5]. Even though the spatial pattern of direct impacts of COVID-19 and the ones of natural hazard do not overlay, cities are facing a multi-tiered risk scenario that is sum of all direct and indirect impacts of the mentioned phenomena. Thus, as described in section 2, even hazards mainly affecting rural areas also impact cities and town by having negative effects in terms of food markets, livelihoods, job access, or basic services delivery.

The interconnections of drivers and effects can be frightening on the one hand, but it also provides an opportunity and call for regional coordination, on the other.

The region presents common fragilities (according to the Economic Commission for Africa[6]). For example, Africa is particularly susceptible to COVID-19 because 56 per cent of the urban population is concentrated in overcrowded and poorly serviced slum dwellings (excluding North Africa). Poor access to basic hand washing facilities does not help. Urbanization is a phenomenon that all countries in the region are experiencing, both in terms of threats and opportunities. The region lacks an effective DRR management and governance system, has poor capacity in terms of data collection (which is key to properly respond to shocks and stresses), high rates of employment in the informal sector, and high rates of malnourished children. With lower ratios of hospital beds and health professionals to its population than other regions, high dependency on imports for its medicinal and pharmaceutical products, weak legal identity systems for direct benefit transfers, and weak economies that are unable to sustain health and lockdown costs, the continent is vulnerable. The pandemic is also exacerbating inequalities in how people live in cities, and how cities serve their residents, with the most vulnerable suffering the most[7].

On the other hand, the region benefits from a privileged position to build urban resilience to COVID-19 and to hazards in general. This is possible through a better integration of the urban dimensions in plans and policies, through the set-up of collaboration with academia and research centres in the region to design endogenous solution, thought the design of solutions that call for a transboundary approach, through knowledge sharing, through a reorganization and coordination of DRM and early warning mechanisms (see sub-section 2c). SADC can ensure that what is designed at municipal and national levels is implemented effectively and in line with the regional vision at all levels. Non-aligned implementation of guidelines or complete lack of implementation on the ground may lead to the failure of the whole system. Another key aspect to consider in resilience building when thinking about COVID-19, is that it has highlighted already existing gaps that, if addressed, would also tackle resilience to other hazards. For example, gaps in terms of health systems as a whole, job opportunities and unemployment, poverty, urban planning and DRR were already there. By facing and responding to COVID-19, the region also responds to needs raised by other hazards, such as floods, droughts, landslides, and cyclones.

5 COVID-19 in African Cities: Impacts, Responses and Policies - UN-Habitat
6 COVID-19 in Africa: Protecting Lives and Economies
7 The SG's Policy Brief on COVID-19 in an Urban World (Global – UN)

It is also key to raise the fact that to balance the call for action at the regional level, there is also urgent need of pro-activeness from local administrations and communities. As highlighted from the CityRAP tool implementation (section3), the countries belonging to the SADC region present similarities in their conditions that enable the provisioning of endogenous solutions and of knowledge sharing. This can be done both at regional level, but also at local level -in parallel. The CityRAP tool and DiMSUR (see section 3) represent illustrative examples. Just as Zimbabwe can benefit from flood-related solutions crafted in Madagascar or Mozambique, COVID-solutions can be mainstream along similar lines.

The implementation of the CityRAP tool has shown already how knowledge sharing is possible and fruitful: why can't this be done with regard to COVID-19? Thus, the tool is not only effective, but also it enables a quick and easy replication. Of course, the social distancing and other COVID-related constrains launch new challenges to the tool (and to participatory approaches in general). For example, while COVID-19 has reduced the budget for physical meetings it will certainly increase the costs for communication. Many cities/communities will need financial support to establish/ maintain the means of communication to be able to participate effectively. In particular, with regard to the CityRAP tool, there will be need for an overall review of the duration of delivery. Special attention will need to be given to working with cities in identifying and training Focal Points, to ensure that they sufficiently understand the process and are able to lead with only remote support from external trainers. And in order to keep social distancing but to ensure that appropriate voices are heard, it may be necessary to break up the different sessions into smaller focus group discussions. Creativity will be needed and helpful. However, new problems call for new solutions.

With regard to local-crafted responses to COVID-19, they do exist. An example is urban farming, spreading as a consequence of many city households depending on the informal sector and being forced to stay home, and needing to look for an alternative way of getting food and/or an income.

Together with the rest of the world, SADC countries are facing a situation where business-as-usual cannot work as it used to. The debates about decentralization vs centralization, about transportation, health system, economic sectors, job opportunities, urban planning and living standards, need to be re-opened. COVID-19 not only presents an opportunity for the region to improve its response to risk, but also to build back better and make leaps towards achieving sustainable development, like shifting national economies towards green economies in the recovery process. COVID-19 can be supportive of building urban resilience.

CONCLUSIONS

The aim of this paper was to bring together i) findings, ii) possible solutions, and iii) questions that still need further investigation and discussion arising from the research conducted through the Regional Assessment Report and the implementation of the CityRAP Tool by UN-Habitat. Figure 8 below presents a summary of the flow.

In general, the findings of the Regional Assessment Report (section 2) underline the fact that, though progress is certainly being made, SADC Member States are still ill-prepared to deal with the prevention and management of climate and human induced urban crises, and for various reasons still unable to establish and implement strategies that can promote coordinated urban development processes that could increasingly promote climate resilience and balanced socioeconomic dynamics.

Urbanisation is still largely driven by impoverished population groups looking for employment or income opportunities, access to basic services and better living conditions. Hence, the prevailing trend, in the region is a poverty-driven urbanisation that translates into rapidly growing informal settlements, often located in high-risk areas that are not suitable for human habitation. Meanwhile, larger investments in cities, including those from the private sector, are often not designed to withstand the impacts of climate change, as clearly shown by Cyclones Idai and Kenneth in March and April 2019.

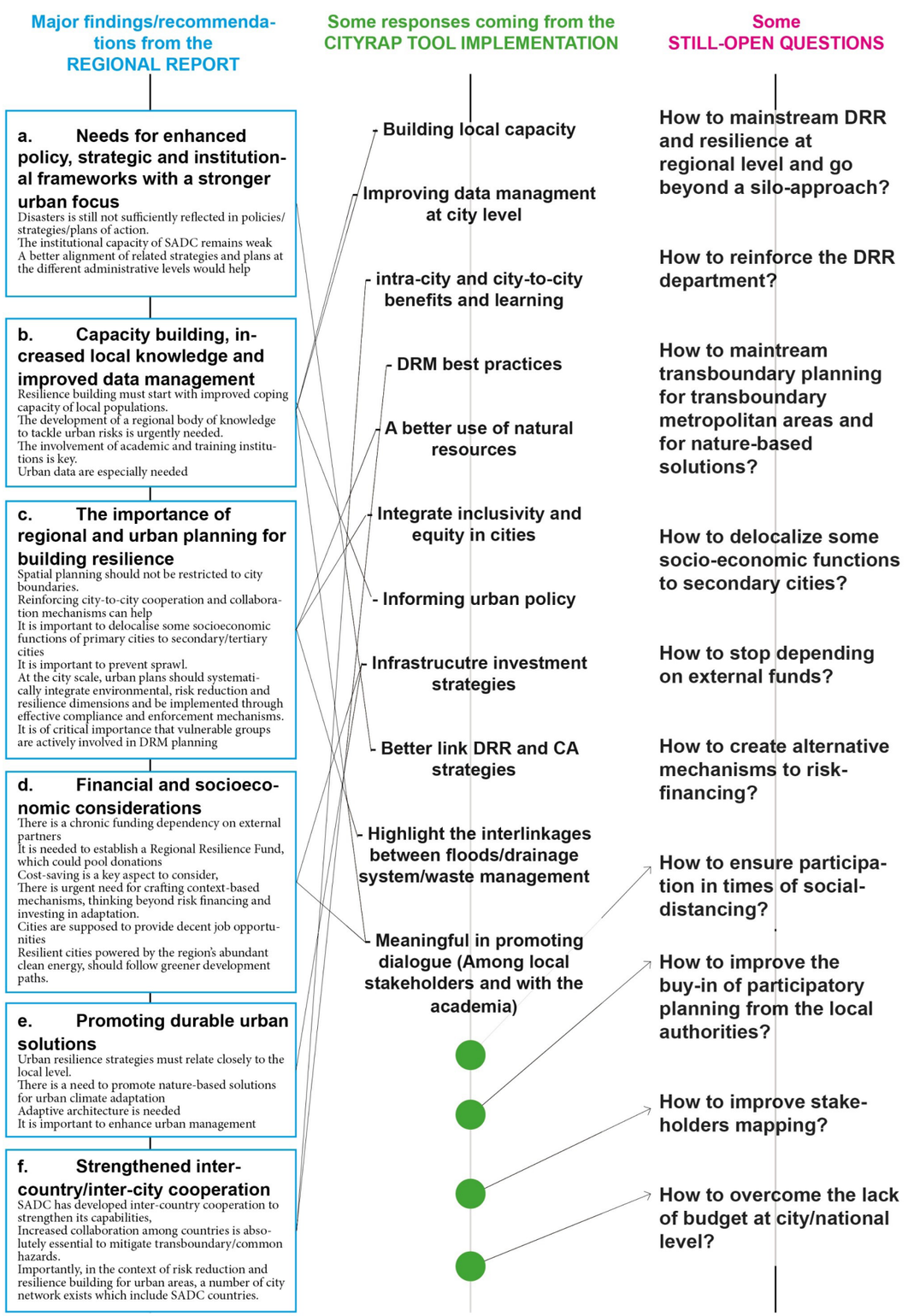

FIGURE 7: FINDINGS, RECOMMENDATIONS, POSSIBLE SOLUTIONS AND OPEN QUESTIONS EMERGING FROM THIS PAPER

However, this consulting assignment was also able to identify, in addition to the threats and weaknesses, some strengths and opportunities that would support the SADC region in moving towards incrementally better urban resilience and innovative paths towards sustainable development.

A key factor to look at is the optimal scale of intervention. Among the many challenges that cities face, it is important for them to focus on what they can handle, while the national and higher levels maximize their effort on what can only be addressed at the larger scale. For example, cities can play a major role in adaptation, but cannot run the marathon of mitigation, that can only be addressed at a larger scale. As already observed from the findings of both the Regional Assessment Report and the CityRAP tool implementation, cities can play a key role in mainstreaming knowledge, sharing best practices, crafting solutions that fit the context, improving the capacity of their officials, building dialogue with communities, and involving the most vulnerable groups at all stages. This is especially the case in secondary cities where there is more space for closer collaboration between city authorities and communities. Cities can also be creative in overcoming budget constraints, by setting up innovative mechanisms -for example, by offering free rides on public transport to households which are disposing their waste properly. Or Cities can start promoting urban farming.

On the other hand, there are issues that call for a regional approach. Among these, is the need to reinforce the SADC DRR Unit for the purpose of enabling it to influence policies, strategies, and processes across the SADC region. A better alignment of related strategies and plans, including on both DRR and CCA, at the different administrative levels (i.e. local; sub-national; national and regional) is also an urgent need that could more effectively be carried out at the regional level. Planning and DRR governance has to become transboundary to achieve resilience, because as many as the drivers of risk supersede national boundaries the less likely that these can effectively be addressed at city or country levels: the region here has an opportunity to play a crucial role. Risk financing and capacity building are also key aspects that could be considered and addressed at the regional level.

The findings from both the Regional Assessment Report and CityRAP clearly show that the need for the southern African region to urgently build its urban resilience capacity is immense. However, working in parallel at regional, national and local levels could help to move this agenda forward.

Another relevant factor is the immense potential that the SADC region has and the tremendous need to be creative in designing solutions. SADC countries as a region need to explore context specific solutions to tackling vulnerability, because this may be an effective way to optimise the regions resources and maximise results.

The region could, therefore, explore available opportunities in the areas of renewable resources for energy production, which could move the region towards a green economy and increased resilience. The social capital generated by urbanisation is already bringing new ways of thinking, for example in the field of risk financing. It is however evident that further efforts in investment are needed, together with stronger collaboration with academia, research centres, and the private sector. Solutions that are locally designed also benefit from a better endorsement and tend to be more sustainable.

A third factor, or input, can be the choice of multi-purpose actions. Thus, as it can be seen in figure 8, many aspects are inter-related: there are actions that are able to tackle multiple problems. Examples are nature-based solutions, as well as the implementation of participatory planning, or the adoption of urban planning to limit fragmentation.

In conclusion, a fourth factor relates to coordination. SADC countries need to deepen their strategic thinking and partnership building practices, as these issues broad and cannot be tackled solely by a single government institution, community, company, organization or individual.

Building urban resilience requires cooperation, coordination, sustained political will, sharing of knowledge, information and ideas as well as a concerted effort to jointly find innovative solutions to shared challenges. The answers to the region's needs are embedded in coordinated multi-country approaches that go beyond local, national and sectoral boundaries.