

URBAN RESILIENCE IN AFRICA

Perspectives from experts and city officials

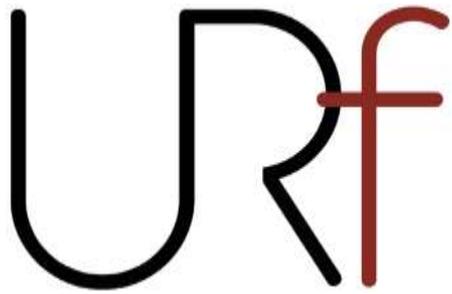
Thursday, November 19, 2015
African Union – Addis Ababa, Ethiopia



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Ibidun Adelekan
University of Ibadan,
Nigeria





*What is Resilience? Challenges,
Opportunities and Tools for African Cities*

PATRICIA HOLLY PURCELL

UN Habitat & Chair for Medellin Collaboration
on Urban Resilience



Purpose of Today's Presentation

- **Inform:** *What do we mean when we talk about resilience?*
- **Review:** *What's the current state of play in urban resilience?*
- **Discuss:** *How can UN-Habitat and the Medellín Collaboration on Urban Resilience support the ambitions of your city?*

First....

What is *UN-Habitat* doing in the area of urban resilience?

What is the *Medellín Collaboration on Urban Resilience*?

DRR: Relevance to UN-Habitat's Mission

UN-Habitat has an extensive global portfolio of projects and expertise in disaster risk reduction, recovery and resilience building.

UN-Habitat provides technical and policy support by building local capacities in assessing risks and building resilience at city and community levels, particularly through country, regional and global programmes, including:

- City Resilience Profiling Programme (CRPP): Works in 10 cities globally on a multi-stakeholder, multi-hazard, multi-sector urban systems based approach to measure, monitor, and continuously improve resilience to multiple shocks and stresses; and recently welcomed 5 more local governments to its Associate Cities Network.
- Cities and Climate Change Initiative (CCCI): Works with local authorities through a process of climate change vulnerability assessments, local adaptation plans, monitoring and documentation, and scaling up and mainstreaming climate considerations in urban planning.

Medellín Collaboration on Urban Resilience

UN HABITAT
FOR A BETTER URBAN FUTURE

THE
ROCKEFELLER
FOUNDATION

 **UNISDR**
The United Nations Office for Disaster Risk Reduction

100RESILIENTCITIES.ORG
100 RESILIENT CITIES
PIONEERED BY THE ROCKEFELLER FOUNDATION


WORLD BANK

C40
CITIES

ISDR

 **GFDRR**
Global Facility for Disaster Reduction and Recovery

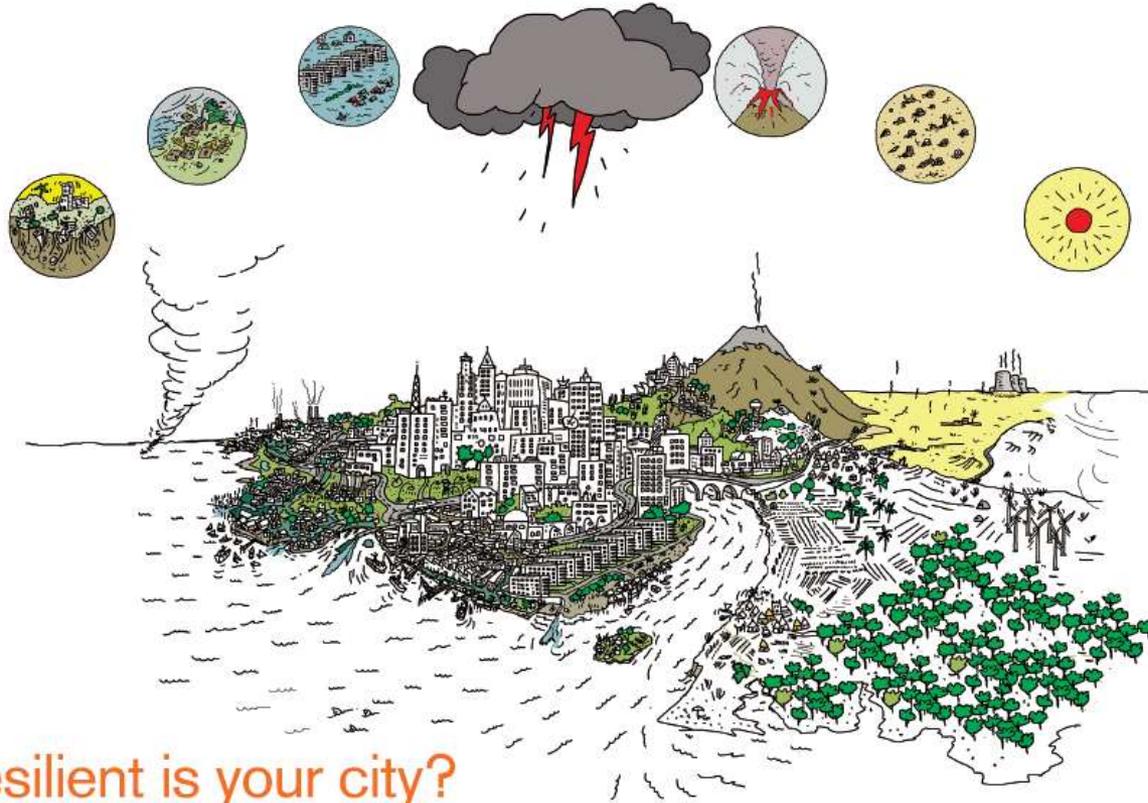
 **IDB**

ICLEI
Local
Governments
for Sustainability

Cities Alliance
Cities Without Slums

- **Launched at the World Urban Forum, April 2014**
- **Collectively, we work in over 2,000 cities globally**
- **Invest USD\$2 billion + annually in urban resilience**

Introducing Resilience



How resilient is your city?

UN HABITAT
FOR A BETTER URBAN FUTURE
www.unhabitat.org

I'M A CITY CHANGER
imacitychanger.org

UNISDR
The United Nations Office for Disaster Risk Reduction

UN HABITAT
FOR A BETTER URBAN FUTURE

What is 'Resilience'?

- **"A resilient city can adapt to a variety of changing conditions and withstand shocks while *still providing essential services to its residents.*"**
 - -World Bank

- **"Resilience is the ability to *withstand and recover quickly* from *any plausible shock and stress*, and *maintain continuity of services.*"**
 - -UN-Habitat

- **"Resilience is the *capacity of individuals, communities and systems* to *survive, adapt, and grow* in the face of stress and shocks, and even *transform* when conditions require it."**
 - -The Rockefeller Foundation

- **"The *ability of a system* to *respond* successfully to *climate variability and climate change.*"**
 - -Intergovernmental Panel on Climate Change (IPCC)

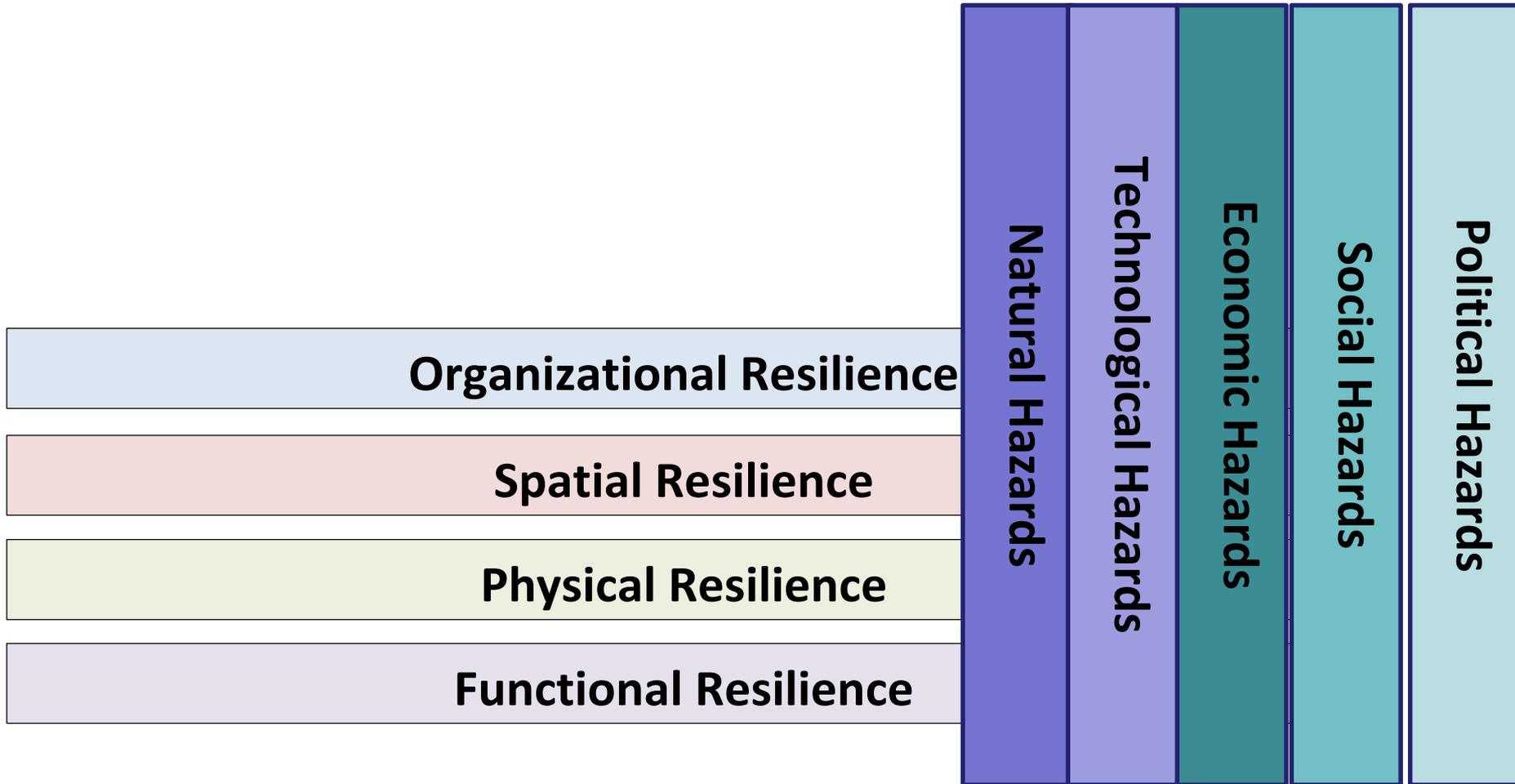
What is the Difference between DRR and Resilience?

DRR	Resilience
Often used in context of natural hazards	Covers natural and manmade threats
Mitigate or reduce existing threats	Avoid creation of 'new risk'
Avoided losses (human and physical)	Value creation – “ <i>Realizing the Resilience Dividend</i> ”

Resilience – used in this context– focuses on ***future integrated development planning targets*** to increase resilience and measure progress.

- ✓ Multi-hazard/multi-sector/multi-stakeholder
- ✓ Future planning/development based targets
 - ✓ Measurable and verifiable
- ✓ Incremental – ***doing what you can with what you have!***

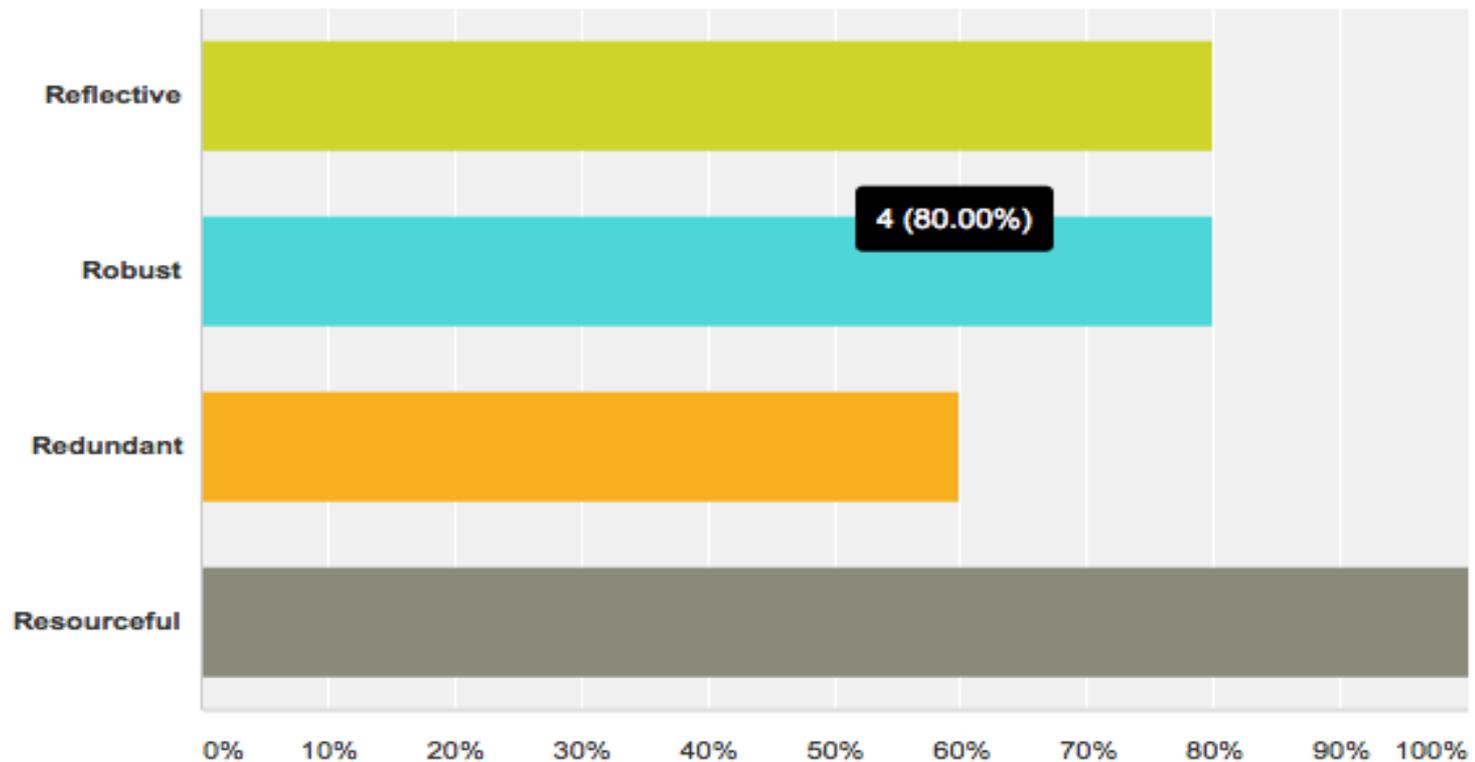
An Holistic 'Urban Systems' Approach



Characteristics of Resilience

What are the key characteristics/traits of a resilient city?

Answered: 5 Skipped: 3



Why Should City Leaders Care about Resilience?



How resilient is your city?

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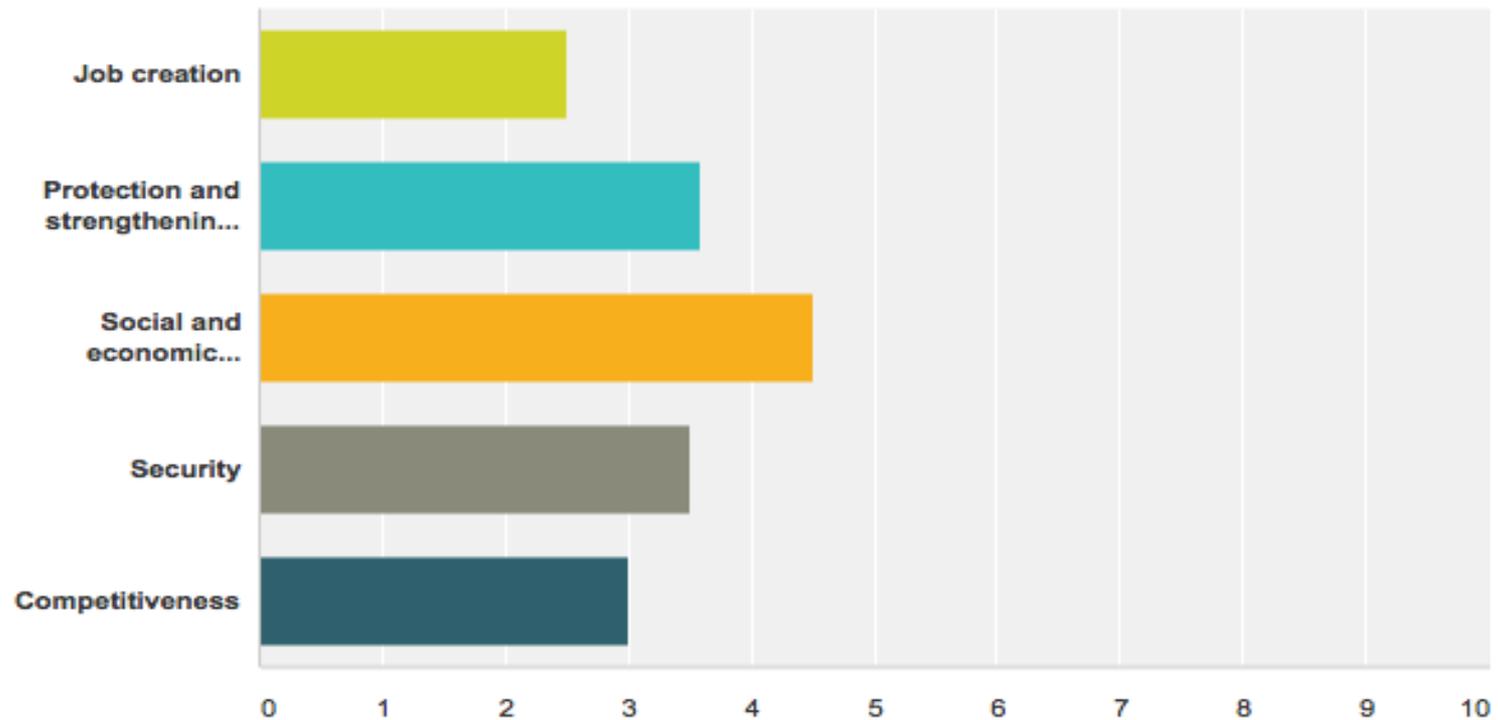


Show me the money - every month!

We call that...*The Resilience Dividend*

What are the 3-5 top 'resilience dividends' cities can expect from investing in urban resilience plans?

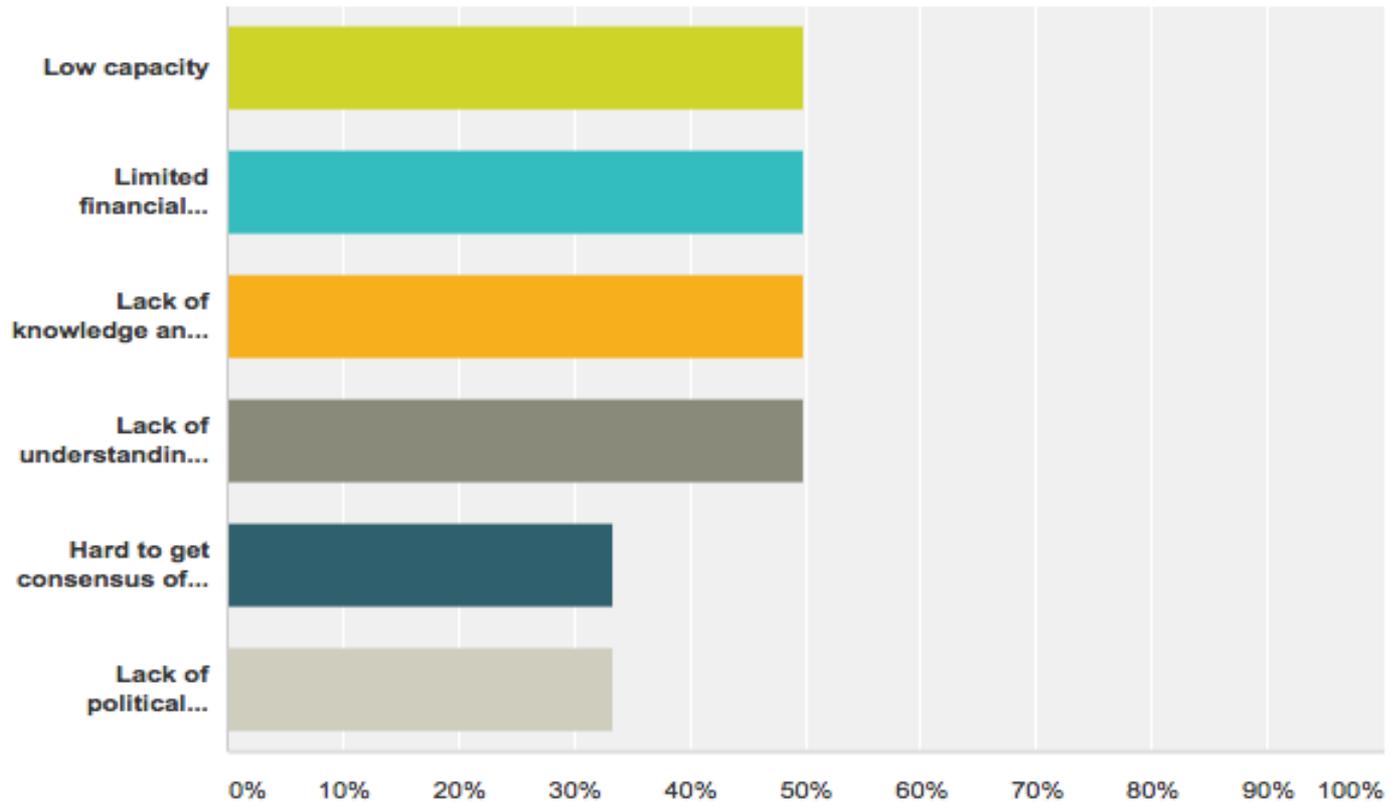
Answered: 6 Skipped: 2



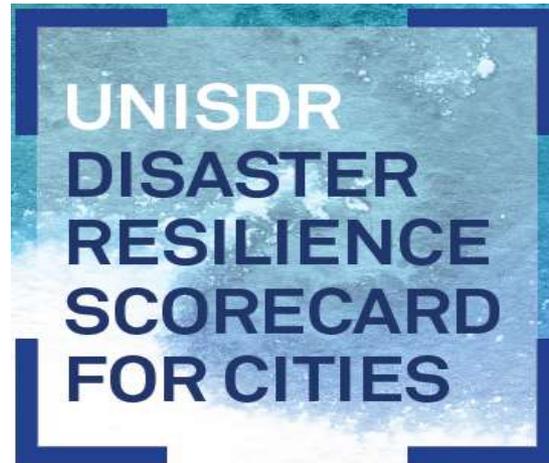
Chief Barriers to Resilience

What are the chief barriers to building resilience?

Answered: 6 Skipped: 2



Resilience Tools



Resilience Action Plans (RAPs)

Inform: Give local authorities a clear and COMPLETE view of their cities' risk landscape, including where the greatest threats, weaknesses and opportunities lie.

Formulate: Verifiable data provides the EVIDENCE base to formulate sound strategic and investment decisions;

- Prioritize immediate, medium and long-term needs;
- Ensure the sustainability of investments;
- Do more with what you have*

Transform: Implement strategies that will have the GREATEST IMPACTS and benefits to citizens

Leverage: RAPs deliver concrete value to OPEN OPPORTUNITIES; foster confidence among citizens, business, and investors

MCUR at COP21

High-Level Event on Jump-Starting Urban Resilience Action & Investment

2 Dec. (Resilience Day)

Keynote: Mayor of Paris

Hosted by Dutch Government

Speakers:

Mayor Kuma of Addis Ababa, World Bank, Rockefeller Foundation, World Economic Forum, World Resources Institute, Organization for Economic Cooperation and Development, UNISDR

Launch of Cities Alliance/MCUR Resilient Cities Programme

8 Dec. (Cities Day)

- **USD\$900k**
- **Through 2017**

The Road After Paris

- **2030 Sustainable Development Agenda**

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- ***The Sendai Framework for Disaster Risk Reduction***

- ***World Humanitarian Summit (Istanbul, May 2016)***

- ***Habitat III (Quito October 2016).***

Local governments must be at the centre!

Thank you.
patricia.holly@unhabitat.org

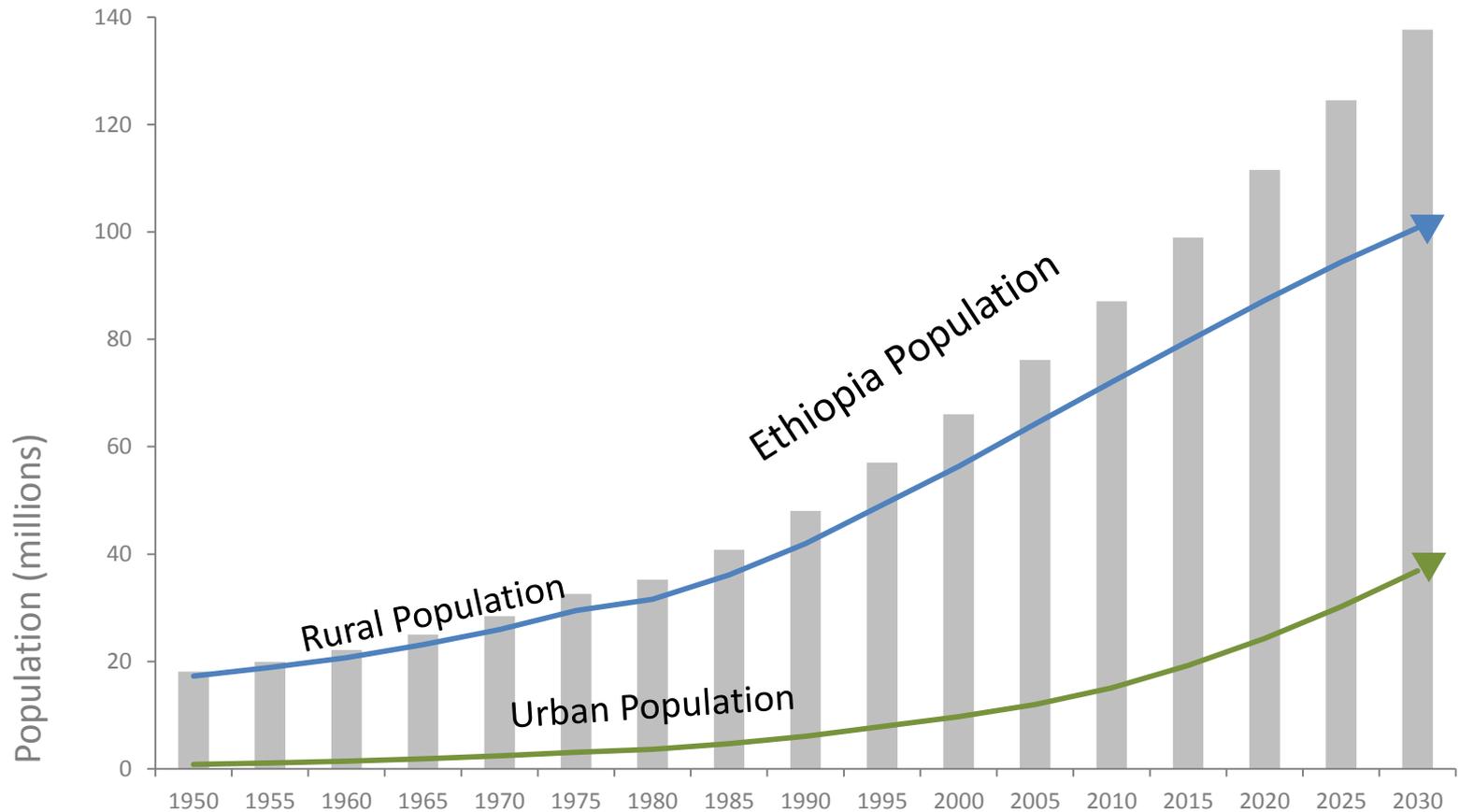


City
STRENGTH
RESILIENT CITIES PROGRAM
in Addis Ababa

Ato DERIBA KUMA
Mayor of Addis Ababa,
Ethiopia



Urbanization is increasing in Ethiopia – with potential to promote economic growth, create jobs, and connect Ethiopians to prosperity



Source: UN Department of Social and Economic Affairs

The need for resilience in Addis Ababa

- **Addis is the largest city in Ethiopia and one of the fastest growing in Africa.**
- **Addis plays an important role in delivering the benefits of urbanization for the whole country.**
- **Addis faces diverse shocks and stresses that could inhibit its ability to achieve its goals:**
 - be a safe and liveable city
 - ensure the national goal of becoming a middle-income country
 - become Africa's diplomatic capital and a world class city



Quick Facts about Addis Ababa

QUICK FACTS



Population
2013
3.6 million⁷



Population
2037
9.8 million⁷



Land Underused
or Vacant
46%⁸



Total Housing
Stock Comprised
of Low Quality
Housing:
70-80%¹⁶

LOCAL ECONOMY



Poverty Rate
22%⁹



Unemployment Rate
23.5%¹⁰



Employment in the
Informal Sector
30%¹¹



GDP Growth
14%¹²



Increase in Mean
Annual Rainfall
by 2050
35-50%¹³



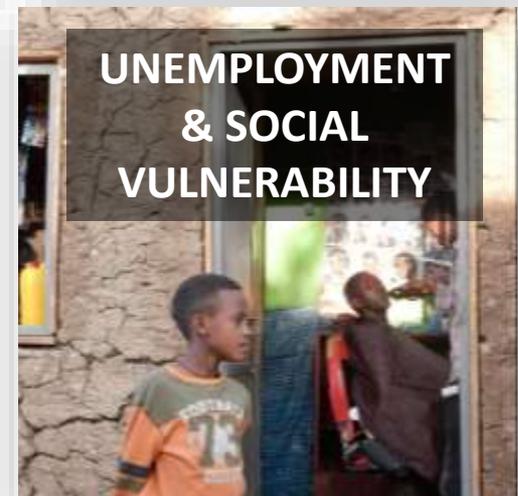
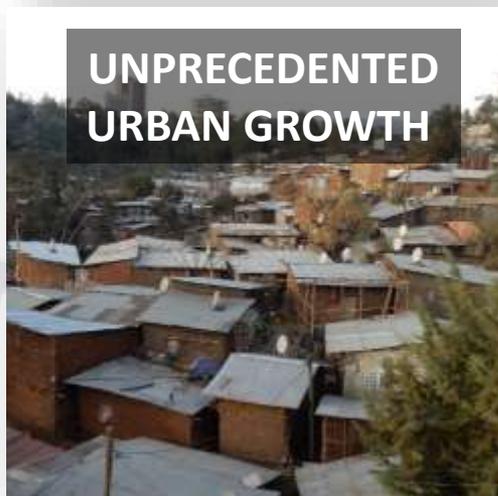
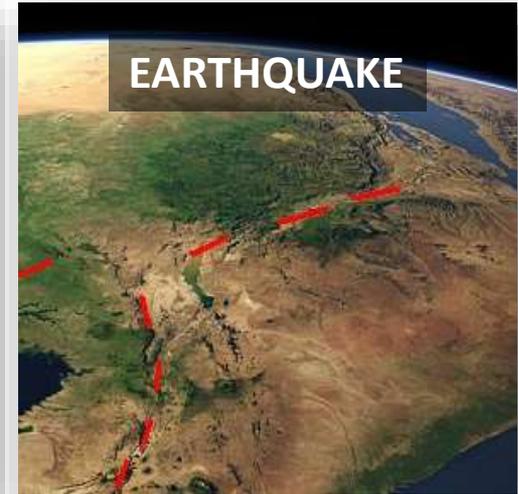
Increase in Mean
Annual Temperatures
by 2050
1.5 °C¹⁴

Sources: Please refer to the Addis Ababa CityStrength Publication



Photo credit: Dereje/Shutterstock

Key Shocks and Stresses in Addis



A decorative geometric pattern on the left side of the slide, consisting of a series of interconnected lines forming a series of triangles and quadrilaterals, with small grey circles at the vertices.

Sudden shocks or accumulating stresses could lead to infrastructure failure, economic decline, or social breakdown

A decorative geometric pattern on the left side of the slide, consisting of a series of interconnected lines forming a series of triangles and quadrilaterals, resembling a mesh or a stylized architectural structure.

A resilient city can adapt to a variety of changing conditions and withstand shocks while still providing essential services to its residents

The CityStrength Diagnostic:

- An engagement process, not a study
- Facilitates a dialogue with city stakeholders about:
 - RISKS (the shocks and stresses that Addis faces)
 - RESILIENCE (the ability to respond, adapt, bounce back)
 - URBAN SYSTEMS (infrastructure and services within Addis)
- Objective is to identify priority actions and investments to enhance the city's overall resilience



Because cities depend on a complex network of infrastructure, institutions, and information – the resilience of each informs the resilience of the city as a whole

CityStrength Sectoral Modules in Addis



DRM & Climate Change Adaptation



Energy



Water & Sanitation



Urban Development



**Community & Social
Protection**



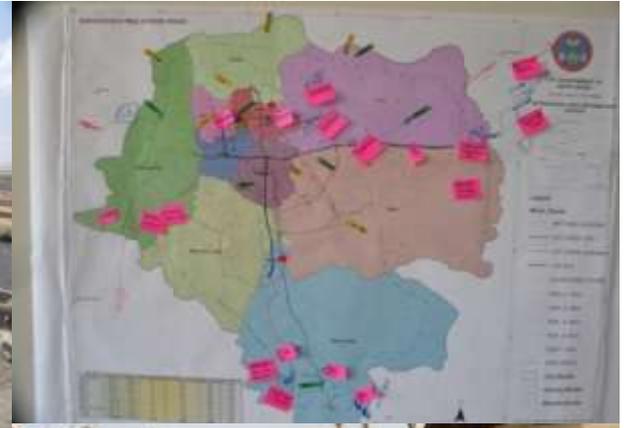
Transportation

CityStrength Process in Addis

- 1) Review of existing studies, plans and reports relevant to the city as a whole and the identified focus sectors
- 2) Launch workshop with key urban stakeholders and World Bank specialists to talk about urban resilience, validate the findings of the review process, and discuss key shocks and stresses for the city.
- 3) Interviews with key urban stakeholders focusing on the key identified sectors, and site visits
- 4) Based on the initial review, the workshop outcomes, the interviews and field visits, the CityStrength Team identified priority actions and investments to enhance the overall resilience of the city of Addis Ababa
- 5) Refined the recommendations based on discussions with the City Leadership



Pictures from the Engagement Process



Findings:

Enhancing resilience in Addis requires actions and investments oriented toward implementing existing plans and regulations, establishing clear and capacitated leadership on risk management topics, and investing in infrastructure that meets existing and future needs.

Recommended Actions:

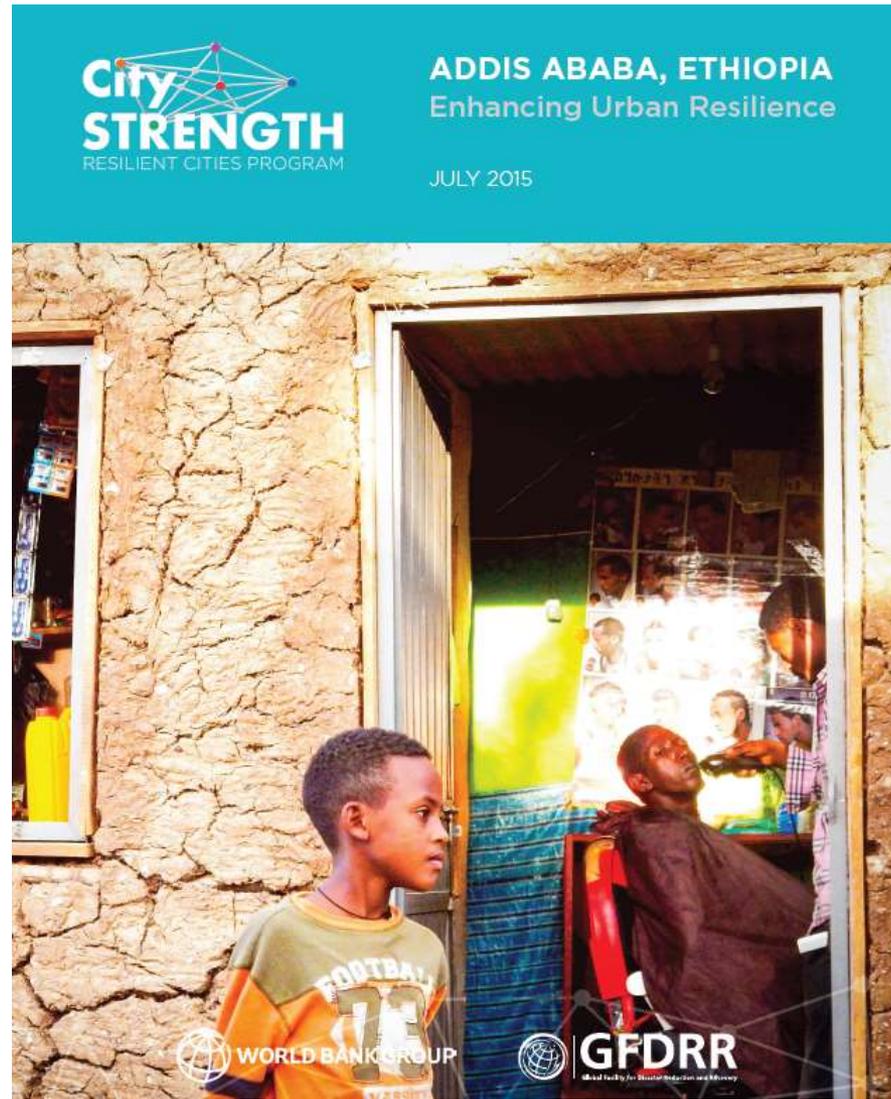
- Effective implementation of the new Master Plan and related regulations
- Establishment of a risk management unit under the Mayor
- Strengthen transport agencies (including their role in stormwater management)
- Strengthen citizen engagement in disaster risk management

Findings:

These actions need to be coupled with the following priority investments:

- Addressing water scarcity by focusing on improved efficiency and protection of the existing supply system and exploration of additional water sources;
- Piloting urban densification using a transit oriented development and integrated municipal management approach;
- Better managing river catchments and related network of secondary drainage, stabilizing eroding river banks and preventing encroachment in flood-prone areas.
- Upgrading drainage on the ring road, expanding stormwater drainage systems in low-lying areas of the city, and installing water retention ponds;
- Upgrading and expanding existing electricity substations; and
- Introducing an effectively targeted productive safety net to support vulnerable groups and households impacted by shocks

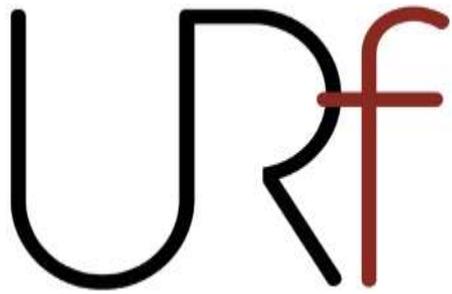
CityStrength: Addis Ababa Summary Publication





Thank you





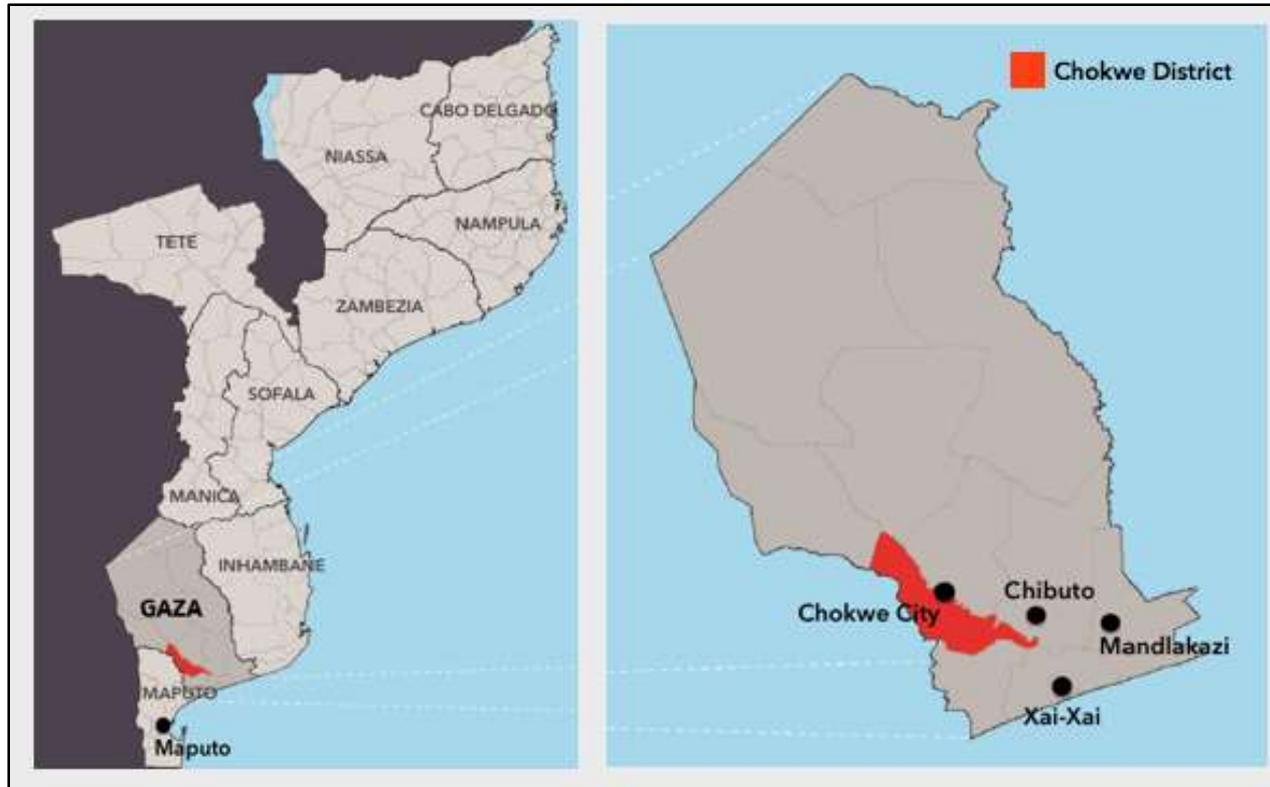
*Developing a City Resilience Action Plan
in Chókwè, Mozambique*

LÍDIA FREDERICO COSSA CAMELA

Mayor of Chókwè, Mozambique



Chokwe City Profile



- Located in the Province of Gaza, Southern part of Mozambique, about 210km from Capital City, Maputo
- 55256 inhabitants (Census2007)

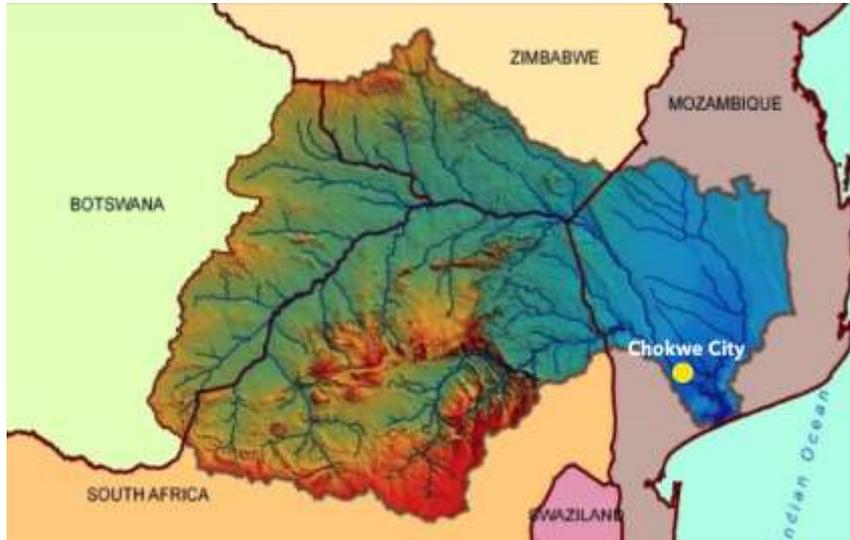
- Economic capital of the Gaza Province
- High Urbanization followed by a very low Urban Growth

Risk Profile

Located in the Limpopo river basin

Vulnerable to Floods and cyclones

Biggest Floods events in the 21st century: 2000; 2010 & 2013



Building Resilience in Chokwe: Experiences and Good Practices



Disaster Risk Reduction and Emergency Preparedness

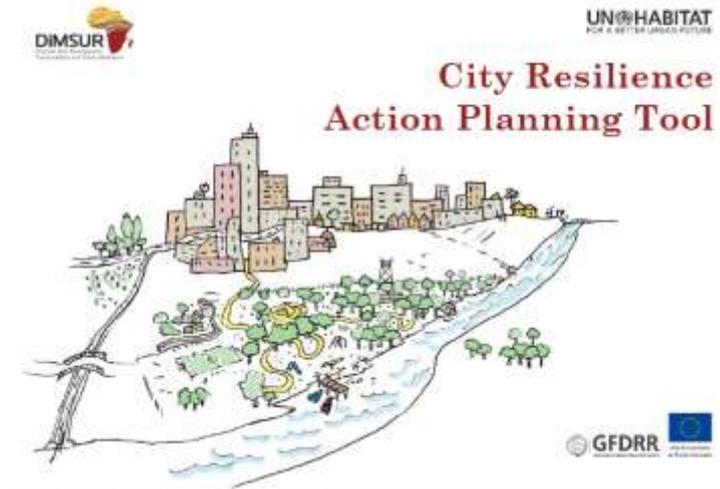


Emergency Response

Providing support to the communities in order to reduce their vulnerability and strengthen their capacity and mechanisms to cope with disasters and Increasing knowledge and skills in disaster management.

Building Resilience in Chokwe: Experiences and Good Practices

Tool that enables an integrated approach in medium and small municipalities that empowers local authorities, increases public awareness and enhances participation of urban residents, including the poor, in decision-making.



Phase 1

CRASH COURSE

Crash Course

Diffusion of the movie 'The Change'



City Vision Activity



Focal Point Training



Phase 2

CITY ASSIGNMENT

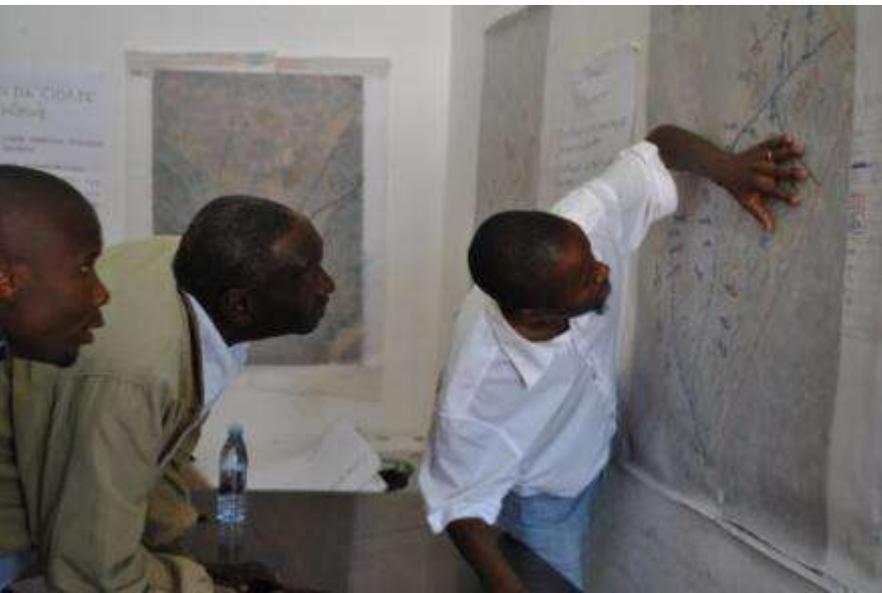
City Assignment

Self-Assessment Matrix



Community Risk Mapping Exercises

Prioritization Workshop



Phase 3

FINALIZATION AND
VALIDATION OF THE CITY
ACTION PLAN

Elaboration and adoption of the City RAP

Working sessions on City RAP



Meeting with the Mayor



Validation Workshop: Adoption of the City RAP

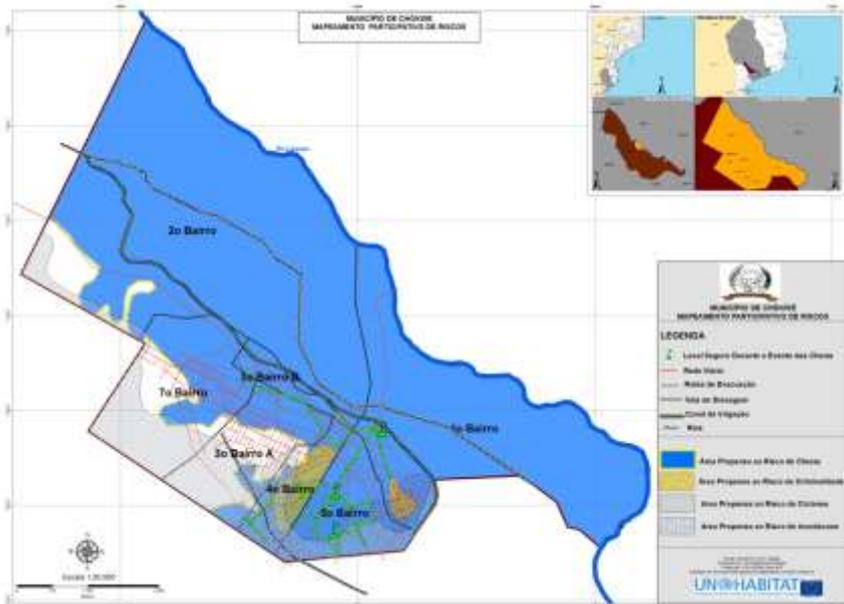


Building Resilience in Chokwe: Experiences and Good Practices

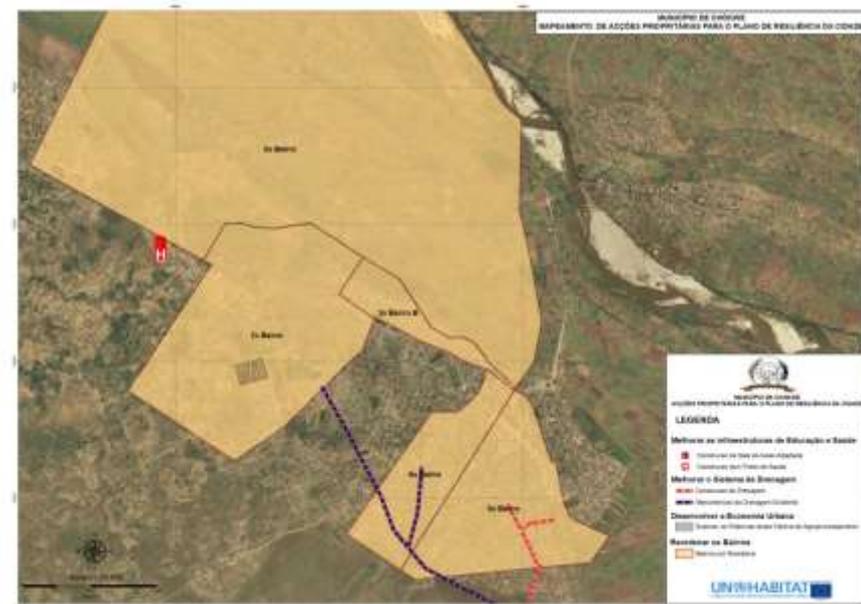
City Resilience Action Plan

Implementation framework that underlines the importance of considering disaster risk reduction, resilience and climate risks in urban management and planning .

Chokwe City Risk Map



Chokwe City Priority Actions Map



Main Output: Chokwe City RAP

Priority Actions

1. Planning Neighbourhoods

2. Improving Drainage System

3. Improving Solid Waste Management

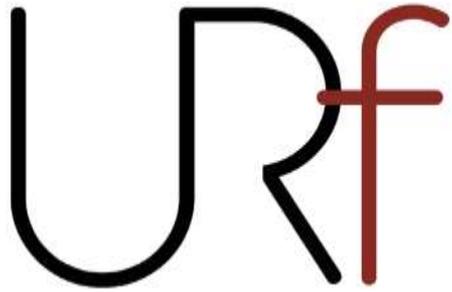
4. Strengthening Public Lighting

5. Developing Urban Economy

6. Improving Education and Health Infrastructures

Building Resilience in Chokwe: Lessons Learnt

- *Promote resilience planning processes that are **led by the municipality**.*
- *Emphasize the need of **all municipal departments to be included** in the process of planning and acting for resilience.*
- *Ensure that Cities conduct and enforce **participatory planning**. Participation is an effective way to learn and include the most vulnerable.*
- ***Build the human and technical capacities** to develop, deliver and enforce Resilience Action Plans at City and sectorial levels.*
- ***Promote risk and climate change impact assessment** at local level in Sub-Saharan Africa.*



*Towards Solutions for Urban Flooding in
Teresina, Brazil*

FIRMINO FILHO

Mayor of Teresina,
Brazil





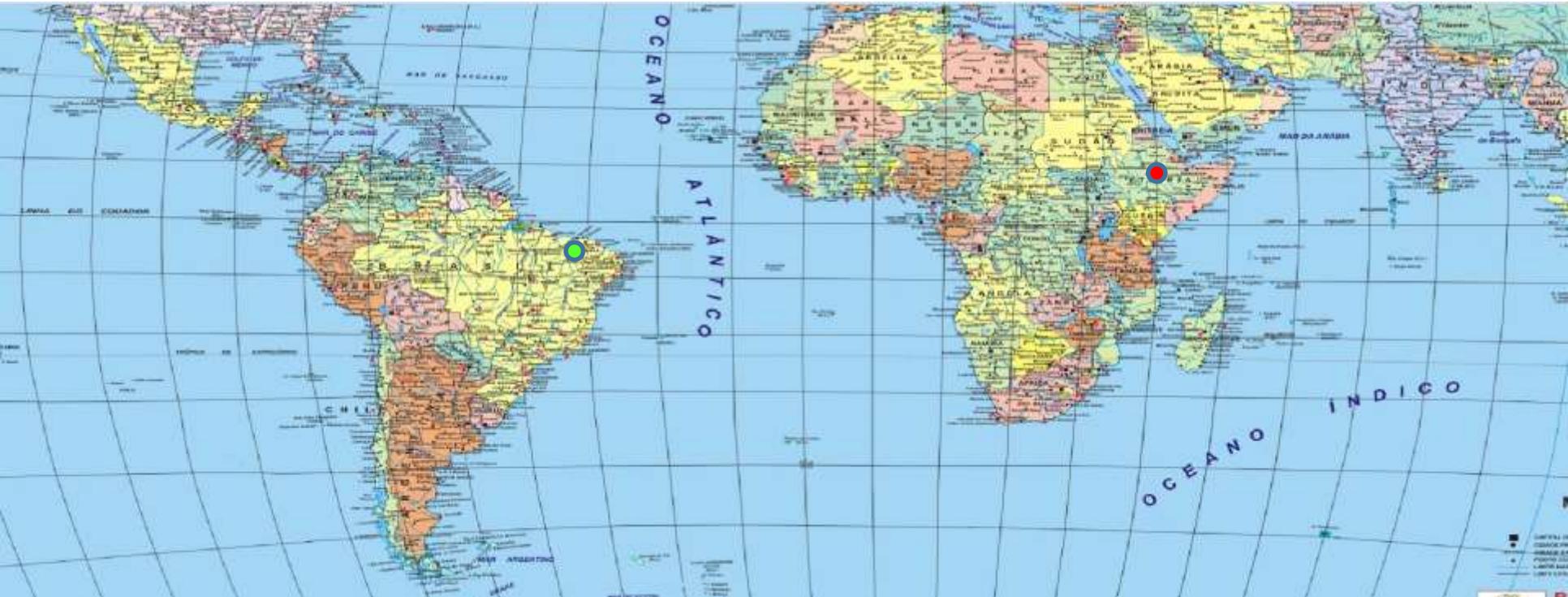
Teresina Enhancing Municipal Governance and Quality of Life Project



DO NORTE



GEOGRAPHIC LOCATION



LEGEND:

- Teresina – Brazil
- Adis Abeba – Ethiopia



TERESINA | Geographic Location



TERESINA | General information

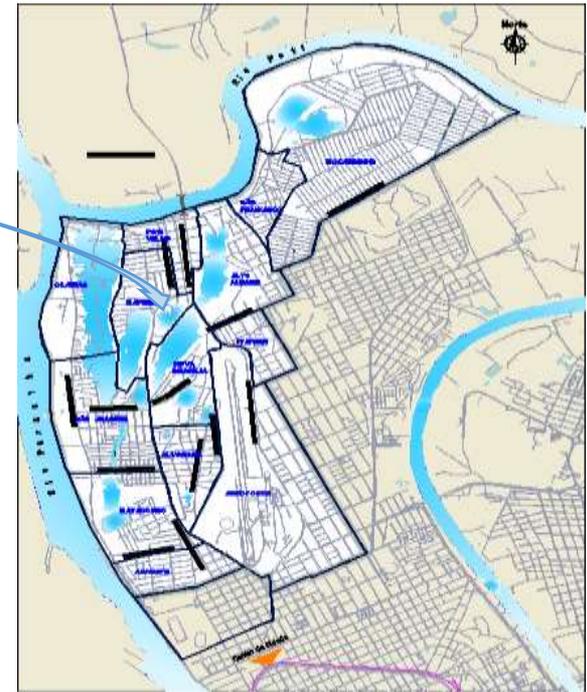
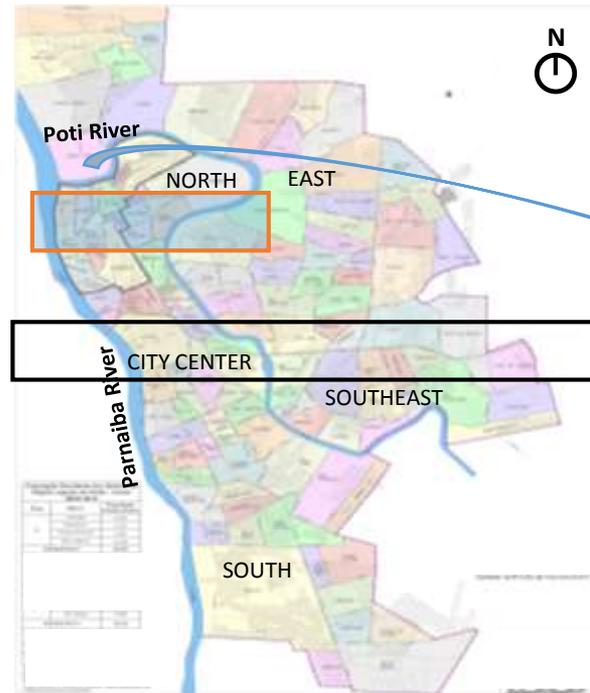
- Population: 844,200 inhabitants
- Area: 1,392 Km²
- Teresina Metropolitan Region: 1.2 million inhabitants
- GDP: R\$12.3 billion (47,8% of State of Piauí - PI)
- GDP per capita: R\$14,823.31
- HDI: 0.751 (21st among the 27 Brazilian state capitals)
- Child Mortality: 16.1 (PI: 23.1 and BR: 16.7)
- Water Supply network coverage: 86.97% of households
- Sewerage network coverage: 18.99% of households
- Housing: 42.6% of households classified as semi-adequate or inadequate

Source: IBGE, Teresina City Hall



Lagoas do Norte | Area of Intervention

- North-Central Region
Region of the City
- 13 districts
- Area: 13.2 Km²
- Around 100 thousand
inhabitants



Lagoas do Norte | Area Characteristics



- Located at the confluence of the Parnaíba and Poti rivers, naturally subject to flooding;
- Decades of unplanned urban occupation, contributing to frequent flooding;
- Protective dikes built along the right bank of Parnaiba river (early-1970s) and Poti river left bank (late-1980s);
- Existence of lakes that can overflow and cause flooding, mostly as a result of occupation of areas of risk;
- Population average income is lower than 3 minimum wages.



Lagoas do Norte | Needs for intervention

- Flooding risk, as unplanned urban development has blocked natural drainage paths;
- Precarious housing conditions;
- Indiscriminate disposal of domestic sewage and garbage in waterways;
- Few income opportunities;
- Little access to leisure, cultural and sporting events.



Flood of 1995 in Lagoas do Norte

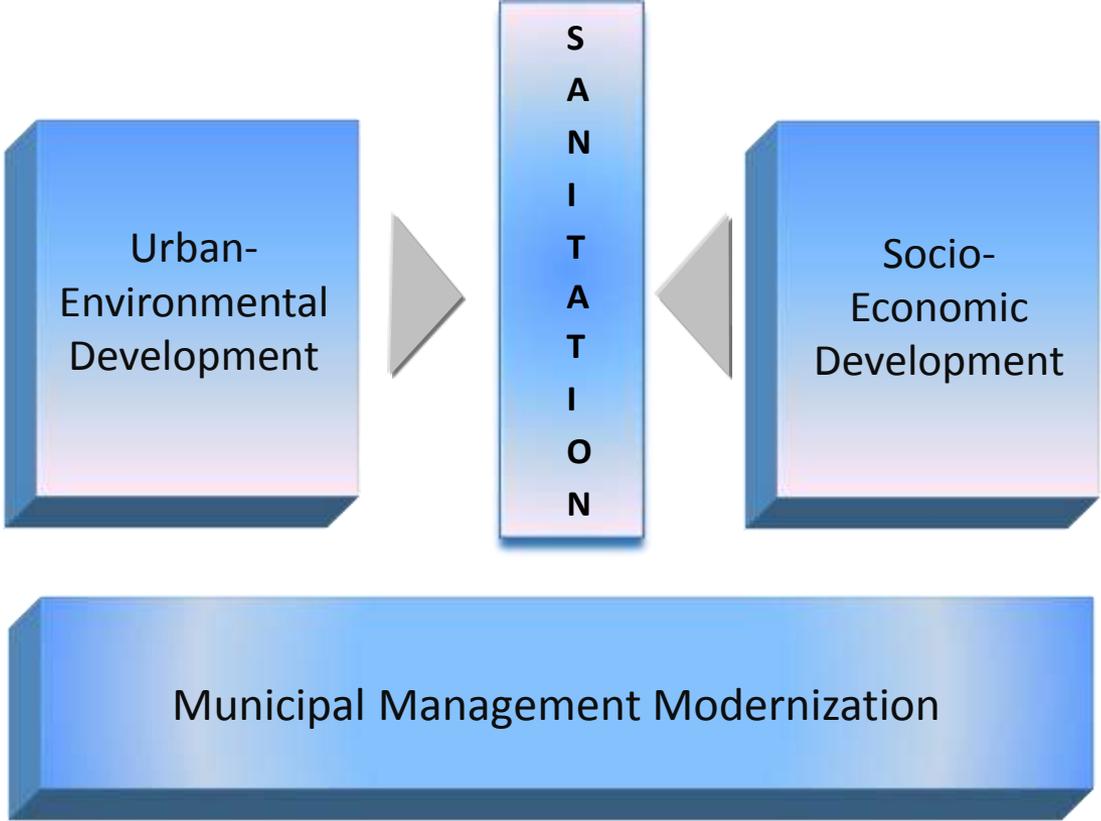


Lagoas do Norte Program | General Objectives

- Improve living conditions and promote socioeconomic and environmental development in the lake areas in the north of the city of Teresina, Piauí State;
- Improve the management capacity of the Municipality in the financial, urban, environmental, basic services provision and development areas.



Lagoas do Norte Program | Components



Lagoas do Norte Program | Intervention strategy



Area 4 – Mocambinho and São Francisco

Area 3 – Itaperú, Alto Alegre and Aeroporto

Area 2 – São Joaquim, Olarias, Mafrense, Poti Velho and Nova Brasília

Area 1 – Acarape, Matadouro, Parque Alvorada and São Joaquim

City Center



Lagoas do Norte Program | Previous situation



Frequent flooding



Absence of infrastructure



Lagoas do Norte Program | Previous situation



Unplanned occupation



Pollution





**PROGRAMA
LAGOAS
DO NORTE**

Integrated Multisectorial Project Phase 1

Após 20 milhões no Programa Lagoas do Norte, o MIB investe mais de 100 milhões de reais em uma área de 40 milhões de reais e uma área três vezes maior do que a fase 1, quando foram aplicados 100 milhões. É o maior investimento já feito na



Banco Mundial



Prefeitura de Teresina

DO NORTE

Lagoas do Norte Program | Actions

- Urban infrastructure improvement: access roads, parks, cultural and leisure areas, schools, health centers and community gardens
- Community participation during implementation
- Environmental awareness
- Withdraw of families from risk areas to new housing



Lagoas do Norte Program | Results

- Sanitation: access to about 25,000 people
- Urban roads: improvement/deployment of 8 km
- Flooding risk: protection to about 20,000 people
- Resettlement of 500 of families living in areas of risk
- Park Construction: offering leisure space, improvement of urban drainage and source of income for the local population
- Housing improvements to about 200 families in extreme poverty
- Education and culture: reform of the Teatro do Boi- to offer courses and training workshops in Arts for the community - and local schools



Lagoas do Norte Program | Results

Drainage and Urbanization



BEFORE



AFTER



Lagoas do Norte Program | Results

Drainage and Urbanization



BEFORE



AFTER



Lagoas do Norte Program | Results

Drainage and Urbanization



SÃO JOAQUIM CHANNEL



BEFORE



AFTER



Lagoas do Norte Program | Results

Urbanization, Mobility and Environmental Preservation

SÃO FÉLIX STREET



BEFORE



DURING



AFTER



Lagoas do Norte Program | Results

Housing



BEFORE

AFTER



Lagoas do Norte Program | Results

Housing improvement



BEFORE



AFTER

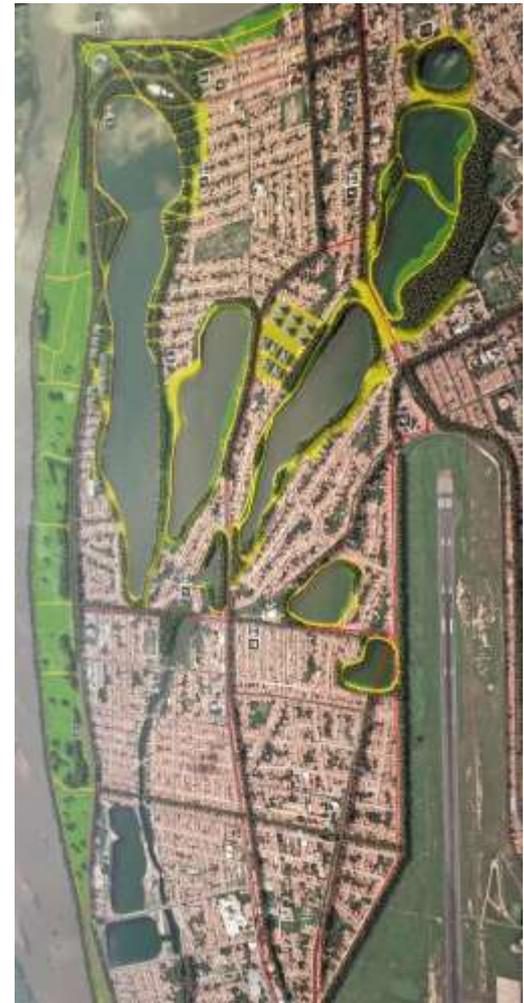


Lagoas do Norte Program | Actions

- Continuing the interventions begun in Phase 1
- Additional focus on:
 - Land value appreciation and tourism potential for the rehabilitated natural environment – particularly where the two rivers meet and around the lakes
 - Local economic development – to provide more income opportunities for local people
 - Reducing crime and preventing violence



AREA LIMITATION



Lagoas do Norte Program | Actions

- Sanitation
- Flood protection
- Urban requalification
- Urban mobility: improvement/widening of roads
- Resettlement of families in areas of risk
- Housing improvements: assistance to families in need
- Improvement in access to public services and economic opportunities



Urbanization Plan for the Area where the two Rivers meet



Lagoas do Norte Program | Expected Results

- Sanitation access to 54,000 people
- 100,000 people protected from floods
- Expansion of park (additional 5 m² of leisure space/habitant)
- Urban mobility: improvement/widening of roads
- Resettlement of families in areas of risk (about 1,980 families)
- Housing improvements (about 700 families)
- Improvement in access to public services and economic opportunities (tourism, businesses, etc.)





THANK YOU!

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DO NORTE

PANEL: RETHINKING URBAN RESILIENCE IN AFRICA



Perspectives from experts and city officials

moderated by: **IBIDUN ADELEKAN**
University of Ibadan, Nigeria

PATRICIA HOLLY PURCELL

UN Habitat & Chair for Medellin
Collaboration on Urban Resilience

DERIBA KUMA

Mayor of Addis Ababa,
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LÍDIA FREDERICO COSSA CAMELA

Mayor of Chókwè,
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FIRMINO FILHO

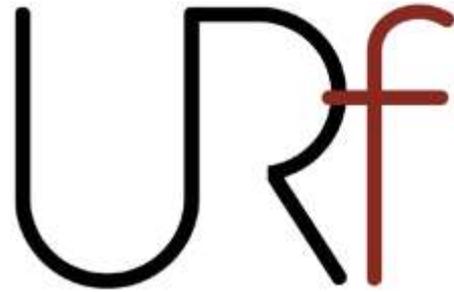
Mayor of Teresina,
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RETHINKING URBAN RESILIENCE IN AFRICA

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