



Smart Urban Resilience in Sub-Saharan Africa

UNDP/UN-Habitat Joint Regional Programme (JRP)

Concept Note

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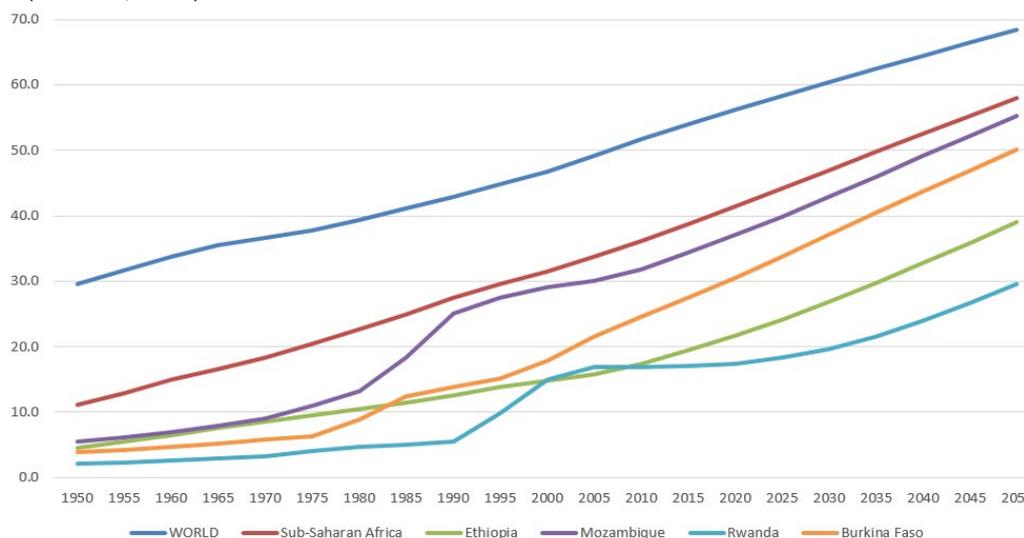
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1. Introduction, Context and Justification

1.1. Urbanisation Trends in Sub-Saharan Africa

Sub-Saharan Africa (SSA) is the world's fastest urbanising region. The share of the urban population in SSA is projected to increase to 60 percent by 2050 from the current share of 40 percent (see Fig. 1). Urban growth in SSA is characterised by high urban sprawl, in-migration of the poor and the proliferation of slums and informal settlements in large urban centres.

Figure 1: Proportion of the urban population between 1950 and 2050 globally, in SSA and selected African countries (UNDESA, 2018)



Higher population increases are observed in urbanised areas outside the largest cities in SSA as a combination of natural growth, rural-to-urban migration, and the reclassification of rural areas to urban areas. SSA is experiencing an annual urban population growth rate of 4.1 percent, compared with a global rate of 2.0 percent and in the next 30 years, urban dwellers will outweigh rural residents.

Urbanisation in SSA results in the increasing geographical concentration of opportunities alongside growth in population and economic activities and risks due to rising pressures on limited development assets and critical infrastructure. Consequent development deficits, environmental degradation and accompanying vulnerabilities worsen systemic risks, which are becoming higher in frequency and magnitude contributing to rising economic and human losses and impacts. Focusing on urban areas in SSA is crucial for the global pursuit of sustainable development, and for securing human development gains made in the region over the recent decades.

1.2. Urbanisation and Risk: Gaps and Opportunities

Urban centers are confronted with a wide range of natural, human-made and hybrid¹ hazards that contribute to both intensive and extensive risks that result in large scale disasters and disruptions. Urban areas are witnessing an increasing incidence of systemic risks (see Kaufmann and Scott, 2003; Klinkle and Renn, 2006) that can originate within or outside the city, impacting urban systems with cascading effects beyond city administrative boundaries. For example, deforestation outside cities results in flash floods and damage to physical infrastructure and services.

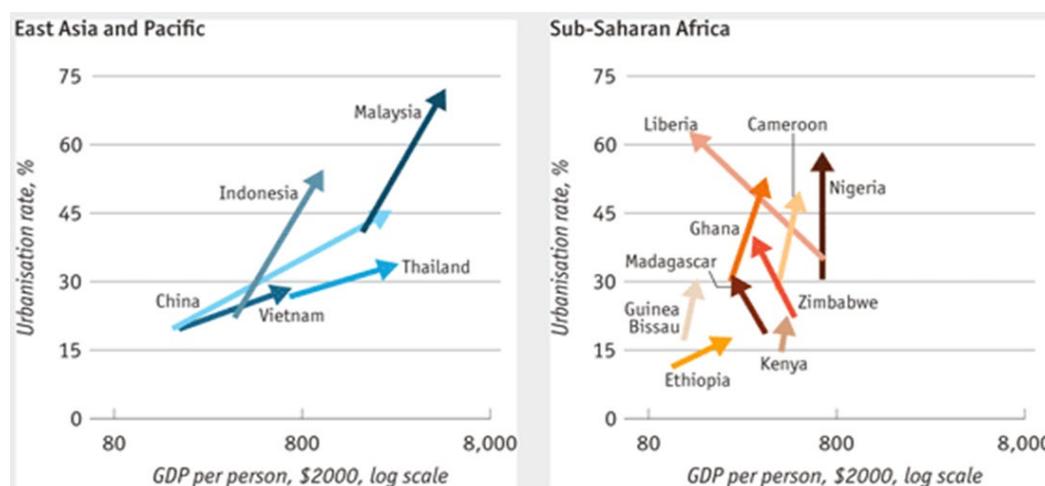
¹ Hybrid Risks, defined as risks where human behavior interacts with natural systems to create new risks, such as anthropogenic climate change, pandemics, droughts, floods and pollution.

These risks are often exacerbated through rapid, uneven, and inequitable urban development processes, absence of economic opportunities, basic protective soft and hard infrastructure and the quality and capacity of local governance (Dodman et al., 2012). Population concentration, scarce and high land prices in urban areas push poorer population segments to environmentally fragile floodplains, steep slopes, or hazardous contaminated land (Satterthwaite et al., 2020). Higher densities also result in overbuilt land with little green spaces contributing to the urban heat island effect (Aram et al., 2019). Inadequate water, sanitation and other basic services in informal settlements further exacerbate risk, particularly health risks (Satterthwaite, 2016). In city centres, inappropriately planned modern infrastructure can destroy cultural heritage, and degrade, pollute and overexploit natural ecosystems. Unplanned development can negatively impact traditional community institutions and relationships that shape social cohesion and increase people’s capacity to cope with shocks and stresses (Aldrich and Smith, 2012; Concern Worldwide and USAID, 2014).

Inequalities have widened in the wake of the Covid-19 pandemic, as lack of access to healthcare, livelihood opportunities, effective safety nets, and basic services create greater risks for the poor and vulnerable, particularly outside the ‘formal’ city. Covid-19 continues to have profound economic implications and is eroding years of progress on poverty reduction, winding back progress by 4 to 10 years in cities (Alkire et al., 2021) and increasing socio-economic inequalities. It has highlighted the need for inclusive growth and holistic policies that tackle socio-economic vulnerability, environmental sustainability, ineffective safety nets, social tensions and actions that leave ‘no one behind’.

Urban governments are unable to grapple with systemic risks, with the increasing complexity and interactions between natural, human, political and financial systems, due to their limited jurisdictional remit and resources. Integrated territorial development plans can create urban/peri-urban linkages to meet the diverse needs of residential and business communities (Buhigas San José et al., 2017). Within the SSA region, many urban areas are ill-equipped to mitigate the impending risks associated with urbanisation. Local capacity for managing and planning urbanisation as an avenue for sustainable economic growth is limited. While historical urbanisation rates and development (per capita GDP) have been positively correlated globally, this relationship has moved in the other direction in many SSA countries, and nations are not yet leveraging urbanisation optimally to deliver development outcomes (see Fig. 2). Urgent attention is needed to harness the twin dividends of urbanisation and demographic (i.e. youth population) growth, given multi-dimensional risks, using urban resilience as a key strategy for sustainable and inclusive development.

Figure 2: Change of the relation between urbanisation and income from 1985 to 2010 in East Asia and Pacific and SSA (World Bank, 2010)



In this context, building the capacities of cities and local governments to deliver better-targeted services and linking them to the national fiscal and regulatory system is needed. A high percentage of

the working-age population, mostly engaged in the informal economy, contributes poorly to tax collection and other necessary local resources required for reinvestment. Assisting cities to develop their local resources is a significant opportunity for better planned and more resilient urbanization.

The pandemic is forcing a rethink of the very nature and fabric of our urban environments and cities. The diversity of people in cities, alongside the concentration of capital, ideas and innovation, can be galvanised to plan for greater resilience to shocks and stresses. Developing smart urban resilience will require a systemic understanding of urban challenges considering present and future risks and potential negative impacts of business as usual, particularly where risks are likely to accumulate and get amplified by climate change.

1.3. Strategic Focus on Urban Settlements at the Frontier of Risk and Change

Small and medium-sized cities in SSA have limited capacities and resources to provide critical infrastructure and services. Hence, they are more likely to face development challenges and complex risks than larger metropolitan areas, even within the same country or sub-region. Furthermore, smaller cities in SSA are caught in an underdevelopment trap due to their inability to attract investment capital while also struggling to get their priorities adequately reflected under the national budgetary allocations. However, given the interdependencies between the large and small and/or medium-sized cities, including interconnected socio-economic and development dynamics between the urban, peri-urban and rural areas, targeting smaller and intermediary cities can contribute significantly towards regional resilience. In addition, low-income and low-skilled urban residents may be disproportionately represented in smaller cities, provincial towns, and peri-urban areas. These issues particularly converge in smaller cities that are experiencing great societal and economic transformation in the context of conflict and fragility.

Small and medium-sized cities in SSA urgently need support given their high numbers and rapid growth, as sites of weak governance capacities, multidimensional risks and challenging development contexts. There is potential in small cities to avoid mistakes made in larger cities. Capacity strengthening for urban resilience in smaller cities can have substantial payoffs with opportunities for effective risk management, resilience building and sustainable development.

This calls for urgent focus on small- and medium-sized cities in SSA, which are the fastest-growing population concentrations, occupying crucial nodes along the urban-rural continuum and economic/migration networks. The typology of cities and towns within SSA that will be the focus of the UNDP/UN-Habitat joint programme include border cities, urban settlements most threatened by climate change-related hazards, such as sea-level rise, flooding, drought and cyclones, settlements which are part of development corridors experiencing socio-economic change and settlements experiencing in-situ urbanisation in rural and in peri-urban areas.

1.4. Climate impact on Urbanisation in SSA

African cities are among the most vulnerable to climate change and climate variability partially due to exposure, low adaptive capacity, and high vulnerability to climate-related hazards such as flooding, drought, and sea-level rise (Wilson, 2014²). Increasing sea surface temperatures and elevated atmospheric temperatures are projected to shift storm frequency, intensity, duration, and timing.

Increased precipitation in areas of Western Africa and Eastern Africa, concentrated during current heavy-rain periods will increase the exposure of coastal areas to flooding as a result of both precipitation events and sea-level rise. An estimated 54 million Africans live in vulnerable Low Elevation Coastal Zones (LECZ)—defined as areas 10 meters or less above sea level—and this figure is projected to rise to over 100 million by 2030. Areas around rivers and creeks are also susceptible to

² Climate Change and Cities in Africa: Current Dilemmas and Future Challenges (2014)

riverine flooding, especially in more heavily developed settings. Flooding can cause significant human and economic losses and is unique in the visibility of its effects, as both a fast-onset and localized hazard.

Many regions are also at risk of water scarcity and drought. Annual variation in precipitation and heavy but short precipitation events mean that the same areas that are subject to flooding can also be subject to drought. In the Southern African region mean annual rainfall in the summer rainfall region is projected to decrease by 10–20% by 2050, accompanied by an increase in the number of consecutive dry days during the rainy season under the Representative Concentration Pathways (RCP) 8.5 scenario (IPCC WGII Sixth Assessment Report, 2022³). The same report projects that the western parts of the region will become drier, with increasing drought frequency, intensity and duration likely under RCP8.5, including multi-year droughts.

In addition to the inundation of low-lying areas, sea-level rise can lead to coastal erosion and damage of infrastructure and built areas along the coast. Given population concentrations and current projections for sea-level rise, the homes of an estimated 16 to 27 million people across the African continent could be flooded annually by 2100, amounting to 5 to 9 billion dollars per year in damage.

While climate change will increase the exposure of cities to climatic hazards, many cities already experience significant impacts from climate events, especially exposure to flooding risk due to unregulated urban expansion. Furthermore, slums and informal settlements are often located in flood plains, riverbeds, and marshes, exacerbating the vulnerabilities of these populations. Notwithstanding current initiatives, African countries continue to face challenges in building the adaptive urban capacity required to respond to climate hazards effectively. Limited resources and technical capacity, competing priorities, and fragmentation among government agencies constrain adaptive capacity.

Local governments in cities can play a crucial role in addressing vulnerabilities through the provision of local grey and green infrastructure and public services, land use planning and building codes. The risk of increased exposure to climate events is likely, and many cities already feel the impact.

Several African coastal cities are exposed to cyclones, sea-level rise and the impact of heavy storms. Cyclones Kenneth, which struck South-East Africa in April 2019, led to 45 fatalities and left 374,000 people at risk of waterborne diseases (Cambaza et al., 2019). Waterborne diseases may increase due to more frequent and severe floods and drought, thus affecting urban populations in high-risk areas (WHO 2018; Fombe, 2019; Siegel 2020). For the inland mountainous cities like Addis Ababa, extreme rainfall and droughts have intensified disease outbreaks and food insecurity. In Kampala (Uganda) and Zomba (Malawi) inland cities, flash floods usually destroy backyard gardens, make roads impassable, accelerate contamination of air and water sources and contribute to the intensive spread of diseases like cholera and malaria (Lwasa et al., 2018).

1.5. Urban Areas Affected by Conflict and Displacement

Most refugees and Internally Displaced Persons (IDPs) now live in urban or semi-urban areas instead of in camps or purpose-built settlements. This shift has put considerable pressure on cities, especially fast-growing secondary cities that are already struggling to meet the needs of their populations (Cities Alliance, 2021⁴). Uganda is one of the largest refugee-hosting countries in Africa, closely followed by Ethiopia and Kenya. Most refugees settle informally in urban areas and live among the host communities rather than living in designated camps. This leads to the informal occupation of available land and pressures on existing limited basic/social services and resources (water, energy, food, schools, healthcare, transport, etc.). In addition, climate change is projected to increase migration especially internal and rural to urban migration (high agreement, medium evidence) and with 1.7 C

³ IPCC Sixth Assessment Report Impacts, adaptation and Vulnerability (2022); Chapter 9: Africa; available at: https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_Chapter09.pdf

⁴ Cities Alliance & UNOPS (2021). A regional dialogue examining the needs of secondary cities with Ethiopia, Kenya, Somalia, and Uganda

global warming by 2050, 17-40 million people could migrate internally in sub-Saharan Africa, increasing to 56-86 million for 2.5 C due to water stress, reduced crop productivity and sea-level rise (IPCC, 2022; Chapter 9 Africa).

There is an urgent need for host cities and towns to adapt and promote social integration for displaced persons and rural-to-urban migrants, as often these urban settlements offer economic security to displaced populations. Studies show that people displaced by conflict can remain displaced for an average of two decades. The generally observed pattern is that there is a lack of security in their areas of origin, preventing voluntary return. As a result, small and secondary cities double or triple in size in a few months due to a massive influx of displaced populations looking for safety, food, and income opportunities.

However, without flexible planning and smart use of existing financial resources in times of crisis, employment and livelihood opportunities will remain limited in the urban centre recipient of displaced populations, with a lack of access to basic services and infrastructure for all. Environmental degradation, decreasing water supply, a lack of solutions for energy and climate change adaptation topped by limited social and political inclusion, participation in planning, and awareness of rights and obligations as city residents can result in social tension among different residing groups if needs are not met. Meanwhile, better access to services such as water and sanitation, health, waste collection, and protection for both displaced and host populations can enhance social cohesion and community dialogue and help promote socio-economic development.

1.6. Border Cities/Towns

These are urban settlements which are located close to international borders impacted by socio-economic dynamics linked to trade, migration, and mobility/transport in diverse cultural settings. Border cities/towns regulate the movement of people and goods. They typically emerge around opportunities for cross-border trade and channel human flows, especially labour migrants, displaced persons and refugees (Soi & Nugent, 2017). Border cities/towns generally occupy specific nodes along main roads and railways and thus play an important role within international transport networks. Examples also include cities/towns facing each other across borders such as Ndjamena, the capital of Chad, and Kousseri on the Cameroonian side of the border, emerging entirely as a consequence of trading opportunities, and Goma in the Democratic Republic of Congo across Rubavu in Rwanda.

1.7. System of Cities, Development Corridors and Nodes

A system of cities describes a functional network of urban settlements that sustains the territorial development of a region through enhanced inter-urban and rural-urban linkages. Such networks provide enabling spatial frameworks to support sustainable development corridors with cities/towns functioning as economic/logistic nodes. Examining and understanding systems of cities at the country or regional level will be crucial for national governments, regional bodies and financing institutions to make strategic investment decisions that support sustainable economic development, supply chains, food and energy security, and natural resource planning.

Regional planning instruments are a recent phenomenon in SSA, which provides an early entry point to integrate smaller cities/towns within national and regional territorial frameworks. Strategic spatial planning should be linked to the development of urban policies that establish holistic national and regional frameworks that can enable improved urban planning and management mechanisms. This needs to be accompanied by institutional capacity building to promote local economic development. Such an approach would also enable governance of ecosystem and environmental resources required to support sustainable regional growth. Planning activities and investments in key nodal cities located along main infrastructure and socio-economic flows will most likely have the highest multiplier effects within national/regional systems of cities.

2. UNDP/UN-Habitat Joint Initiative

Based on the above context and justification, the United Nations Development Programme (UNDP) and the United Nations Human Settlements Programme (UN Habitat) decided to establish a partnership in SSA by developing a Joint Regional Programme (JRP) on Smart Urban Resilience. This partnership localises the 2030 Agenda, as framed under the SDGs, Paris, and Sendai Agreements and the New Urban Agenda, by building Smart Urban Resilience in SSA with a focus on settlements at the frontier of climate risk, conflict risk and/or as key nodes of systems of cities in a country/region. While both agencies have been working on urban resilience in SSA within their organizational remit, the JRP allows for a more systematic integration and implementation of these approaches and experiences across thematic areas. The JRP also provides a regional framework that integrates experiences from recent and current collaborations between the two agencies in several SSA countries.

2.1. Enabling Global and Regional Frameworks

This regional partnership is set in the broader corporate context of cooperation between the two organizations which is framed under the global Enhanced Collaborative Framework signed in December 2020 between UNDP and UN-Habitat. The latter identifies five areas of collaboration i.e., (i) National Urban Policy; (ii) Financing for Development; (iii) Climate Action; (iv) Urban Resilience; and (v) Digital Transformation. Given this background, UNDP Africa's Nairobi Resilience Hub and UN-Habitat's Regional Office for Africa are leading through this JRP on advancing the inter-agency partnership on urban resilience and digital transformation as two priority areas under the global collaborative framework. The JRP will also touch upon the other 3 areas of collaboration in one way or another.

At the regional level, the JRP is aligned with the Agenda 2063 "The Africa We Want" of the African Union (AU), with the Nairobi Declaration on Disaster Risk Reduction (DRR), as well as with several DRR initiatives carried out by the Regional Economic Communities (RECs) including the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Economic Community of Central African States (ECCAS), the Economic Community of West African States (ECOWAS), and the Southern African Development Community (SADC). The JRP also draws upon the premise of the 2020 Human Development Report, to systematize the use of nature-based solutions for human development⁵. The JRP is aligned with the UNDP and UN-Habitat priorities for Africa and refers to the Smart Africa Initiative.

2.2. Comparative Advantages of UNDP and UN-Habitat

One of the core strengths of this UNDP and UN-Habitat JRP is the coming together of the respective expertise of the two organizations. UNDP has a wider geographic footprint and country presence, well-established financing channels, significant outreach capabilities and networks, and extensive experience in working on local governance, inclusive growth, resilience, environment and climate change adaptation in rural, peri-urban, and urban settings with a cross-section of stakeholders, donors and governments. As the UN focal point for human settlements, UN-Habitat has different areas of expertise on urbanisation. In particular, UN-Habitat has strong relationships with municipalities and has significantly advanced its work on strategic spatial planning/system of cities, urban resilience, smart cities and innovation.

Under this strategic partnership, the complementarity of the respective expertise will allow for delivery in a conflict-sensitive context, and efficient and integrated way on several aspects related to smart urban resilience such as development, climate change adaptation, governance and promotion

⁵ <http://report.hdr.undp.org/part-2.html>

of inclusive and responsive institutions, building on programmes, projects and lessons learned, making full use of tools developed by the two agencies, as well as innovation and digital technology.

Through its country presence and long-term partnering with government entities and other agencies, UNDP has accumulated a broad range of experience in building urban and peri-urban resilience, in Africa and globally. This includes ongoing projects and projects under design:

- Flood protection in Bamako, Mali with (i) the provision of climate information, (ii) the updating of community planning to integrate flood risks, (iii) the restoration and installation of grey infrastructure and (iv) the greening of upstream areas to increase water infiltration and reduce the impacts of floods.
- Coastal protection in Muanda, DR Congo, with (i) the revision of provincial plans, (ii) access to EWS, (iii) hard and green infrastructure to prevent coastal erosion and SLR.
- Ecosystem-based Adaptation of Thies, Senegal, with (i) Ecosystem-based Adaptation (EbA) measures are implemented on the upstream Plateau to reduce flooding in the city of Thies, (ii) assisted Natural Regeneration experience in the upstream Plateau of Thies, (iii) the restoration of a climate-resilient green belt around the city of Thies.
- Coastal protection in Lagos, Nigeria by i) strengthening the enabling financial, institutional and policy environment for integrated coastal zone management and climate change adaptation in Lagos State; ii) investing in climate-proofing, risk reduction, climate-resilient grey and green infrastructure, and capacity-building; and iii) supporting the establishment of climate-resilient livelihoods and enterprises.
- Resilient access to water resources, Maputo, Mozambique by (i) integrating climate risks into urban drainage and water resource management planning, (ii) investing in nature-based and hard infrastructure for water storage, rainwater harvesting, green/grey storage facility to expand potable water access in peri-urban areas.

Meanwhile UN-Habitat has a 20-year experience on urban resilience and risk reduction in SSA, and 10-year experience on smart cities – below are few examples:

- Since 2002, promotion of Living with Floods and Cyclones in Mozambique, including awareness raising materials, strategy/policy development, improved building codes for resilient school construction (Ministerial Decree) and large technical assistance programme for safer schools (4,000 classrooms rehabilitated and resilient), safer hospitals and resilient housing (15,000 units targeted jointly with the World Bank).
- Development of the City Resilience Action Planning (CityRAP) Tool in 2014-2015, now implemented in over 30 cities in Africa, and establishment of the Disaster Risk management, Sustainability and Urban Resilience (DiMSUR) technical centre in Southern Africa.
- Development of the Smart Cities Masterplan for Rwanda, launched by President Kagame in May 2015 at the Smart Africa Conference in Kigali.
- Urban resilience programme in Lusophone Africa (Cabo Verde, Guinea-Bissau and Sao Tomé and Príncipe) between 2015 and 2017.
- Urban resilience regional assessment and CityRAP implementation in Southern Africa (2018-2021).
- South-East Urban Climate Resilience for South-East Africa funded by the Adaptation Fund (14M USD until 2024 – ongoing).
- Detailed Resilience studies and action plans for Dakar, Senegal, and Maputo, Mozambique, using the City Resilience Profiling Tool (CRPT).
- Sustainable integration of IDPs in four secondary cities of Burkina Faso funded by the European Union (4M Euro – ongoing).

2.3. Current UNDP/UN-Habitat Collaboration in SSA

In the SSA context, UNDP and UN-Habitat are already collaborating on several projects and activities at different geographic scales on themes such as urban resilience, local capacity building, urban and regional planning, peace building and inclusion. Both agencies have developed different methodologies and tools that are being leveraged in the framework of ongoing joint initiatives. An example is the project *“Inclusive, Safe, Resilient and Sustainable Human Settlements in the Sahel – A regional approach to build community resilience across the Humanitarian-Development-Peace nexus”* funded by UNDP, covering seven countries of the Sahel region (Burkina Faso, Chad, Mali, Mauritania, Niger, Nigeria and Senegal). In this project, two methodologies developed by UN-Habitat will be implemented, namely the City Resilience Action Planning (CityRAP) tool and Spatial Development Framework (SDF).

CityRAP is also being implemented in other UNDP/UN-Habitat joint initiatives in Guinea-Bissau and Zimbabwe. In Somalia and Somaliland both UN Agencies are collaborating in two projects funded by the Multi-Partner Trust Fund (MPTF), i.e. *“Saameynta - Scaling-Up Solutions to Displacement in Somalia”* and the *“The UN’s Joint Programme on Local Governance and Decentralized Service Delivery”*. UNDP and UN-Habitat are currently also joining forces for climate resilience building in Lagos mega-city, Nigeria, and in Cabo Verde in the context of decentralisation and territorialisation of development policies. In another joint initiative to strengthen all-inclusive urban disaster preparedness (DP) capacities in Mzuzu, Lilongwe, Zomba, and Blantyre in Malawi, UNDP and UN Habitat will employ a range of risk assessment tools, including model impact of risks on urban areas to inform contingency plans and pilot urban-tailored telemetric community-based early warning systems (CBEWS) and design a mobile application for early warning and early action. The JRP will take maximum advantage of these ongoing joint initiatives and build on them to progressively expand.

3. Scope and Key Principles of Engagement

Urbanisation is one of the most significant transformations facing African countries this century. The consequences of weakly planned and managed urbanisation can be complex to address, in intersection with developmental challenges such as climate change and migration. Hence, the JRP presents an opportunity for UNDP and UN-Habitat to jointly support sustainable urban transformation in SSA, to propel socio-economic growth, create jobs and income opportunities, and reduce widespread poverty. This integrated and holistic collaboration between the two UN Agencies and other actors will minimise risks associated with unmanaged urbanisation in a region undergoing immense demographical shifts.

The scope of this JRP is to build innovative urban resilience systems in human settlements in SSA, enhancing their prevention, mitigation and adaptation capacities to address socio-economic, environmental, conflict and climate-related shocks and stresses and leverage green growth opportunities, including digital transformation, to reach the most vulnerable, including women, youth and migrants. Building resilience in cities, towns and settlements at the frontier of multiple risks entails going beyond siloed sectoral interventions, instead working simultaneously on changing urban systems that both potentiate and are impacted by risk: the physical/built infrastructure; the governance frameworks and mechanisms; the socio-economic fabric; and the natural ecosystem(s).

3.1. Smart Urban Resilience: Aligning Concepts and Approaches

It is important to underline that ‘Urban’ in the context of this JRP does not only refer to cities. Rather, sustainable urbanisation is meant as a territorial development process to increase the density of land occupation in a smart and sustainable way (e.g., by promoting compact development), ensuring availability of services and infrastructure, integrating efficient use of environmental resources, planning for clean air and water provisions, providing more opportunities for local economic development (job creation, etc.), and for attracting investment, promoting innovation, ensuring better connectivity, urban green spaces with multiple co-benefits, etc.

Urban resilience, as a forward-looking approach, seeks to address the challenges of urbanisation and leverage its opportunities by recognising cities as complex adaptive systems, and by establishing processes and capacities that allow cities to better respond to current and future trends and shocks. It can be defined as the ability of any urban system, with its inhabitants to maintain continuity through all shocks and stresses, while positively adapting and transforming toward sustainability.

The necessity of taking a resilience approach in SSA urban areas is undeniable, but implementation in practice can be challenging. Local authorities in the region often lack financial resources, including their revenue generation, and are restricted in their ability to meet the ever-increasing demand for services and programming due to the fast pace of urbanisation in the region. Generally, capacities are limited to “putting out fires”, meaning responding to emergencies, and more work needs to be done to enable cities to build their long-term resilience through integrated urban planning and, in this way, proactively prevent and prepare for a range of risks and ensure sustainable development trajectories. These urgent needs provide a set of logical entry points for the Smart Urban Resilience Regional Programme.

Innovation is one of the central pillars of the JRP, by referring to the integration of both digital and non-digital innovation with risk reduction, mitigation and adaptation measures to achieve urban resilience. ‘Smart’ in the context of urban resilience and SSA, translates to taking into account a core set of principles that would support sustainable growth and development. These principles, as defined jointly by UNDP and UN-Habitat, are:

- **A People-Centred Approach** – technologies and urban innovations that support community empowerment and human rights, and generate digital/technological public goods that are open, transparent, accessible and interoperable. This approach promotes technological equity, improves citizens’ access to services, sets technology governance standards and accountability, and safeguards public trust.
- **Agile governance** – technology and innovation can play a significant role in assisting local governments to rapidly assess, adapt and respond to shocks and stresses to prevent and mitigate adverse outcomes (e-governance). The management of different aspects of the urban system could become more efficient, and local governments can leverage technology for urban planning decisions, environmental management, land and property management, and revenue collection.
- **Liveability** – urban innovation ultimately needs to contribute to the quality of life for urban residents including a clean and safe environment, enable the protection of natural resources, ecosystems, and in improving safety and security in public spaces, especially for women, children and differently-abled, as well as for other vulnerable groups including migrant populations and displaced persons.
- **Inclusivity** – technology and innovation need to make cities people-centric by providing individuals and communities with a voice in decision-making processes and the ability to participate in and access municipal programming and services. Cities can also leverage smart technologies to create enabling conditions for livelihood opportunities/investments, inclusive growth, and integration in the social fabric of urban environments.
- **Digital Infrastructure, Data Management and Connectivity** – people-centric ‘smart’ urban settlements need to be based on equal access to information and economy by bridging the digital divide, following ethical digital standards, data privacy, and protecting the rights of citizens from the misuse of technologies.
- **Sustainable Business Models** – cities need to explore sustainable ways of leveraging technology and innovation by developing new business and collaboration models with the private sector and academia toward agile solutions for urban challenges, including green technology and nature-based solutions for risk reduction and sustainable low-carbon growth.

It is important to add that the concept of ‘Smart’ in the SSA context goes beyond digital technologies to include low-cost innovations and nature-based solutions/ecosystem-based adaptation for effective problem-solving. In other words, ‘smart cities’ are those that employ ‘smart’ approaches to problem-solving.

Urban centres lacking access to adequate infrastructure and basic services are also more likely to be impacted by natural disasters, climate change and/or massive influxes of the population displaced by conflict. For the settlements at the frontier of risk and change (see Section 3.2.), key developmental gaps and needs that will constitute entry points for the UNDP/UN-Habitat JRP, include:

- **Climate Change and Natural Hazards-Induced Disasters.** These include several areas of interventions, including building coastal resilience, urban flooding mitigation, greening and the integration of nature-based solutions for risk reduction, protection of agricultural land and prevention and remediation of encroachment of natural ecosystems.
- **Socio-economic and Environmental Risks and Crises.** Entry points here include basic services, shelter and infrastructure, food security and food systems, energy security, water resource management, the ongoing pandemic response, and addressing the digital divide.
- **Inclusive Growth and Livelihood Opportunities.** Opportunity to focus on employment opportunities for youth and women, support for small enterprises, addressing labour and human rights and working conditions, and creating enabling conditions for local innovation and skills development. Technology is creating access to innovative and flexible jobs through new platforms in the sharing economy.

- **Social Cohesion and Conflicts.** With a stronger focus on the internally displaced, migrants and refugees, the JRP has an opportunity to serve these marginalised communities in specific urban typologies such as border cities and economic nodes through local integration while leveraging inclusive and agile urban governance.

These principles come together in ‘Smart City’ concepts that seek to integrate urban planning and management with digital technologies. Both UNDP and UN Habitat see immense potential in leveraging digital technologies toward risk-informed development planning, while at the same time going beyond digital to incorporate a wide-range of available urban innovations that make cities smart.

UN-Habitat’s approach to **People-Centred Smart Cities Programme (2020)**⁶, acknowledges the transformative potential of digital technologies for sustainable urban development and the initiative positions urban digital transformation for the benefit of all, driving sustainability, inclusivity and prosperity and the realization of human rights in cities and human settlements. The programme aims to reposition smart city discourse away from top-down application of sensors and large-scale digital infrastructure towards the delivery of positive outcomes for urban residents through local government digital transformation and focus on impactful digital tools while addressing digital inclusion and human rights. UN-Habitat supports cities with smart city strategies, digital governance frameworks, and digital transformation capacity building and develops technical tools that leverage the power of data, artificial intelligence and digital platforms for urban development. The **UN Innovation Technology Accelerator for Cities (UNITAC) (2021)**, which UN-Habitat leads, is currently working in South Africa on machine learning for informal settlements management and developing a tool to assist African local governments with strategic digital transformation.

Similarly, **UNDP’s Smart Cities Initiative (2021)**⁷ aims to support cities in leveraging innovations and technology in projects and initiatives that improve citizen services and quality of life, while responding to global challenges. Innovations are seen as the interplay between actors, their roles, data and information, and broader tools i.e., frugal or frontier technologies, existing or new physical infrastructure and innovative financing.

The Smart component of the JRP is also linked to **UNDP’s Africa Technology Offer (2021)** that aims to enable improved preparedness, insight-driven responses and leadership in the era of the 4th Industrial Revolution (4IR), where Governments and citizens can participate and benefit from technology to address immediate problems and build long-term resilience. The smart cities formulation of the UNDP/UN-Habitat JRP seeks to define a bold vision for the future, sustained trust between government and residents, continuous learning, partnerships and collaboration among actors and a commitment to create and maintain inclusive and sustainable urban spaces and services. While technology and data are seen as critical enablers, nature-based solutions, behaviour change-based interventions, new organisational approaches, experimental and other context-specific solutions also have the potential to allow cities to evolve in an informed manner (UNDP, 2021). The initiative, therefore, aims to redefine the smart city discourse in Sub-Saharan Africa beyond conventional approaches.

The UN-Habitat and UNDP approach to people-centered smart cities considers the key actors (Government, private sector, community) and their roles, how they use the data, information, tools available and identifies opportunities to solve major urban challenges, for example, affordable housing, ecological management, fight against climate change, sustainable mobility, and more

⁶ UN Habitat (2020). Centering People in Smart Cities: A playbook for local and regional governments; available at: <https://unhabitat.org/programme/people-centered-smart-cities>

⁷ UNDP (2021). Handbook on Smart Urban Innovations. UNDP Global Centre for Technology, Innovation and Sustainable Development.

participatory democracy (UNDP, 2021; UN-Habitat, 2020⁸). The joint programme will support cities in their adoption of new technologies from a people-centred approach based on current and future needs assessments, strategically leverage available resources and partnerships, develop capacities to innovate home-grown solutions, as well as approaches that can be efficiently deployed and sustainably managed in specific contexts. As city leaders play an instrumental role in the uptake of smart urban innovations, the joint programme will create enabling environments through policies, funding, partnerships, and strategic and implementation guidance. Interventions introduced will offer creative solutions using existing resources and where possible invest in future needs, including investments to support local innovation ecosystems.

3.2. Strategic Geographic Targeting and Demand-driven Approach

As indicated above, the UNDP/UN-Habitat JRP will focus on **Settlements at the Frontier of climate risk, conflict risk and/or as key nodes of systems of cities in a country/region**. In terms of settlements typologies, the JRP will mainly target **Secondary/Intermediary Cities, Informal Settlements in major cities as well as Small Towns and Villages**, as they represent urban (or urbanising) areas where the biggest gaps and needs exist in SSA, requiring greater attention to ensure more sustainable urbanisation patterns.

Considering that the JRP will be developed and implemented through different phases based on a demand-driven approach, clear selection criteria of the targeted settlements need to be defined. These criteria should allow performing a rigorous assessment of the existing needs and of the strategic role these settlements could play within their surrounding territory, also because of their location within the system of cities to which they belong. These criteria should help prioritising cities and towns near the borders of two or more countries, that are playing a key role in the context of a sub-national, national or regional conflict, are threatened by climate change (e.g. coastal cities), and/or are located along development corridors experiencing socio-economic change. Strategically located informal settlements in major cities and smaller towns or villages experiencing in-situ urbanisation should also be considered. Additionally, the selection of the potential settlements where the JRP could intervene in the SSA region should consider other important aspects, such as the level of political will and request to accommodate the JRP, existing local capacities for ensuring the sustainability of the programme's interventions, available funding and resources, etc.

Importantly, **the geographical targeting of the JRP will build upon work where the two organizations already have a presence** and are working (or about to work) together, such as in the Sahel region, in Cabo Verde, Guinea-Bissau, Malawi, Mozambique, Nigeria and Zimbabwe. There is potential to scale up and leverage existing momentum to advance outcomes, while further developing the partnership in the different sub-regions of SSA. Opportunities for new joint programming could potentially include:

- *For West Africa:* Burkina Faso, Cabo Verde, Guinea-Bissau, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria and Senegal
- *For East Africa:* Ethiopia, Kenya, Rwanda and Somalia
- *For Southern Africa:* Angola, Botswana, Comoros, Madagascar, Malawi, Mozambique and Zimbabwe
- *For Central Africa:* Cameroon and the Democratic Republic of Congo (DRC)

⁸ UN-Habitat (2020) People-focused smart cities, available at: https://unhabitat.org/sites/default/files/2020/01/fp2-people-focused_smart_cities_v261119.pdf

3.3. Typologies of Targeted Settlements

Chapter 1 contextualised the focus of this JRP on Urban Settlements at the Frontier of Risk and Change, by describing the importance of working in smaller/secondary urban centres, given the conventional emphasis on primary and mega-cities, the impact of climate change and conflict and displacement on urban areas, the role of border cities/towns, and the importance of understanding the system of cities at the sub-national, national and regional levels. In this section, three (3) main typologies of targeted settlements are described in terms of physical characteristics, needs and opportunities for the JRP.

- Secondary/Intermediary Cities

Secondary cities, also called Intermediate Cities, are often classified merely in terms of population size (e.g. greater than 500,000 people). However, in the context of this JRP and taking into account the urban characteristics of SSA, these Secondary Cities will be considered more for the functions, vocation and role they play within the larger territory. Therefore, apart from their population size, their political, social, cultural and economic significance and influence within the sub-national, national and regional contexts are critical to consider, which depend largely on the location these Secondary Cities occupy within a country or region's spatial structure or system of cities. Secondary Cities are meant to play a key intermediary role within the system of cities, often as potential alternative growth poles or as logistic/trading hubs.

As their name indicates, Secondary Cities are distinct from Primary Cities that are typically prime political (capital cities) and/or economic hubs which have developed into important urban metropolises or mega-cities. They are greater and more important than small towns and villages. Despite often playing a relevant and strategic role within the national or regional context, most Secondary Cities in SSA struggle to attract national and international investors. They generally survive mainly based on the limited financial transfers received from the central level according to approved national budget allocations. These transfers are insufficient for these cities to develop their infrastructure and improve the quality of services delivered to an ever-growing population. There is an urgent need for developing alternative sources of revenue so that these cities can adequately play their role in national and regional development agendas.

Secondary/Intermediary Cities in SSA link remote and rural areas to larger urban centres. The future of economic power and societal development could come from adequately strengthened secondary cities benefiting from strategic investments and with the capacity to trigger and sustain local socio-economic development processes. Secondary cities have the potential to support the incoming population by providing valid economic alternatives and thus reduce migration towards megacities and prevent slum formation.

In the context of this JRP, prioritization and selection of Secondary/Intermediate Cities will be guided by a variety of factors, including their role as border cities, climate change risks, the influx of displaced populations or migrants and their location along key development corridors.

- Informal Settlements in major cities

Despite a major focus on secondary cities and small urban or urbanising settlements of this JRP, there is a need to consider the need to improve the living conditions of informal/poor urban settlements/neighbourhoods or slums strategically located within major cities (which could be primary or megacities). The fact that these informal areas, which can be located close to the cities' core in the peri-urban areas, play a key economic role in African cities and that they often host massive numbers of migrants or people displaced by conflict cannot be ignored. In addition, these settlements can be located in important ecosystems and thereby reducing the services provided by these ecosystems and putting newly settled communities at increased risk. Thus, while supporting the creation of alternative poles of development by supporting secondary/intermediary cities, the JRP will work towards the physical, socio-economic transformation (with a focus on the youth) and resilience

building of these informal settlements through the implementation of smart and sustainable solutions, looking also into climate adaptation and risk mitigation.

- *Strategically located Small Towns and Villages*

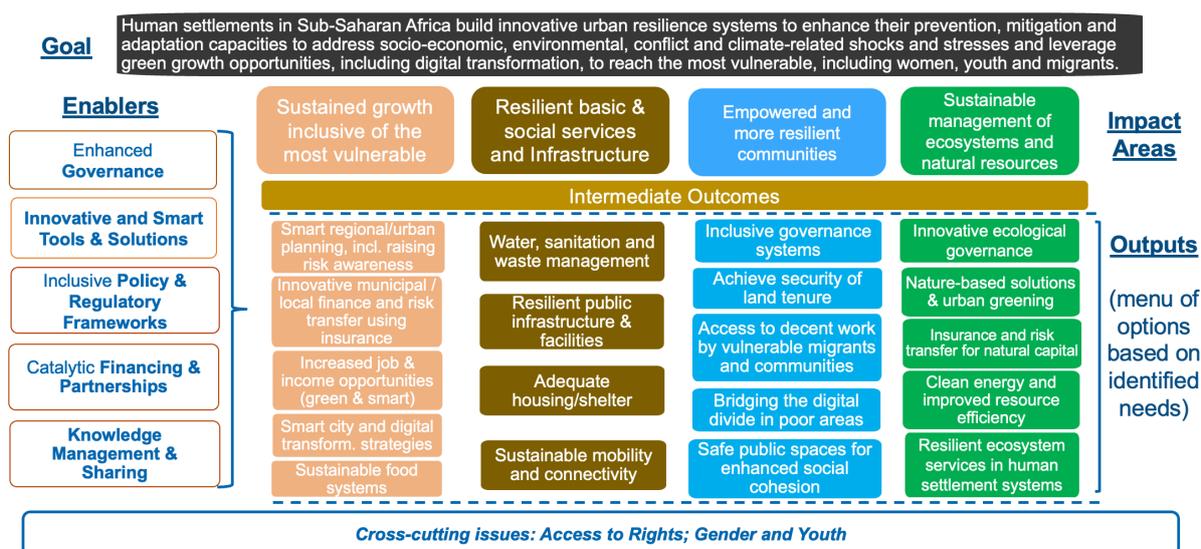
The UNDP/UN-Habitat JRP will also work on small towns and villages located along key transportation networks with high trade/economic potential to create jobs and income opportunities; settlements receiving a lot of displaced populations; those that are located close to countries' borders; and/or are particularly vulnerable to climate change. This will be integral to the JRP's approach to support urban-rural linkages that would ensure spatially well-distributed urbanisation processes over larger territories to progressively strengthen systems of cities.

4. Theory of Change

The novelty of the JRP resides in holistically addressing different dimensions of fragility and vulnerability of African urban (or urbanising) settlements, by establishing concrete synergies between UNDP's and UN-Habitat's respective mandates in the broad context of smart urban resilience, acknowledging their inherent interconnectedness and the need to support sustainable change. The JRP seeks to leverage smart urban technologies, as part of a people-centred smart cities approach, and financing, insurance and risk-transfer innovations. Cities and towns are made of a complex network of actors, local resources and relationships that can mutually influence each other and generate change in many directions. Urban resilience depends on *aggregated* change, which needs to be pursued through the implementation of smart and durable solutions.

Reflecting this approach, the Theory of Change (ToC) underpinning the JRP is structured around four higher-value impact areas (see Fig. 3) that channel intended *intermediate* results (the level of direct – and credible – attribution to actions from the Programme) through an options-menu of outputs. These indicative outputs will be combined, nuanced and adapted according to **the urban context** (under the typology of urban settlements), **needs** (as per diagnostic, assessment, analysis and participation in the second phase of the JRP) and **opportunities** (facilitated or enhanced by partners and stakeholders, including urban communities, and available funding).

Figure 3: Theory of Change of UNDP/UN-Habitat JRP on smart urban resilience in SSA



The ToC is strongly anchored on the following elements:

- A clear and plausible **causality chain**, linking indicative activities with results at outputs, intermediate outcome and impact areas levels;
- Strong **complementarity** and **inter-relationship** among different JRP outputs, where the intended results will depend to a great extent on their coherent articulation and integrated implementation through an area-based approach, seeking for synergies; many interventions proposed under the JRP will be relevant for more than one output with meaningful results across multiple impact areas;
- Emphasis on programmatic **relevance** and **sustainability**: the JRP emphasises the need for enhancing both urban planning and governance systems to respond to the urgency of establishing viable urban (or urbanising) settlements in SSA able to withstand shocks and stresses caused by climate impact and/or conflict;

- **Inclusive governance and social cohesion** as crucial foundations of smart urban resilience in SSA in contexts of multiple risks: the JRP takes participation and contribution of different stakeholders (including public entities, private sector, communities including vulnerable groups, civil society organizations, the academia, etc.) as essential to the social contract underpinning smart resilient cities.

4.1. Impact Areas/Outcomes and Combination of Outputs/Activities

To achieve the **Goal of building innovative urban resilience systems in human settlements in Sub-Saharan Africa**, based on the above ToC, four (4) main **Outcomes** can be defined for this JRP, including the adequate combination of different **Outputs/Activities** (to be identified based on proper local assessments and on demand):

- **Outcome 1: Targeted human settlements have adopted sustained and inclusive planning and growth mechanisms** through the combination of one or more of the following **Outputs/Activities**:
 - **Smart regional/urban planning**: spatial planning needs to be applied at different geographical (regional/national/sub-national) scales to prioritise strategic investments and reinforce the existing system of cities, and at the city/local scales through participatory planning (which is meant to enhance local ownership of the proposed interventions as well as social cohesion) to enable the implementation of integrated multi-sectoral interventions through an area-based approach. Ideally, these planning efforts should integrate climate risk, propose adaptation and mitigation solutions to enhance resilience (including in peri-urban ecosystem), cater for the sudden increase of urban population due to forced displacements, and catalyse financing mechanisms.
 - **Risk education and awareness**: critical activities around the risk education, and awareness-raising of stakeholders and creating an enabling environment through integrating risk transfer into urban development plans and policies will also be promoted.
 - **Innovative municipal/local finance**: the capacity for enhancing local revenue is enhanced thanks to rapid assessments, the application of smart solutions (especially land-based finance) and participatory budgeting. Investments are attracted thanks to improved local capacity and the development of bankable projects through specialised technical assistance.
 - **Risk transfer using Insurance**: the innovative and integrated insurance and risk transfer mechanisms will complement and strengthen disaster risk management strategies, and protect resilience investments (e.g., flood risk solutions). Innovation in insurance products using technology to detect urban risks and the amount of damage caused will be utilized in collaboration with the insurance industry. The innovative risk transfer solution based on a pre-determined parametric⁹ trigger, will provide government with quickly calculated payouts within a short period after an event, thus enabling a quick infrastructure reconstruction and rehabilitation.
 - **Increased job and income opportunities (green and smart)**: cities and towns, including public institutions, private entrepreneurs and communities, can attract investments and generate green jobs and income opportunities while producing mitigation co-benefits through youth skills enhancement, waste management, renewable energy, urban agriculture, efficient use of natural resources, reducing the vulnerability to climate impacts, among other possibilities.

⁹ Parametric insurance is defined by a set event threshold. Payouts are triggered by an agreed level of rainfall, flood or storm intensity, for example. It is easy and simple to set up, and claims can be settled rapidly, following a mutually acceptable definition of loss, without the need for lengthy loss assessment or adjustment. However, the model carries a very high basis risk compared with others.

- Smart city and digital transformation strategies: Local governments are able to maximise the benefits of smart and digital technologies through strategic and active leadership, investment and aligning digital transformation initiatives with resilience and sustainability efforts.
- Sustainable food systems: urban and peri-urban agricultural solutions are applied, including through reinforced urban-rural linkages and enhanced food trading opportunities, to ensure sustainable food systems in the targeted settlements.
- ***Outcome 2: Targeted human settlements benefit from more resilient basic & social services and infrastructure*** through the combination of one or more of the following ***Outputs/Activities***, privileging the adoption of an integrated area-based approach:
 - Enhanced access to water, sanitation and waste management services: upgrade/increase access to water and sanitation facilities to enhance hygiene and reduce the spread of water-borne diseases and introduce smart and innovative waste management solutions to strengthen circular economy dynamics. This will include peri-urban ecosystem restoration to restore ecosystem services such as water infiltration for increased groundwater recharge.
 - Climate-resilient public infrastructure and facilities: integrate climate risks/proofing into the infrastructural design (especially in drainage, roads and energy-supply facilities), integrate innovative approaches, such as a "sponge city" approach for flood risk reduction, improved drainage, ecosystem-based solutions for coastal resilience, and promote safer minimum construction standards in public buildings, in particular education and health facilities.
 - Access to adequate housing/shelter: apply low-cost, simple, innovative, locally adapted, incremental and disaster-resistant housing/shelter construction techniques in informal settlements of major cities or in resettlement/new development areas integrated into existing secondary cities, towns or villages. Risk mapping will be conducted and relied on to avoid new settlements in high-risk areas.
 - Sustainable mobility and connectivity: non-motorised and smart public transport solutions are applied in the target settlements, as well as road network and connectivity improvements, to enhance the circulation of people and goods, based on prepared local/city plans.
- ***Outcome 3: Targeted human settlements enjoy enhanced social cohesion thanks to empowered and more resilient local communities***, through the combination of one or more of the following ***Outputs/Activities***:
 - Inclusive governance systems: urban governance at city/town/neighbourhood level, including both local authorities and concerned communities, is mainstreamed thanks to on-the-job capacity building; on-site technical assistance; enhanced data management; adoption of smart and innovative solutions/technologies; participatory urban/local planning for enhanced local resilience, integrating climate adaptation and mitigation measures; gender mainstreaming; set-up of budgeting/finance accountability systems; reinforced disaster/crisis preparedness and response mechanisms; among others.
 - Achieve security of land tenure: vulnerable (e.g. slum dwellers) and/or conflict/climate-affected populations are prioritised in terms of security of tenure thanks to innovative geospatial mapping tools, community participation and land conflict mediation and resolution.
 - Access to decent work by vulnerable migrants and communities: both host and displaced vulnerable populations are adequately supported to facilitate their access to decent jobs and/or income generation opportunities, through small grants/investments and by working on enabling legal/regulatory conditions.
 - Bridging the digital divide in poor areas: vulnerable groups and communities strengthen their inclusion in the urban social contract through the use of technology and innovation allowing

for broader access to rights, services and representation, and their meaningful contribution to the urban resource and knowledge base.

- Safe public spaces for enhanced social cohesion: as a result of participatory planning and active community engagement, public spaces are improved through increased greening (including urban agriculture), urban rehabilitation/renewal works, benefiting both host and displaced communities and enhancing social cohesion.
- ***Outcome 4: Mechanisms are in place to promote the sustainable management of ecosystems and natural resources in the targeted human settlements***, through the combination of one or more of the following **Outputs/Activities**:
 - Innovative ecological governance: Through participatory approach and awareness-raising, targeted cities and towns give proper consideration to important and fragile ecosystems as part of their urban and peri-urban management plans, including the implementation of concrete measures to enhance ecological and socio-economic benefits.
 - Nature-based solutions and urban greening: technical and financial support is provided to local authorities and communities to systematically integrate and implement hybrid solutions that include nature-based solutions in addition to hard infrastructure, as well as urban greening interventions (which have benefits for human health, climate mitigation and adaptation).
 - Insurance and risk transfer for natural capital: protecting the natural capital, with the help of insurance will, simultaneously protect biodiversity, critical infrastructure and livelihoods and provide economic benefits to vulnerable cities and communities.
 - Clean energy and improved resource efficiency: target cities/towns promote investments and entrepreneurship regarding clean energy and improved resource efficiency, especially in the construction sector.
 - Resilient ecosystem services in human settlements: key ecosystem services provided by wetlands, rivers and coastal areas (e.g. prevention/mitigation of coastal erosion through mangrove restoration, provisioning services such as fisheries improved through reduced pollution of waterways, enhanced access to clean water), among others, which are connected or part of targeted human settlements, are protected and restored.

4.2. Enablers

These refer to the enabling tools, solutions, mechanisms and processes to produce the expected change in the different Impact Areas as described in the ToC in Fig. 3. The Enablers are:

- ***Enhanced governance***: Planned activities to improve urban governance have already been described under Outcomes 3 (with emphasis on social inclusion) and 4 (with emphasis on ecosystems protection/rehabilitation). Improving local governance is probably one of the most important enablers of the JRP, to guarantee its successful implementation and sustainability. At the national and regional levels, institutions also need to be strengthened to provide sustained support to concerned local governments and enhance their skills and knowledge on key topics such as social inclusion and sustainable integration of displaced populations, climate change adaptation and mitigation, resilience building, efficient urban management, conflict resolution, among others. This activity will also help the local government and policy-makers in developing the policy and procedures for disaster response, with restoration guidelines, as well as trainings on carrying out the restoration activities using insurance proceeds.
- ***Innovative and smart tools and solutions***: UNDP and UN-Habitat will take advantage of this JRP to apply in-house, as well as external, tools, approaches and solutions and provide their technical expertise to build resilience in the targeted human settlements, by integrating smart and

innovation aspects. They should work effectively as **enabling tools** i.e., they are designed to be progressively adopted/applied locally without external support in the medium to long-term. Efficient risk monitoring tools and technologies will be adopted. For instance, where coral reef insurance is deployed to protect the coastal communities from flooding, a more sophisticated atlas could be drawn combining available data on coral reefs, from the Allen Coral Atlas – an innovative coral mapping tool, supplemented by data on socio-economic information provided by local stakeholders. This kind of advanced layering of data on hazards and exposure valuation can help in drawing up plans to restore and conserve the coral reefs as well as protect coastal urban communities.

- ***Inclusive policy and regulatory frameworks:*** while implementing the JRP, it will be important to influence/review existing policy and regulatory frameworks to enable more efficient urban management at the different level, flexible/adaptive planning and construction standards, integration of migrants/displaced populations into cities and towns, among other aspects.
- ***Catalytic financing and partnerships:*** this JRP will need to mobilise funding to implement concrete pilot interventions at the local level that are bankable and can be scaled-up by interested financing institutions/partners, thus playing a catalytic role. For this purpose, it will be crucial to build, maintain and expand partnerships during the whole period of implementation of this joint initiative. This will include innovative insurance and risk financing approaches, such as being pioneered by UNDP's SSA Finance Sector Hub, Pretoria. The proactive insurance solutions are aimed at reducing the risks faced by the urban communities and transferring them to insurers, thus protecting every dollar that is spent on building urban resilience.
- ***Knowledge management and sharing:*** taking stock of lessons learned and best practices from past/on-going initiatives, the JRP will have to rapidly establish a knowledge platform which will allow collecting and sharing in real-time experiences issued from implementation, which can help develop inter-country cooperation and cross-fertilisation in the different fields composing smart urban resilience.

5. Methodological approach

An approach that matches the key goals to be achieved with this regional programme to be implemented jointly by UNDP and UN Habitat is key. The approach is built around two phases - a Preparation Phase and a Diagnostic/Detailed Design Phase (for a total of 6 to 9 months) and an initial implementation phase of 3-4 years (Phase 1), with the possibility (if the JRP is successful) to be expanded over a total period of 10 years. To achieve sustainable change in development terms, experience shows that an average of 5 to 10 years period is required.

Figure 4: Process Activities

PREPARATION	DIAGNOSTIC	SUITE OF SOLUTIONS	PARTNERSHIPS
<p>TAKE STOCK OF AVAILABLE TOOLS AND RESOURCES ACROSS THE TWO ORGANIZATIONS</p> <p>STUDY LESSONS LEARNED AND BEST PRACTICES FROM PAST/ON-GOING PROJECTS / SET UP A KNOWLEDGE MANAGEMENT PLATFORM</p> <p>SHARE THE DRAFTED PROGRAMME PROPOSAL WITH UNDP/UN-HABITAT MANAGEMENT AND REGIONAL/SUB-REGIONAL BODIES, GOVTS, ETC.</p> <p>ASSESS THE MAIN CHALLENGES AFFECTING THE DIFFERENT SUB-REGIONS AND SELECT PILOT COUNTRIES/CITIES/TOWNS FOR PHASE 1</p> <p>WORK ON RESOURCE MOBILISATION FOR PHASE 1</p>	<p>CARRY OUT VULNERABILITY & NEEDS ASSESSMENTS / ANALYSIS IN THE SELECTED LOCATIONS THROUGH PARTICIPATORY APPROACH AND CONSULTATIONS</p>	<p>BASED ON THE MENU OF OPTIONS DESCRIBED IN THE THEORY OF CHANGE (SEE FIG. 3), PROPOSE A COMBINATION OF OUTPUTS/ACTIVITIES THAT FIT THE IDENTIFIED NEEDS, TO BE IMPLEMENTED IN AN INTEGRATED/MULTI-SECTORAL AREA-BASED APPROACH IN THE DIFFERENT TARGETED HUMAN SETTLEMENTS</p>	<p>TAKE ADVANTAGE OF GLOBAL, REGIONAL AND NATIONAL NETWORKS /FRAMEWORKS (INCLUDING RECs, ETC.)</p> <p>WORK CLOSELY WITH FINANCING INSTITUTIONS (WORLD BANK, AfDB, ETC.), NATIONAL & SUB-NATIONAL GOVERNMENTS, ASSOCIATIONS OF LOCAL GOVERNMENTS/MUNICIPALITIES, BI/MULTI-LATERAL PARTNERS, CIVIL SOCIETY, ACADEMIA AND THE PRIVATE SECTOR</p>

5.1. Preparation Phase

In the **preparation phase**, leading to the development of the full-fledged project document, the **Programme Development Team**, defined during the brainstorming workshop that took place in October 2021 between UNDP and UN-Habitat, will first take stock of the available tools, solutions and resources across the two organizations.

For UN-Habitat, this will involve identifying and mobilising colleagues from the Regional Office for Africa and selected Africa country offices, as well as colleagues working on normative approaches related to urban planning, public space, urban resilience, innovation, people-centred smart cities, municipal finance, housing and urban basic services. It will also involve identifying successful tools and approaches that can be used within the programme, including tools such as the City Resilience Action Planning (CityRAP) Tool, Our City Plans - the incremental and participatory toolbox for urban planning, the Rapid Own-Source Revenue Tool, the Block by Block and Her City digital public participation methodologies, the Assessing and Addressing the Digital Divide approach and many others. **For UNDP**, this means engaging regional and headquarter colleagues engaged in relevant themes for this JRP as well as taking stock of programmes and interventions already ongoing at the regional and country office level to better understand it and learn from them. Resources such as the Nature-Based Solutions' Standards are also available for integration into the overarching toolkit.

At this stage the programme team will also collect insights to better tailor programme goals, partners and means, through innovative design thinking methodologies. This will include reviewing guiding documents on priorities for urban resilience for global stakeholders – including potential donors such as the Global Environment Facility (GEF) and the Green Climate Fund (GCF).

Two short and concise papers will be produced compiling lessons learned and best practices to inform the programme development for smart urban resilience in SSA. The first, summarising the experience of urban resilience and smart cities in Africa, will be produced by UN-Habitat's Regional Office for

Africa and UNDP Resilience Hub. The second, building on the work of UN-Habitat and UNDP on people-centred smart cities and urban innovations will set out shared thinking on smart urban resilience in Africa. This will be produced jointly in collaboration UN-Habitat's Innovation Technology Accelerator for Cites in Hamburg and UNDP's Global Centre for Technology and Innovation in Singapore.

To ensure buy-in and commitment, countries and cities/towns will be selected through an internal **call for expression of interest** at UNDP and UN-Habitat. Selection criteria - including a clear request for technical assistance from national/local governments - will have to be developed and applied appropriately (see also suggestions made in Chapter 3 in terms of selection criteria).

A **partner/donor mapping exercise** will be carried out to identify the existing partner landscape across UNDP and UN-Habitat, including international financial institutions. This mapping exercise will inform the creation of a partners' network and invitations to a partner roundtable to be held in NYC and/or Nairobi in May 2022. A clear partners' offer will be developed.

5.2. Diagnostic/Detail Designed Phase

Following the Preparatory Phase, UNDP and UN-Habitat will enter the Diagnostic and Detailed Design Phase during which selected countries/human settlements are assessed and the suite of solutions/combination of Outputs are designed for the countries/cities/towns in a more detailed manner.

During this phase, the timely and regular engagement with partners at international, regional, national and local levels will be crucial, including government/public entities at the various levels, financing institutions, bi/multi-lateral partners, the private sector, civil society organizations, the academia, among others.

Similarly, with a cross-cutting and mainstreaming dimension, the Programme Development Team will apply a conflict/climate sensitive lens as well as gender, youth and human rights-based approach throughout this phase, to be adequately monitored during the initial implementation phase (or Phase 1).

After extensive analysis that results from the needs and vulnerability assessments at the urban settlements pre-selected using participatory inclusive approaches, the programme will start applying the suite of solutions (or adequate combination of the menu of options/outputs), which will reflect how best the JRP can make use of the identified tools and, based on the assessments, apply the several identified solutions in a fully contextualised manner and based on needs and demand, also to also allow the comparison of results and peer-to-peer exchange later on. Solutions use integrated multi-sectoral area-based approaches in the different locations (see typologies of settlements in Chapters 1 and 3).

6. Partnerships

Partnerships - both internally within the UN system and externally - lie at the heart of the JRP's successful multi-phased implementation and resource mobilization efforts. Partnerships will bring the essential assets and resources which will be key to sustainable and effective programme implementation, including knowledge/know-how, technology and finance.

The UNDP and UN-Habitat JRP partnership framework is centred around three core objectives:

1. Encourage home grown capabilities;
2. Garner sufficient capital & resources;
3. Ensure medium to long-term sustainability.

Within this framework and through a systematic approach, UNDP and UN-Habitat will seek diverse partnerships from a wide range of sectors and entities, including:

- Bilateral and Multilateral Donors
- International Financing Institutes (IFIs)
- Non-Profit Organisations and Foundations
- Private Sector
- Research Institutes
- Regional Institutions & Scientific Community
- UN Entities

The JRP will also call upon UNDP's vast network of Hubs that are already involved in smart cities, sustainable development and financial innovation, including the UNDP Africa Nature, Climate and Energy (NCE) Unit in the UNDP Addis Ababa Regional Service Center for Africa (RSCA), UNDP Global Centre for Technology, Innovation and Sustainable Development in Singapore, the UNDP Africa Finance Sector Hub, Pretoria, and UNDP's Insurance and Risk Finance Facility. The value-added through South-South cooperation and lessons learned will also be leveraged, in addition to North-South cooperation.

The JRP will aim to channel capital resources and technical capabilities into programmatic elements, in partnership with others, leveraging technology and smart solutions to further urban resilience in innovative ways. Technology (for prevention, mitigation and adaptation) and finance and insurance as a risk-transfer mechanism will serve as two primary enablers, occupying the centre stage of collaboration and implementation on the ground. With this in mind, due consideration will be given to ongoing project/programme activities in the region implemented by stakeholders to avoid duplication and focus on complementarities and synergies.

A comprehensive strategic plan will be developed, reflecting partner opportunities for engagement, value-added to programmatic components, as well as key intervention areas for mid to long-term sustainability.

For further information and to explore partnership opportunities please contact:



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