Workshop Report

Participatory and risk informed visioning for Kibera informal settlement, Nairobi.

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Prepared by the Nairobi Research team.

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"Our mission is to reduce disaster risk for the poor in tomorrow's cities."

Tomorrow's Cities is the UK Research and Innovation (UKRI) Global Challenges Research Fund (GCRF) Urban Disaster Risk Hub – a five-year global interdisciplinary research hub.

Our aim is to catalyse a transition from crisis management to multi-hazard risk-informed and inclusive planning and decision-making, for cities in low-and-middle income countries.

Globally, more than two billion people living in cities of low-to-middle income countries are exposed to multiple hazards such as floods, earthquakes, landslides, volcanoes and fires, which threaten the cyclical destruction of their lives and livelihoods. With urban areas expanding at unprecedented rates, this number is expected to reach four billion by 2050.

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But this global challenge is also major opportunity: as ~60% of the area expected to be urban by 2030 remains to be built, we can reduce disaster risk in tomorrow's cities by design.

We are one of 12 UKRI GCRF Hubs funded by a UKRI Collective Fund Award, as part of the UK AID strategy, putting research at the heart of efforts to deliver the United Nation's Sustainable Development Goals (SDGs).

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About ARIN

The Africa Research and Impact Network (www.arin-africa.org) currently hosts the Nairobi Risk hub as the current implementing partner of the Tomorrows Cities in Nairobi. The ARIN is a network of over 200 researchers and policy makers with National Focal Points across 36 African countries aimed at 1) consolidating evidence from various African contexts and 2) promoting research excellence and sharing on best research and impact practices. ARIN has vast experience in generating and consolidating evidence on what works or not focusing on the key strategic sectors critical for Africa's Member States in the pursuit of Sustainable Development. The ARIN has pioneered pathbreaking studies and evidence based convenings on various thematic areas including climate change, disaster risk reduction, health, science technology and innovation among others.

Acknowledgment

1. ABSTRACT

Like many other developing cities, Nairobi is experiencing rapid urbanization and increasing disaster risks especially for the poor. The city historically has strong institutional focus on emergency response both at the practice and regulatory levels. With a focus on the present response, planning for the future of the city and associated risks remains unclear and unconsolidated with little consideration of the consequences of today's decisions on tomorrow's Nairobi. Despite their vulnerability, the Nairobi urban poor, mainly living in the informal settlements such as Kibera are rarely integrated or considered in urban and risk decision/planning processes. These two concerns impede adequate planning to support DRR for the poor and vulnerable groups in Nairobi. Through the Tomorrow's Cities Decision Support Environment (TCDSE), this report highlights some of the aspirations of different social groups within Kibera that could make the area safe from disaster risks in the future. The report is based on a series of stakeholder consultations that culminated in a two-day visioning workshop bringing together different groups within Kibera.

From the exercise, there is consensus that the future Kibera should be safe from risks, inclusive and supportive to livelihood and security, jobs, social cohesion, and quality infrastructural amenities. Groups believe that these will not only enhance the quality of life for residents in an inclusive way but will also immensely contribute to safeguarding them from the impacts of disaster risks. In other words, for these groups, development is seen as part and parcel of DRR challenge for the present and future and this underscores the strength of the TCDSE approach as an integrated concept that considers DRR as part of wider developmental challenges for the urban poor. Some of the common visions across the groups included better housing infrastructure and designs that are inclusive and can accommodate the growing population, and the need for green spaces and social amenities to support opportunities for livelihoods, jobs, and social cohesion. Additionally, DRR response systems (e.g., evacuation centres, community information centres, fire response etc) that are gender responsive are critical for safety of vulnerable groups such as women, children, young girls, and the elderly who sometimes suffer double exposure of sexual harassments and competition for services during emergencies. Land tenure remains critical for planning the future of Kibera and needs to be addressed. Additionally, institutionalising the different voices in the decision-making processes is a desire for various social groups. This promises actualisation of their aspirations through policy and practice.

Methodologically, while the TCDSE supports the opportunity for profiling the voices of local communities especially the urban poor in planning and decision making for the future, the framework does not clearly consider options and structures through which these voices are institutionalised to make change. Additionally, the Kibera visioning case reveals wider land governance issues and power relations that shape decisions, including how and who is included in the planning process. Embedding some understanding of the political cultures and power relations in the TCDSE framework would be useful in understanding the diverse drivers of decisions that sometimes create implementation deficits for ''well neat'' and community driven plans.

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3. INTRODUCTION

For most cities in Global South, the development, planning, and resilience building happens with the minimal input of the marginalized and disadvantaged communities, yet they are the most affected when disasters occur. Generally, there has been a failure to integrate multi-hazard disaster risk resilience into urban planning, and often the decision-making processes reinforce existing cycles of risk accumulation. This condemns billions of the world's poorest to continued cyclical destruction of their lives and livelihoods. In some cases where community consultations have been incorporated in urban planning, their voices fade way amidst the dominant expert and city decision makers' voices and opinions.

It is against this background, that the Tomorrow's Cities is working across four cities i.e., Kathmandu, Nairobi, Quito and Istanbul. The Tomorrow's Cities Hub purposes to bring multi-hazard disaster risk management at the center of urban policy and practice, facilitating a reduced disaster risk for the poor in tomorrow's cities. Through the application of an overarching framework called Tomorrow's Cities Decision Support Environment (TCDSE) (Galasso et al., 2021), the Hub aims to support the process of making risk informed decisions that steer policies and governance towards reducing risks in tomorrow's cities.

The Nairobi city is among the focus of the Tomorrow's Cities Hub. The city's fast paced urbanization, frequent occurrence of devastating hazards, and its stakeholders' desire to ultimately reduce these risks through inclusive and integrated urban planning and development decision making, makes it a great fit for the study. However, this ambition is faced with two interlinked challenges: First an initial mapping of the city's governance landscape (policies, actors, and decision processes) (Tonui et al., 2021), shows that governing DRR in Nairobi is complex and characterized by multiple actors playing different roles in disaster management cycle and operating within a political culture underpinned by interests in land ownership. These 'institutional interests' mean that the voices of the local community, especially in the informal settlements are rarely integrated or considered in decision/planning processes. Secondly, there is relatively strong institutional focus on emergency response both at the practice and regulatory levels. With more focus on the present response, planning for the future of the city and associated risks remains unclear and unconsolidated with little consideration of the consequences of today's decisions on the future of the city. These two challenges impede adequate planning to support DRR for the poor and vulnerable in Nairobi.

The TCDSE therefore confronts these challenges by allowing communities to be the central stakeholders in shaping the future of their city. The TCDSE tool further aims to promote inclusivity among different stakeholders in the decision-making process around urban planning and risk reduction.

Future Visioning is the first stage of the TCDSE framework, an activity that involves engaging the various social groups within a particular community to collectively map out their vision for the city through a participatory interactive methodology. There has been less integration of the various community social groups in urban development, and this is the niche the TCDSE future visioning exercise intends to bridge, by allowing the urban poor to significantly contribute to shaping the future of their community and neighborhood.

The Nairobi hub partners: the Africa Research and Impact Network (ARIN), the Kenya Red Cross Society (KRCS), and the Slum Dwellers International (SDI), planned and executed a comprehensive participatory future visioning workshop in Kibera with the aim of demonstrating a practical process for future visioning, with Kibera community residents and partners representing the urban poor. The exercise was conducted following an extensive planning process and consultation with the wider Tomorrow's Cities project partners.

The specific objectives of the Kibera visioning exercise were to generate collective possible futures of Kibera by the year 2050, which will describe physical, economic, and social conditions as well as implications for hazards, vulnerability, exposures and "everyday risk", set within the framework of distinct future development scenarios for Nairobi. The objectives of the exercise were to:

a) Develop shared visions and aspirations for Kibera.
b) Spatialize and complicate visions in the face of risk.
c) Outline essential policies that align with the developed visioning scenarios.

This report summarizes the process and outcomes of the Nairobi future visioning exercise, a 2-day workshop that was held on 13th and 14th December 2022 at the Kibera CDF Hall. The workshop targeted various social groups from the Kibera informal settlement as the participants. The social groups represented included the Kibera youth, men, elders, women, and businesspeople.

4. THE KIBERA CONTEXT

3.1 LOCATION AND GEOGRAPHY

Kibera, is an informal settlement located in Nairobi, Kenya and is one of the largest slums in the country and is estimated to be home to between 70,000 and 1.5 million people (Figure 1). It is among the eleven informal settlements in Nairobi. In addition, it is one of the Sub-Counties of Nairobi. There are five Wards in Kibera namely: Laini Saba, Lindi, Makina, Woodley/Kenyatta Golf Course and Sarang'ombe. The settlement is further divided into thirteen villages and two estates, including Kianda, Soweto East, Gatwekera, Kisumu Ndogo, Lindi, Laini Saba, Siranga, Makina, Salama, Ayany and Mashimoni. The area's residents face a multitude of problems due to inadequate infrastructure and limited access to essential services such as clean water, healthcare, education and sanitation. The majority of residents live below US$2 per day, resulting in widespread illegal connection to electricity and other services. Furthermore, Kibera is located in downstream part of Nairobi and is characterised by sloping terrain that exacerbates the risk of flooding and associated human displacements and loss of property.

In 2020, Kibera was declared a Special Planning Area (SPA) to prevent further development in the area for two years. This was done to allow more meaningful and inclusive planning for its future development and growth. The goal of this designation is to ensure that the residents' voices inform the planning and development process, and that their needs and concerns are considered. Kibera nonetheless is characterised by a strong social solidarity and a close-knit community with a rich history and culture.

The TCDSE therefore, is an opportunity to support community informed city planning in Nairobi. To do so, the Kibera informal settlement, the recently gazetted SPA (even though it is yet to be operationalised) was selected as the case study for the future visioning work in Nairobi.

Figure 1: The Kibera informal settlement

3.2 INSTITUTIONAL SETTING OF KIBERA

The understanding of the institutional set-up of Kibera helps to reveal the existing stakeholder groups and their roles in shaping integrated development and DRR planning. Kibera is made of both stakeholders (state and non-state actors) with interest in urban planning (Figure 2).

Preliminary mapping of organisations playing significant roles in housing and risk reduction programmes show that there are multiple organisations from national, city (sub-national) and Kibera slum. The state actors are predominantly leading policy and implementation of programmes. The Nairobi County Disaster Management Emergency Response Committee (CDMRC) co-chaired by the Governor of Nairobi City County Government has established sub-county, Ward and Village Disaster Management Emergency Response Committees at the local level. The Sub-County at the Executive level is represented by Sub-County Administrator and the Ward is administered by a Ward Administrator who coordinate departmental & development activities lead by sector officers. They all play significant roles at the DMRC, housing and other development programmes.

The local committees are expected to support local communities in addressing DRR issues, providing linkages with policy and programmatic agendas.

While not having direct policy mandate at the Nairobi County level, National Ministries and elected leaders also play a role in developing programmes targeted at uplifting living standards in the informal

settlement. The Ministry of Housing and Transport is currently operationalisation the national Building Climate Resilience for the Urban Poor Programme (BCRUP). The programme is spearheaded by the State Department of Housing and Urban Development (SDHUD) to support informal settlements and build their resilience to climate risks. SDHUD is also leading the construction of affordable housing units in Kibera, and it has identified Kibera as a hotspot under the BCRUP programme. The programme supported by local committees and administrators.

In addition, we have the national and county based elected leaders/ politicians working through housing, urban planning & public works and disaster committees to spearhead legislative and resource allocation agenda. Nairobi County as a sub-national unit is represented by a Senator at the Senate while Kibera as Constituency, which is a political unit is represented by a Member of Parliament (MP) The Senators and Members of Parliament seat in the National Assembly. Nairobi County Assembly which is the legislative arm of Nairobi City County Government is composed of the Members of County Assembly (MCAs) who are elected at the Ward level. Ward is an administrative unity below the Sub-County at the County level. Kibera is a sub-County with five Wards, namely: Laini Saba, Lindi, Makina, Woodley/Kenyatta Golf Course and Sarang'ombe. These Wards are represented at the Nairobi City County Assembly respective MCA. MCAs play the role of formulating relevant laws and regulations, passing of policy options proposed by the executive arm of a county government, resource allocation for development activities and oversight over the mandate of the executive.

The county administrators from the Governor, County Administrator, Sub-County and Ward administrators are constitutionally designed to work together with the MCAs to facilitate participatory process in identifying development activities, resource mobilization and allocation and formulating relevant policy and legislative options aligned to the national policies but also taking into consideration the local context. The development activities are integrated into the County Integrated Development Plan (CIDP). According to the Constitution of Kenya (2010), the political representation of Nairobi city county government and Kibera are contributed by the Senator of Nairobi and the Member of Parliament of Kibera, who champion for enhance county and constituency resource allocation and relevant laws and policies. However, the political momentum by the Senator of Nairobi and the Member of Parliament for Kibera to enhance acceleration for risk reduction Kibera is slowed down the lack of a national disaster management law. In addition, it clearly shows fragmented political and policy approach to risk reduction at the city and the informal settlement. Further, responsibility over risk is difficult to identify because of the design of the government at county and national level, which potentially reflected when interacting with the non-state actors.

The non-state actors are predominantly contributing to the policy formulation and implementation of programmes in Kibera and at city level (figure 2). We identified various social (gender) groups and networks in Kibera. Some of the key social groups include women, youth, men, elderly and village elders and entrepreneurs. The other key players include religious groups and networks. The social groups work together with the local administrators in the implementation of the government and private sector led programmes. The local administrator undertakes awareness creation on public policies and programmes while the social groups undertake advocacy and implementation of activities. The social groups obtain strategic technical support from academia, private sector, several NGOs and international organisation implementing various livelihoods and awareness interventions with residents mainly through community-based organisations, various social groups and individual opinion shapers.

Figure Organisational Arrangement for DRR & Housing Planning in Kibera Slum, Nairobi City

Figure 2: Institutional/Organisational Arrangements in Kibera Slum, Nairobi City

Local social groups are powerful actors in planning and DRR in informal settlements. Table 1 lists the various social groups identified to be crucial for Kibera's future planning.

Table 1: Social Groups in Kibera

Stakeholder	Relevance
1. **Women**	They are more disproportionately affected by the impact of hazards in the informal settlement. They are great utilizers of the social assets and amenities in the informal settlement and thus their voices were critical in the exercise.
2. **Men**	They mostly make the opinion shapers and local decision makers within the informal settlement. Therefore, they were able to understand the present context of Kibera and voice out their views for the model Kibera
3. **Youth**	They are the future as it were, for Kibera. The visioning exercise needed to borrow strategically from their ideas.
4. **Elderly/*Nyum ba Kumi* Elders**	They are persons who have lived in Kibera for long and understand its past context better. They are also in touch with the everyday activities in the informal settlement as the local leaders. Further, they were in a better position to explain the past of Kibera and their hopes for the future.
5. **Businesspeople**	The businesspeople are mostly affected by the policies around their operations. They also are heavily affected by hazards when they occur as this destabilizes them economically. Their voices were crucial in ensuring that economic perspectives were taken into account for Kibera 2050.

3.3 POLICY OUTLOOK OF KIBERA

The understanding of Kibera's policy context is important in revealing potential policy gaps and trade-offs within which emerging policy bundles could be negotiated. The policy context of Kibera spans from both national and county government domains (Figure 3). The 2010 Kenyan Constitution created the Nairobi City County Government (NCCG). The NCCG alongside other 46 County Governments have been mandated to take charge of DRR management and city planning in the entire Nairobi including the informal settlements. The Kenyan Constitution enacted in 2010 gave room to the emergence of relevant policies such as the Urban and Cities Act (2019) and the Kenya's Physical and Land Use Planning Act (2019) both of which allows the county government to declare a human settlement a Special Planning Area (SPA) in Kenya.

 As an overarching strategy for development planning, the county initiated the first and second County Integrated Development Plan in 2013-2017 and 2017-2022 respectively. The NCCG implement disaster management and firefighting services and housing services within specific policy mandates. The NCCG passed a disaster management law in 2015 known as the Nairobi City County Disaster and Emergency Management Act, 2015 and the County Emergency Operations Plan (CEOP) 2021. The law replaced

the city-by laws, adopted by the defunct Nairobi City Council, which ended its term when NCCG came into force in 2013.

In addition, Nairobi City County government has facilitated at least 12 sectors to develop Standard Operating Procedures (SOPs) to reduce risk which also align to the National Emergency Operation Plan (NEOP,2020) & CEOP (2021) and the city DRR Act (2015). CEOP establish the Nairobi County Disaster Management Emergency Response Committee (DMC), which draw stakeholders from state and non-state sectors. Through the Kenya's Physical and Land Use Planning Act (2019), the NCCG gazetted Kibera as a Special Planning Area in 2021 within which new slum upgrading programmes such as the Building Climate Resilience for the Urban Poor Programme (BCRUP) 2020-2030-Kenya spearheaded by the State Department of Housing and Urban Development. The SPA gazettement marked the commencement of a preparatory phase for comprehensive sector assessments and planning.

Even though DRR and planning is bestowed on the Nairobi Country Government following the enactment of Kenya's 2010 Constitution, the national government in collaboration with partners such as the UN-HABITAT, the world Bank, have, in various occasions-initiated slum upgrading programmes targeting Kibera and the other slums. In 2004, government initiated the Kenya Slum Upgrading Programme (KENSUP) which aimed to improve lives and livelihoods of people working and living in slums through various initiatives and interventions. Through KENSUP, a new social housing scheme was initiated in Kibera Soweto East housing project-the first housing upgrading project in Kibera and the country. The site consisted of 600 housing units comprising of 17 blocks of three roomed houses which were completed in 2016. However, court cases and other policy related issues slowed down the delivery. The Kenya Informal Settlement Improvement Project (KISIP) initiated in 2011 was designed to complement the KENSUP. The national government spearheaded review of policy support, which led to the development of the National Housing Policy (2017), Housing Act (2012), National Urban Development Policy (2016) among other relevant policies. These policy options triggered partnerships which have enabled the national government to initiate various housing programmes. KENSUP was reinforced by the launch of the Kenya's Affordable Housing Programme (AHP) in 2017. The AHP promised to deliver 500,000 affordable homes over a five-year period, and involved a number of incentives and supports to enable the delivery of affordable housing in Kenya. In 2019, the government launched Kibera slum Phase-II aiming to build 4,335 affordable housing units in Kibera Zone B- Soweto slum. The programme is going on in Kibera with the new government in place.

While a positive step towards enhancing the quality of life for the urban poor, the scheme faced various social challenges including affordability especially for the targeted slum residents whose earnings could not pay the subsidised rent of Ksh 3000 (USD 30) per month that is about 70% of the average income of most of Kibera residents. Additionally, DRR and various social amenities that are important for the slum residents were not clearly integrated in the scheme. Consequently, various residents who were initially allocated these houses, returned to their original informal shelters which they felt were affordable and socially integrating. This experience reveals the limitations of conventional slum upgrading programmes and an indication that approaches to DRR should be considered as part of wider social and developmental issues.

The new housing programmes, already highlighted above, are now increasingly becoming conscious of the need to integrate DRR in slum upgrading. However, the lack of adequate evidence and

frameworks to support this integration remains a challenge. The new programmes such as the SPA and BCRUP require dedicated frameworks to integrate risk consideration in the developing planning.

Figure 3: Policy Outlook for Risk Reduction and Housing in Nairobi (Tonui, C. 2023)

3.4 POLITICAL ECONOMY OF KIBERA

Kibera informal settlement was recently designated as a Special Planning Area with the aim of achieving urban regeneration and redevelopment. As part of the SPA, The Nairobi Metropolitan Services (NMS), a national government-led agency, was tasked with overseeing the implementation of development projects and activities in health, transport, urban planning and development, and public works and inspectorate departments in Kibera. Specifically, NMS was charged with accelerating the implementation of the Big4Agenda, which encompasses the provision of affordable health services, housing, seamless and integrated transport systems, and water services. Nevertheless, certain legislators and stakeholders have criticized the initiative, citing its potential to undermine constitutional and other relevant policies on devolution.

Despite the best efforts of NMS in Mukuru, the politics and interests of different actors in Kibera has hindered the inception of the Special Planning Area program. Due to past experiences of displacement from Mukuru, the Kibera community seem to have developed a perception against some powerful actors especially the real estate developers who they perceive are responsible for their displacement. The residents therefore mobilized against the SPA implementation process even though these processes were also exacerbated by the prevailing political situation at that time (i.e., the 2022 general election year). Such political seasons are often characterized by limited participation from stakeholders and local communities in the implementation of the projects. Following a change in government, the NMS was deemed unconstitutional, leading to confusion regarding the implementation of SPA programs. Consequently, many NMS staff members were declared redundant, while some were absorbed by the County Government.

In order to guarantee the prosperous execution of the SPA and other planning initiatives in the future, it is crucial to appropriately involve stakeholders, establish political support, and acquire a comprehensive understanding of the predicaments affecting informal settlements in Nairobi. Despite the primary objective of urban renewal and redevelopment, insufficient participation of stakeholders, political meddling, and the current political climate in Kibera have hindered the implementation of the SPA. The TCDSE offers a more effective approach, utilizing a bottom-up model for tackling urban challenges.

3.5 THE VISIONING METHODOLOGY

3.5.1 Conceptual framework: The Tomorrows' Cities Decision Support Environment

The visioning exercise was guided by the ''Tomorrow's Cities Decision Support Environment (TCDSE) '' conceptual framework (Figure 4). The TCDSE provides a favorable setting for decision-making about disaster risk reduction in a pro-poor, inclusive and pedagogical way. TCDSE brings together stakeholders from various backgrounds and elevates underrepresented voices in disaster risk reduction discussions. Besides, it also democratizes access to knowledge and tools regarding disaster risk, which are often monopolized by a select few. Recognizing that disaster risk affects all urban residents differently, the TCDSE views all stakeholders as experts in their own way, allowing for inclusive and diverse contributions towards risk-informed planning, especially in rapidly growing and less developed urban areas[1].

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[1] Hope, M., Filippi, M. E., Ensor, J., Pelling, M., Comelli, T. (2023). Future Visioning for Pro-poor Disaster Risk Reduction in Tomorrow's Cities. Tomorrow's Cities Disaster Risk Hub. bit.ly/3WYffK8

Figure 4: Tomorrow's Cities Decision Support Environment framework

The TCDSE is composed of five main stages of the research cycle (Figure 5). The first is 'Future visioning' which involves engaging the various social groups in a community to collectively map out their vision for the city through a participatory interactive methodology. The second is called 'Visioning Scenarios' where different visions are coverted into different spatial and non-spatial future options for urban development with the support of geographic information system (GIS) tools. The third stage of the TCDSE is fully computationally based. Here, visioning-scenarios are subject to multi-hazard modelling that produces different impact metrics, so risk is holistically evaluated. Data from this stage will inform participants, for instance, on which options lead to more casualties, or infrastructural or environmental damage. Such results lead to the fourth stage, 'Risk Negotiation or Agreement'. This is when participants understand how different visioning-scenarios performed and which ones lead to less risk (based on a collective understanding of the concept) and additional benefits (e.g., less gentrification or carbon footprint). Finally, participants engage in discussions about the consequences of their chosen scenarios and a possible institutionalization of the TCDSE in each city – 'Scenario Assessment'. The image below summarizes a TCDSE interaction, which could happen in loop continuously.

Figure 5: Flow of activity for Tomorrow's Cities Decision Support Environment framework

3.5.2   Specific steps in the Visioning Exercise

3.5.2.1 Preparation for the Visioning Workshop.

As part of the preparation to the workshop, the Nairobi Hub' Visioning Team undertook a comprehensive stakeholder mapping exercise and identified a local champion with good understanding of the local context. Together with the local community champion, the Visioning Team held discussions with the office of the Kibera- Sub-County Commissioner and area Administrative Chief from where consent to implement the workshop was obtained. The Commissioner's office additionally shared more details about the social and governance structure of the Kibera. The engagement with these local was useful in ensuring the legitimacy of the process and provided initial opportunities to link the visioning outcome to broader agenda of the government. The visioning workshop was held in the Kibera' Constituency Development Hall.

The Visioning team was mindful to use the local slang language dubbed *Sheng'* during our preliminary engagements and dressed in a simple manner in order to identify with the local community and this made them comfortable in interacting with the team members. It is the same strategy that we employed during subsequent visioning exercises and this enabled us to win their confidence and trust to share ideas and input.

The Team also undertook a transect walk in the research areas which shaped discussions before and during the visioning exercise. During the transect walk, the visioning team was able to interact with the Kibera residents and to illustratively see precarious levels of flood and fire risk in the informal settlement. They engaged community champions in mapping out the relevant social groups who were involved in the visioning workshop.

3.5.2.2 Implementation of the workshop

The Visioning exercise was conducted in five steps also representing milestones (Figure 6). (0) sorting disaggregated stakeholder groups; (1) developing shared visions and surfacing values based on everyday life; (2) spatializing and complicating visions in the face of hazards and their negative impacts; (3) outlining policy expectations and discussing scale and temporalities; and (4) transitioning to visioning-scenarios. The exercise was undertaken over two days as outlined in the programme of activity presented in the Annex.

Figure 6: The future visioning milestones and steps

a. <u>Developing shared visions through the Rivers of Life method</u>

To develop a shared vision, the Rivers of Life methodology was adopted. The rivers of life method has been deployed by the Nairobi team in stakeholder engagements and it draws from the STEPS Centre's pathways approach to building shared understanding of complex societal problems. The approach is used as a way of opening and understanding the life history, experiences, aspirations of people drawn from diverse backgrounds. Participants use the analogy of a river to reflect and visualize some of the key stages of their lives, whether positive experiences and influences, or difficult challenges and what these mean for the future.

The metaphor of a river as a way of depicting a personal journey or history is widely understood across cultures. In relation to the specific context and aims of a workshop, the method allows an individual not only to portray their present life, but also the historical twists and turns, and discontinuities of the path they have followed to reach this point. The rivers of life may also be extended beyond the present, in order to illustrate the participants' expectations and aspirations for the future.

In research context such as the visioning exercise, the river of life method allows researchers to learn simultaneously about the experiences of individuals, small groups and their communities through a

guided conversation with a carefully selected group of workshop participants. The exercise should reveal and document, respectively, events that have affected the whole community, events that affected particular sub-groups (e.g., a flood or landslide that affected only part of a village), and events that were unique to individual families or households. In the case of events that had broad impacts, the method enables researchers to explore differential experiences of and perspectives on common events. This helps to expose topics where the community has issues in common and areas where its interests or concerns differ or diverge.

The experience of sharing personal life histories to a group of people who belong to the same community can be eye-opening for the participants. It may be instructive for community-members to realise that their own experiences of an event, such as a natural disaster, are similar to or different from those of their neighbours and peers.

The river of life method was used at the visioning exercise to serve both as an ice breaker and as a technique to sketch out personal and group narratives of the past, present, and future (using a timescale of the year 2050) for the Kibera residents. This allowed participants to reveal ways in which the settlement's planning process has been impacting on their lives through development, disaster risk exposures and experiences and what they would like to see as a safer tomorrow's Kibera. To draw out rivers of Kibera, participants were grouped into the five social groups representing; the youth, men and elders (who are viewed as the opinion shapers in the community), women, and businesspeople drawn from all the wards and villages in Kibera. This grouping ensured inclusivity and appreciation of the diversity of views and thoughts within the Kibera community.

Each participant in the respective groups drew their own rivers of life applying key words, drawings, or illustrations that describe a past event, a current event, and an event that they foresee happening in their future i.e. by the year 2050. At least one of the drawings/keywords needed to allude to hazards i.e., describing their lives in Kibera and how they have interacted with hazards (placing emphasis on floods and fires, the most prevalent hazard in the community) at a personal level.

Each participant then shared/discussed their already mapped individual river of their life in Kibera with their group members. This then allowed the group members to bring their diverse experiences and aspirations together to draw/sketch a collective river of Kibera. The timeframe ranges for the past differed for each group depending on their capacity to remember, their age, and how long they have experienced life in Kibera. The objective of discussing the individual rivers of life in the respective groups was to move the participants from individual to collective visions, and from social to socio-urban statements, that is, statements that relate to the city and its dimensions.co-mapping and analyzing future visions. Overall, the rivers of life exercise formed the basis of discussions of day one which was transitioned to drawing out the visioning scenarios in the following day.

b. The Wheel of Assets and Visioning Scenarios

Having drawn the 'River of Kibera', each of the disaggregated groups proceeded to state collective statements about the past and present of Kibera. To do this, the participants allocated the elements of their visions onto the Wheel of Urban Assets, and by analysing the collective aspirations mapped out onto the 'rivers', negotiate a vision statement for the future that represents each particular social group.

To develop the collective vision statement, focus was given to the future (down the river) to identify the key elements that would feed into the vision statement. The vision in this context is what is in the horizon of the river, located on the '2050' section, but is a reflection of the past and speaks to the present. It is a synthesis of what people aspire for their descendants or their progeny. With the context of Kibera in mind, the group facilitators moderated the sessions to ensure that all the statements captured at least all the elements in the wheel of urban assets. This would ensure that the participants understood how their visions related to different urban dimensions. Ideally, some of these statements would refer to hazards, among other elements.

The Wheel of urban Assets is both a framework for a progressive thematic analysis of conversations, and a method for systematically engaging with disaster risk reduction through the future visioning methodology. The wheel articulates two different dimensions. The first speaks to different aspects of urban life and is initially sub-divided in seven categories (with different colours as shown in Figure 7 below): Micro infrastructure (housing); Macro infrastructure and facilities; Social assets; Jobs and livelihoods; Knowledge and cultural assets; Environmental assets; and Institutions and rule of law.
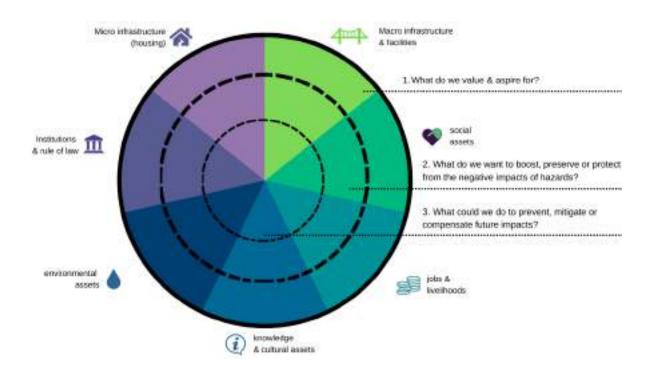

Figure 7: Wheel of urban assets

c. Visioning Scenarios

To develop visioning scenarios, the next steps involved the use of printed maps of Kibera. The second dimension of the wheel speaks to three key questions that were asked during the scenario visioning exercise and the different milestones:

i. The first question (emphasised in Milestone 1) is about aspirations and values. The question seeks to answer the participants' (spatial) aspirations for future Kibera (2050) and what changes they would like to see in the future.

ii. The second question (emphasised in Milestone 2) introduces hazards into the equation. It seeks to understand, from what is valued and aspired for future cities, what should be boosted, preserved, or protected from hazards. As a visualisation and interactive tool, the wheel supports participants in elaborating the reasoning behind these choices and to understand priorities that will be later translated into urban development plans.

iii. Finally, the wheel prompts strategic action – often phrased in this toolbox as non-spatial or soft policy alternatives. It asks what to do to prevent, mitigate or compensate future impacts based on the previous assets that have been highlighted.

d. Spatial representation of visions

Once each of the social groups had mapped their aspirations for the Kibera into the wheel of assets, they translated the aspirations from the Wheel into a spatial representation. This involved drawing a spatial map of Kibera, marking the major landmarks, major infrastructures and social amenities. They were then allowed to translate the aspirations onto the map and locate where they would want the various land use changes to be in order to achieve the aspirations. In doing so, the aspirations were complicated a bit from just aspirations for 2050, but also identified what would need to be adjusted in the maps and plans if the populations were to be doubled by 2050. This complicated the visions with some possible realities of population increase.

e. Policy bundles

Finally, each group outlined key Policy Bundles or possible interventions that could help achieve the stated visions. This was guided by the question about what one could do to prevent, compensate, or mitigate the future impact of hazards. These policies should be about preventing hazards from becoming disasters, about mitigating the impact of hazards, or about compensating people for damages. The policies should also be universal but keeping in mind the social identities of each group when brainstorming the options. At the same time the groups were also to identify possible changes that could impede the realization of the mapped aspiration.

5. FINDINGS & DISCUSSION

This section outlines some of the outcomes of the visioning exercise for each of the social groups involved in the process. The section is relatively descriptive and aims to capture the various ideas and practical aspects of that were highlighted by the participants. The results are presented as per the various sections of the visioning exercise and for each social group represented in the workshop.

4.1 THE YOUTH

> **Youth Group Vision Statement***: A 2050 Kibera Safe for Youth with a voice, access to decent jobs, a clean environment, and affordable housing.*

Figure 8: Youth group 2 during the visioning exercise

4.1.1 The river of Life for Kibera from the Youths' Perspective

The river of life analogy was used to map out the past, present, and future of Kibera youths (see example case in Figure 9 and detailed in Table 2). While the Kenya's Vision 2030 and innovation outlook 2022 (Atela et al., 2022) reveals that Kenya's economic transformation is hinged on its huge youthful share of the population, usually, the insights and inputs of the youths are less integrated into the development decisions and disaster management plans. It is widely assumed that the youths are either in some form of education, or training or too engaged in job search and present self-realization. The voices of young people are therefore mostly excluded in community development plans or represented by other social groups. In the Kibera Visioning process, the youths had a chance to map out their aspirations for a future Kibera just like any other social group. Table 1 shows the collective river of life for the Kibera youth. Generally, the river of life is characterized by socially driven interactions where green spaces for showcasing talents, discussing opportunities is critical. While the

role of green spaces in supporting risk management discussions and planning is highlighted, the youths tend to see these spaces mainly as areas of social engagements, discovering their talents and sharing opportunities especially jobs. The aspirations for the youth may be anchored on enhancing social amenities as platforms for exchanges, accessing or knowing about opportunities but the future seem to be relatively uncertain due to the present complexities and challenges. The increased use of digital platforms and applications for engagement remains a key future aspiration for the youth.
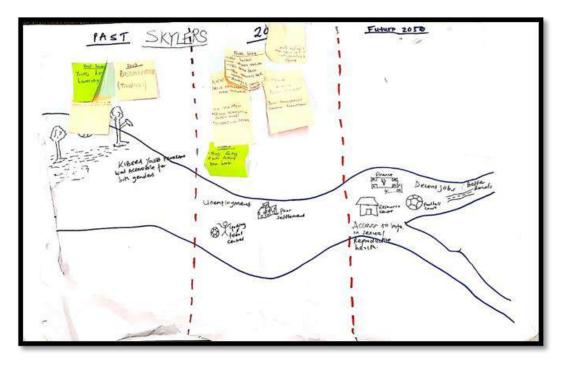

Figure 9: The river of Kibera developed by one of the Youth groups

Table 2: Summary of the youths' collective river of life in Kibera: past, present, and future aspirations from the youth group

The Historical Kibera from the youth's perspectives	The Present Kibera from the youth's perspectives	The Future Kibera from the youth's perspectives
For majority of the youth, the Kibera of the former years had a connotation of a clean, green and socially integrated set up. From their own experiences or through stories that they hear, the previous year's Kibera was characterized, with clean rivers, beautiful green spaces, and spacious playgrounds hence the name Kibera. Kibera is the Nubian word for Forest or jungle. The Ngong River was the main source of water for domestic use. The river drains into the Nairobi dam, which hosted several activities such as swimming, fishing, and boat riding. Young people had centers and open grounds which acted as safe spaces where they could share ideas, interact and talk about various issues including gender, talents, security, disaster management, peacebuilding among others. Besides, the youths in Kibera had a strong social integration and therefore social differences was not a major issue. There was no congestion, and the houses were adequate with the resources available, though not in good conditions, but adequate to serve the local people and the youths. There were few cases of disasters	The current Kibera presents a gradually deteriorating situation with lost glory. The green spaces are continually diminishing, the safe spaces are no longer there, and the youths are surviving on privately owned halls and roadside stages to meet up. The Present-day Kibera is highly congested, and many youths are worried about the future. More cases of disaster are reported in Kibera with floods and fire dominating the list. As much as the infrastructure especially road access has somehow improved and the main roads are tarmacked or made of Murram, they are too small to accommodate the ever-increasing transport needs. The river spaces have been encroached and the trees cleared for shanty housing. Most of the open spaces have been taken over and grabbed or controlled by unlawful cartels. Social integration was highly impacted during the 2007 post-election violence and in as much as the youths are trying to recover and restore the lost glory, a lot more needs to be done still to enhance the youths' social	The future of Kibera seems to be bleak for many youths as many are less hopeful that things will change for the better. While they appreciate that the future Kibera could go either way, most youths strongly feel the future may even become worse if no action is taken. Most youths are worried about the bleak future of Kibera looking at the current state where the remaining trees and green spaces are countable and reduced in size, the river is highly polluted, poor sanitation and drainage, no safe spaces, and congested housing. As narrated by one of the youths, "*Miaka zijazo, nahofia wajukuu wangu wataona miti kwa museum*" translated as "*In the future I'm worried my grandchildren will only see trees in the museum*". Most youths fear that their aspirations for a better Kibera may not be realized as their voices are usually less integrated into development planning. They fear that the decision makers either don't care much about the local transformation or have misplaced priorities and thus the future of Kibera may be worse even with more disasters. As noted by one

such as floods and fire since the river has its natural meanders and no encroachment. The overland flows were adequate and there were less experiences of fire incidences. Overall, the typical Kibera youth had access to a clean, green, and safe environment. What was lacking were digital platforms and resources for timely and adequate information.	integration beyond the five-year election cycle. However, most youths acknowledge the cheap and affordable transport costs to the CBD, the majority of them however walk. There is improved access to the internet and mobile phone network hence they can chat and connect on social medial platforms but the cost is prohibitive for most of the young people who are jobless and have no source of income.	youth *"we can plan for the future but there are many impediments that could stop us from realizing this desired future''*

4.1.2 Kibera Youth Aspirations for 2050

The Kibera Youths were able to document their aspirations for the future Kibera through heated discussions, debates, negotiations, and consensus building during the workshop. Most Kibera youths are jobless and aspire for a more formal and rewarding source of livelihood in 2050. They seem to agree that the low income among most youths makes them more vulnerable to disaster risks. This may mean risky lifestyle such as seeking shelter in disaster prone areas as a last resort. In other words, many youths are aware of the exposure they and their families are subjected but they have no alternative to fall back upon. When disasters occur, the youths are usually the first community responders. They therefore envisage a future where systems and resources are accessible to the youths and these are integrated into the city's emergency response unit. More specifically, the Kibera youth aspired for the following in 2050:

Figures 9-14 show the youth aspirations for the year 2050

Social and institutional governance	**Economic**
Kibera youth whose voices are organized and structured into the development planning agenda. More effective youth representation in the local, city, and national governance and political leadership. This is to ensure the change they want reaches the decision-making space and impacts trickle down to the local youths.	Kibera with well-demarcated road networks and streetlights.
	Youths with more decent and rewarding income sources or livelihoods to reduce their vulnerabilities.
More open spaces for every block of the residential building, where the youths can meet and engage in sporting and art events.	
Environmental and DRR	**Infrastructure**
More effective waste management structures with local youth groups recognized by the city government and supported to innovatively generate income from the waste management cycle. They envision a future Kibera with designated waste collection sites and effective periodic collection by the city authorities. This will reduce the dumping on rivers and blockage of drainage networks.	More modern infrastructures including road networks, bridges, streetlights, hospitals, marketplaces, and playgrounds. This will enhance access to critical services and mitigate vulnerabilities to disaster risks.
More green spaces and restoration of the Kibera River and Nairobi Dam.	More modern and spacious housing (Verticalization) to accommodate the current and future population. The youths aspire for stone-walled houses with a maximum of 10 floors, fitted with lifts to accommodate those with disabilities. However, they caution that the houses should be more affordable, and priorities given to the current Kibera residents.

Figure 10: Kibera youth aspirations

Figure 11: Youth group 1 Proposed future land use map of Kibera

Figure 12: Youth group 2 Proposed future land use map of Kibera.

Figure 13: Youths Group 2 Proposed Land use map

Legend

Land use type

ADMINISTRATIVE UNIT	CEMETERY	HOSPITAL	POPULAR HOUSING
BUSINESS HUB	CHILDREN PARK	MARKET	RELIGIOUS CENTER
ROAD	COMMERCIAL	PARK	RIVER
RESIDENTIAL	EDUCATION CENTER	PLAY GROUND	RESIDENTIAL (MODERATE DENSITY)
	GREEN AREA	POLICE STATION	

Credit: Nairobi Risk Hub 2023

Figure 14: Youth Group 1 proposed land use map.

4.2.3 The wheel of urban assets for the youth aspiration

The listed aspirations of the Kibera youths were then collectively mapped into the Wheel of assets, to sort and classify the aspirations. The exercise revealed that most of the Youths' aspirations were on jobs and livelihoods, institutions, and rule of law and infrastructure respectively as shown in the wheel in the figure 15 below.

Figure 15: Mapped Youth Aspirations in the Wheel of Urban Assets

Table 3: The grouped visions and aspirations of the youths on the Wheel

Infrastructure: Young people envisioned more streetlights along major roads to enhance security**, the** construction of 1 shopping mall in each of the 3 zones of Lindi, Makina, and Laini Saba, the construction of cycling paths along major roads, upgrading the current public schools and constructing more modern public primary and secondary schools with more teachers and constructing at least 1 free public toilet in each of the 3 zones. The youths envisioned an upgrade of the current murram roads through the slums to the tarmac, wide enough and well-marked with traffic lights.

Social Assets: The youths aspired for more non-restricted safe spaces free from drugs where young people could meet and discuss their key issues in the community. They also envisioned sports and recreational centers at least 1 in each of the three zones to engage in sporting activities like football.
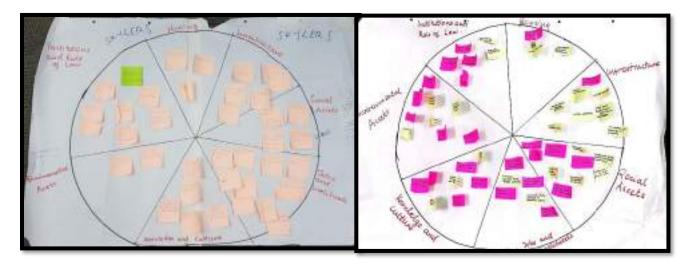
Jobs and Livelihoods: Unemployment is a key challenge in Kibera and therefore this category featured the most in the youth's aspirations. The youth envisioned a Kibera with diverse opportunities for employment ranging from formal to self-employment. The youths appreciate that both formal and informal but rewarding sources of livelihood will sort most of their needs and reduce vulnerability.

Knowledge and Culture: The youths highlighted the need for frequent cultural activities to bring young people together, preserve the religious spaces, provision of study scholarships for the youths to reduce school dropouts, and increased programs that support the boy child. Respect for the youth space and personal spaces is also a key priority. As mentioned by one of the youths, "*women should have a right to make their own decisions, they should be concerned for their health without consulting anyone*". While most youths appreciate the role of religious spaces in Kibera, they think they should be contained and monitored to reduce radicalization and exploitation due to their vulnerabilities.

Environmental Assets: Improper waste disposal is a major issue of concern in Kibera. The Young people suggested 3 designated waste collection points where they can be sorted and later collected by the county waste management team. They also suggested increased environmental awareness through environmental education programs on the need for a clean and safe environment.

Institutions and Rule of Law: Security plays a major role in the development, to achieve the Kibera 2050 vision, the youths advocated for improved security through increased police presence, implementation of policies and regulations, allowing youths to freely speak on their rights, representation of youths in leadership and implementation of tougher laws that protect riparian areas.

Housing: Affordable housing through vertical buildings with clean water and electricity was a key priority for young people.

4.2.4 Interventions and Possible complications

Various interventions were highlighted by the youth. These interventions are mainly in line with the stated aspirations and largely underpin the necessary social and institutional shifts required to achieve the youth vision 2050 for Kibera. Representation and institutionalization of youth voices in decision processes is a key intervention that most youth feel would enable the desired change. Additionally, various infrastructure plans and upgrades including housing, roads, social amenities are key areas that would serve multiple purposes including enhancing opportunities but also safeguarding the community against the risk posed by common hazards including fire and flooding. They believe that proper housing and infrastructures, restored river, and effective waste management strategies could be opportunities for broader social-economic and environmental integration that is key to the desired transformation. Some of the interventions proposed include:

- Stonewalled-story residential buildings in Kibera to accommodate the large and growing population, equipped with affordable essentials such as water legal electricity connections.
- River restoration and green spaces restoration in Kibera through the local community, private, and government partnership programs.
- Efficient and effective locally coordinated waste management programs that allow local communities to clean their environment and the city authorities support by frequently and effectively collecting the wastes.
- Youth leadership and representation in the local governance and decision-making platforms.
- Controlled Building/architecture such that when the houses in the future Kibera are full, no more houses are built to ensure social amenities and resources are not overwhelmed.

4.3.5 Impediments to the interventions

More often, youth aspirations are important in defining the future. Due to their demographic status i.e., young and at an early age, the youth remain realistically the change drivers for the future. However, it is important to note that their ambitions for a better future can be faced with a number of impediments including both personal and external factors. Youths are often seen to be ambitious and impatient in their quest for better livelihoods. On the other hand, they have historically been branded as future leaders who should envision a future that is prosperous and better than what is currently being experienced. However, in some instances, the energy of these youths has been used in ways that compromise a better and safer tomorrow. In Kenya and as in most African countries, the youth are key agents of political processes, pushing certain interests in the decision-making processes including urban planning. For instance, the youth have been in the frontline in advocating social change whether through negative or positive tactics including demonstrations and sometimes violent confrontations against specific decisions. They have been actively involved in mobilizing community members to elect particular leaders and have been agents of change. Some of these have been witnessed in demonstrations that averted private housing schemes in their area and certain land use plans which they feel is unfavorable to their aspirations. In other words, the role of the youth in frontline advocacy remains important- thus capturing their aspirations in DRR plans is valuable. However, a key impediment lies in the fact that this very important frontline advocacy is in most cases informal and not framed within institutional mandates to enable long lasting change. This makes the youth to be vulnerable to different interest groups but also to have their aspirations not considered

in planning processes. In the context of DRR, for instance, the youth again remain key in emergency response especially in case of fire of evacuation from flooding events. Yet, their role is DRR as local response teams or early warning teams is not institutionalized. Therefore, there are several impediments that are likely to affect the visions captured and some of these include:

- Lack of political goodwill and prioritization of change. Most decision-makers and political leadership either intentionally curtail progressive ideas or incite locals against life-transforming projects.
- Lack of clear information and temporary solutions especially on relocations if Housing problems are to be addressed.
- Land tenure issues and discomfort. Most landowners fear losing their lands in the transformation process and tend to oppose most of the development ideas through court injunctions and violence.
- Lack of awareness and knowledge by a majority of the populace on disaster risk reduction and how their daily habits contribute to or enhance their exposure and vulnerabilities.
- Harsh socioeconomic times in the city force the residents to mostly focus on their current socio-economic needs. Many want the current economic change for their families and relatives.

4.2 KIBERA MEN AND ELDERS

> **Vision Statement***: A future Kibera with vertical buildings and social amenities to accommodate the increasing population with public spaces left, and planning that is more inclusive*

Figure 16: The Men and Elders group

4.2.1 The river of Life for Kibera from the Elders' Lens

The elders from Kibera discussed, and mapped and documented the river of life of Kibera to capture how Kibera was in the past, its evolution to the present day and how they envision it to be in the future. From their perspective, the changes in Kibera have been widely defined by increasing population and influx of immigrants into the city in search of opportunities. This has compounded several challenges that were not existing then. For these elders, the aspect of inclusion remains important. They feel that the present Kibera is not inclusive and does not recognise the needs of marginalised groups such as the aged. It is survival for the fittest. In this, when disaster strike, they are more vulnerable. For the men, the burden of reconstruction and the social responsibility of being family heads has meant that disasters impose more responsibilities on them and sometimes affects their ability to plan for a better future. Any savings they make is often at risk of being swept away by among other expenses, reconstruction costs. The future for the elders should be more inclusive and with enhanced social safety nets for the marginalised groups. Insurance schemes for the elderly are socially inclusive infrastructure are critical (see Figure 17 for an illustration and Table 4 for details).
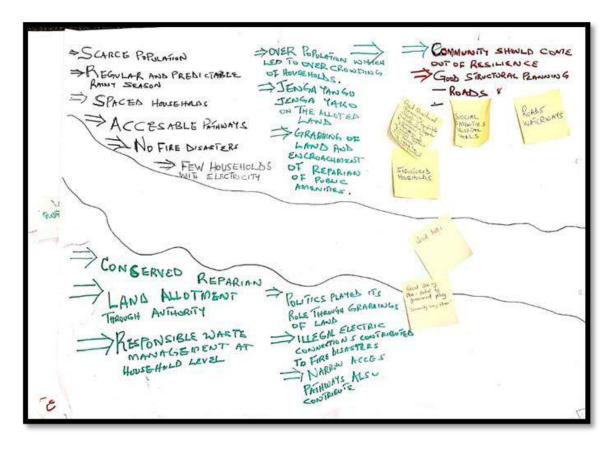
Figure 17: The river of Kibera developed by the Men and Elders group

Table 4: Perspectives from the collective river of Kibera as mapped out by the Men

The Historical Kibera from the Men and Elders perspectives	The Present Kibera from the Men and Elders perspectives	The Future Kibera from the Men and Elders perspectives
The population was small and therefore the settlement was well spaced from one house to the other with well designated social grounds and gardens. The river was clean, and waters clear for domestic and agricultural use. The main roads were murram and few but still served the area for accessibility. There were few cases of fire and flooding.

There was no dumping along the river and in trenches as the dumping was controlled. The municipality had set aside | The population has significantly increased and most of the previously open spaces have been converted into houses, the river reserves have been grabbed and no clear plan on buildings and building codes. The housing is unplanned and no key basic safety measures so long as people can settle in cheaply. Waste disposal is mostly targeted at the river with a few burnt in open grounds. The congestion has seen many houses inaccessible in case of fire or floods. Landowners have | The elderly envision a future Kibera with some order in terms of housing and settlement. They envision a Kibera with clearly protected and reserved green spaces, riparian lands and open grounds. The elderly aspire for a Kibera with clean and well maintained roads, well-coordinated and effective waste collection and management. They hope for socially inclusive amenities such as easily accessible evacuation centres, social |

dumping tankers at specific areas where households could dispose their garbage. The tankers were later emptied by the municipality every week. The surrounding/ environment was green with a lot of trees. There was some order in the community to preserve the riparian areas, no illegal dumping and the Village elders had the power and were respected to guide and provide guidance and order in the community.	been allotting and partitioning their lands through a local system they call *"Jenga yangu, jenga yako"* "build mine, build yours." Cases of fire and flood events have increased due to illegal connection of electrical power "*Kibera Power*", where some are even illegally connected from the public streetlights. Riverine encroachment, clogging of drainage mostly with wastes among others is rampant.	protection and universal health insurance for the elderly as well as socially inclusive infrastructure.

4.2.2 Kibera Elders Aspirations by 2050

The Kibera community elders generally aspire for a future better Kibera with a more well-coordinated and socially inclusive and safe infrastructure (see illustration in Figure 18-19). These elders envision a future that is more inclusive and with infrastructure designs e.g., housing designs that could accommodate the increasing population but at the same time take care of the elderly and the marginalized groups such as the disabled. Currently, the development of Kibera is relatively spontaneous with no clear considerations of the aspirations of the needs of different groups in development planning as well disaster management plans. While some of the social groups such as the youth, men, young women are often able to navigate through the evolving spontaneous houses, roads and social amenities, the elderly often face severe challenges in matching up these situations due to their dwindling energy levels as well as lack of access to information. Additionally, while the institution of elders in the Kenya society has been important in local decision making and shaping opinions including how various disaster risks are handled, the fast-paced growth and changes in urban processes and informal settlements such as Kibera presents new challenges to such traditional institutions and inclusion in contemporary urban planning processes. In these settlements, new forms of informal powers have emerged supported by a range of external interventions, politics among others, to the exclusion of wisdom and indigenous knowledge of the elders. Ultimately, the aspirations of the elders is to restore some elderly values in the planning process and create inclusive institutional systems that recognize their knowledge in informing the future. More specifically, the elders aspired for more in Kibera by 2050 as follows:

- Set specific garbage collection points where all the wastes can be placed and collected by the city authorities to the city's designated dumping site.
- Have the local youths assigned the role and the job to coordinate and collect waste from households and transport them to the designated temporary contained site.

- Have well maintained road networks with well-designed and maintained drainage network.
- Make available enough public spaces within public schools. Those that are available now especially in public schools should be maintained.
- Add two more public primary and secondary schools with the right infrastructure, human resources and equipment.
- Strengthen the capacity of local authorities such as chiefs, sub-chiefs, Trustees, Nubian elders, Nyumba Kumi leaders, who are indeed influential in giving local approvals and control masses in their jurisdictions.
- Construct socially differentiated evacuation points and Centres e.g., for the elderly, for the youth and for women and girls.
- Build infrastructural amenities including housing, roads that takes into account the needs of the elderly including passages and lifts access points among others.

To envision their future aspirations, the Kibera Elders group came up with their 2050 visioning map as shown below:

Figure 18: Men and Elders Proposed future land use map of Kibera.

Figure 19: Men and Elders Proposed land use map.

4.2.3 The classification of the Aspirations in the Wheel or Urban Assets and Spatial Representation

Table 5: The grouped visions and aspirations of the Men and Elders on the Wheel

Environmental assets	• Strictly preserve the green spaces especially along the river. • Well-coordinated, efficient, and effective community led waste management.
Institutional and rule of law	• Structured involvement of community Elders in the physical planning processes. • Strictly implement the 30m rule on protecting the riparian lands in Kibera. • Coordinated legal access to electricity in Kibera to reduce incidences of fire. • Have a law in place that ensures pathways between houses are at least 3 metres apart to reduce fire spread. • Give more governance power to the village elders, sub chiefs and chief to coordinate the local communities.
Jobs and livelihoods	• Have a social security scheme for the community so that the elderly down become disparate as they age. • Create more livelihood opportunities for the community to live and save to enable they age decently.

	• Equal job and business opportunities for all especially in the local administrations, local businesses and local organizations.
Knowledge and culture	• Increase the number of public schools in Kibera by constructing better and well equipped and resourced public schools. At least two well equipped schools in every ward.
Social assets	• Set aside safe and spacious designated social halls, at least one in each ward for recreational and community purposes.
Housing	• Verticalization in Housing - Since people will continue to increase, there is need to adopt a more accommodative and sustainable solution such us, building 4-6 floor buildings with amenities and systems to accommodate the elderly and the people with disabilities (PWDS). The group did not mind about the number of floors building, as long as they can accommodate many people but also inclusive. • House setting house to take into account safe, affordable and accessible to public basic utilities such as toilets, water, sewage, waste management, electricity among others. • Expand pathways between houses to be at least 30 metres apart to reduce fire spread. Have elderly homes set up to protect the old (beginning age 65)
Infrastructure	• A well-structured roads, trenches, hospitals, Social halls, schools. • To have legal electric power connections, to help reduce fire incidents. Set up more public schools with enough public grounds • Set up more public hospitals in each wards.

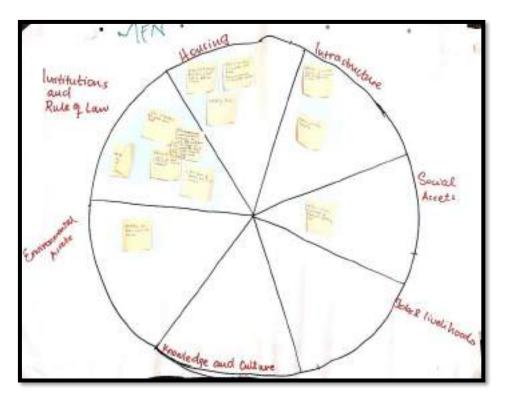### 4.2.4 Interventions and Possible complications

The elders identified various interventions for their 2050 aspirations. Key among them is the need to address the local land ownership issues as basis for effective and inclusive planning. They believe that when the proper housing designs and plans are implemented, then legal power connections will come into play and therefor fire risks will be reduced significantly. They also believe that if the riverine areas can be well protected and proper waste management implemented, then the drainage networks will be much improved and flood risks will be reduced. More specifically, the policy bundles identified by the elders include:

- Develop an inclusive housing plan for the entire Kibera with Up to 6 floors but with affordable rent specifications and maybe home ownership long term plan.
- Locally address the land ownership issues with transparency and inclusivity to ensure the land owners are not afraid of losing their land in the long run.
- Address the illegal electric power connection by inclusively agreeing with the locals as many are currently being exploited by landlords.
- Strictly implement the by laws protecting the river riparian lands and restore the dam to its initial glory. An inclusive and community led interventions can help deliver this.

- Establish a well-coordinated waste management strategy where the local youths can collect the wastes from households and deposit them in designated tanks or containers in each ward for collection by the city county trucks for the legal dumping site.
- A decamping site should be well thought and agreed on so that when the vertical housing are being constructed, life continues as usual.

Figure 20: Mapped Men and Elders Aspirations in the Wheel of Urban Assets

4.2.5 Challenges to the vision

Again, as already highlighted above, the aspirations of the elders may face several challenges. These challenges are mainly political and social complexities around land ownership, political goodwill, and general competition among different social groups. These fears are largely informed by the current situation where there are no structured ways of addressing development planning and DRR in an inclusive way. Instead, various social groups push for their own agendas thus the less privileged who are unable to push their way through or access certain information such as the elderly are often left behind. Some of the challenges identified include:

- Possible land ownership tussle between the local communities and the local city authorities. The land ownership is a sensitive issue and some public lands have been grabbed by private developers and local cartels, who may incite the public against any proposed development.
- Lack of the much desired and honest good political goodwill. Some of the city politicians, who have interest and influence in Kibera may want to benefit the most from the slum title and may slow down development progress through political incitements and court injunctions through sponsored local civil societies.
- The fear of the unknown by the local communities, who are mostly low-income earners. Many fear that Verticalization in housing and improved infrastructures may make Kibera too

expensive for them and they may be forced out of the city system. It may therefore be an uphill task to convince the majority of locals to support such processes and maybe implement the process in phases so that the outcomes can be used to convince the populace.

4.3 KIBERA WOMEN

Vision Statement*: A Developed, cultural, safer, inclusive and green Kibera.*

4.3.1 The river of Life for Kibera from the Women Lens

The Kibera women are one of the main social groups in Kibera who despite being at the centre of any disasters, are usually left out in most urban development planning processes. Most women in Kibera care for their homes and communities and run Micro Small and Medium Enterprises (MSMEs) to support livelihoods at the household levels. This implies that the women alongside children are among the social groups that are highly exposed to disasters. Additionally, due to care duties and of course certain traditions and cultures that prioritises men's voices in decisions and resource management, most women shy away from development planning debates and rely on the information from the men and the local authorities. In this visioning exercise, the local community women were given the chance to discuss and shape their vision for Kibera. Using the river of life analogy, they also mapped the past, present, and future Kibera as shown below. The rivers of life for the women is characterised by trajectory around changes in livelihood opportunities and impacts of some of the events such as disasters and political events such as elections, COVID-19 on their livelihood activities including small businesses. The landmark events for some of the women in the past include the elections that occurred in 2007, flooding that occurs during the main rainy seasons and fires that are relatively spontaneous, all of which cause severe damage to businesses, kiosks, vegetable stalls, houses and displacing families including children. For instance, one of the group members [Ibid] (see Figure 20) and Table for details) , described her river of life as beginning from 2007 from when there was the post-election violence in Kenya. This period saw a lot of political uncertainty and destruction of

property within Kibera. It also disrupted most economic ventures in the area and heightened the rate of tribalism. She also describes other developments in Kibera that have taken place up until then such as the road construction and the presence of schools that are emerging even though in relatively unplanned fashion.

Figure 21: sample individual rivers of life from the women

The Historical Kibera from the Women perspectives	The Present Kibera from the Women perspectives	The Future Kibera from the Women perspectives
The name "Kibera" is a Nubian name meaning forests .This describes how Kibera was in the past. A land full of tree cover, clean and smoothly flowing rivers. The area where present Kibera informal settlement sits today was a paradise supporting various varieties of wildlife such as birds. The Nairobi dam was a clean water body where various activities such as recreation and fish farming used to happen. Life in Kibera was described as being good with no calamities such as floods occurring. From the context of women, Kibera had a perfect ecosystem where tree cover was present forming a forest which supported wildlife .The river was clean free from pollution as women could draw	In the present time, the women noted that Kibera has changed drastically and for the worst. The increasing population in Kibera has led to cutting down of trees for settlement. The area has become congested as more houses are being built. The river is no longer blue and as described by a resident, has instead turned reddish due to the immense pollution caused by uncontrolled waste management. The people in Kibera began invading and occupying the riparian land increasing their risk to floods. The existing Nairobi dam, which played a crucial role in carbon absorption, became polluted as sewer systems were channeled to drain into it.	The Kibera women aspire for a safer, clean, green and developed Kibera. A Kibera with enough, well-spaced 10-15 floors buildings, well developed road network, improved drainage, preserved green and open spaces, well maintained market places, schools and hospitals. A Kibera free from waste and disasters.

from it for domestic use. The air in Kibera was clean and fresh with cool breezes from the forest. There were playing grounds for children to play soccer and entertainment sports. The population in Kibera was low thus few semi-permanent houses were present. Women used to grow indigenous food crops such as cassava in Kibera and fruit trees were thriving. According to the women, life in Kibera was more promising then.

Unfortunately, waste production has also increased leading to dumping in the rivers due to lack of proper management causing pollution in the rivers. Incidences of fire have increased, often destroying businesses, houses and meagre livelihood resources that households depend on. The area is also a political hotspot where often during elections there abound uncertainties. There is overcrowding as houses were built close to each other with poor building materials such as iron sheets. Illegal electricity connection is rampant, as residents cannot afford to pay the high charges for legal connections from Kenya power. Deforestation became the order of the day as people cleared forest cover for development.

Currently, Kibera has become a crowded place, as there are no roads neither clear pedestrian paths between houses. These circumstances have increased the risk of the existing hazards turning to disaster.

4.3.2 The women 2050 Aspirations and the Wheel or Urban Assets

The 2050 aspirations of Kibera women is mainly underpinned by livelihood security as well as safety and security for children through protection of primary health care, education systems and general gender protection in the face of disaster risks. The women aspirations are hugely aligned to the livelihoods as well as safety of their families especially children. Of all the groups involved in the visioning exercise, women provided some of the detailed recommendations that align to children welfare. These include the need for enhanced primary health care, education facilities, reproductive health hubs as well as safe, accessible and well-connected marketplaces. Supporting urban farming programmes and agri-business is seen by most women as opportunity for enhancing family nutrition. Most women have felt the impacts of disaster risks on their livelihoods and welfare. The lack of proper

evacuation centres especially for women and girls often put them at double risks both from the prevailing disasters but also to other human rights abuses such as sexual harassments – especially when disasters occur. They therefore recommend the need for accessible and gender secure evacuation centres. Despite their reported limited roles in decision making, most women aspirations were more around livelihood and social security for them and their children than strengthening their representation in decision making spaces as often reported in most participatory or public consultation processes. Some of the aspirations are outlined in the table below and also formed part of the wheel of assets (Figure 22).

Housing	- Planned housing infrastructure - In 2050, women hoped to have properly planned urban housing with green spaces within Kibera. They suggested that the houses should be built with durable materials unlike the contemporary ones mostly made out of iron sheet. The houses should also have the toilets and bathrooms separately built inside. - Social housing - the women envisioned a social system of house ownership in future Kibera. According to them, the local government should provide affordable and properly designed houses to the residents of Kibera with the paid rents leading to ownership in the long run. - Urban farming- in order to support food production for the families, the women envisioned provision of houses with designated spaces for kitchen gardens. - Durable and safe building materials - For a future secure Kibera in terms of housing, the women emphasized that quality building materials such as stones, which are more durable and strong should be used. - Verticalization- according to the women, future Kibera should have vertical housing of up to 10-15 storeys high of 10 by 10 ft. These houses should be built according to the economic capacity of the inhabitants. For instance, there should be one-bedroom houses, two bedrooms in that order.
Infrastructures	- More public schools - it was noted that only three public schools existed in Kibera. This were deemed inadequate and insufficient for the children in Kibera and thus the women saw the need of construction of more schools with the capacities to accommodate more school going children from the growing population. - Access to electricity- the women hoped that with the growing economy within Kibera by 2050, there should be regulated and safe access to electricity. They also suggested that the electricity could be harnessed from the nearby windmills in Ngong hills. - Clean water- clean, safe and affordable water supply to the people in Kibera through laying down of proper water pipes away from the paths of drainage and sewer systems to avoid contamination of clean water in case of breakage of the sewer systems. - Emergency response station for Kibera- the women wanted to see an emergency response station by 2050 that is fully equipped with trained personnel in order to curb the risks and address the hazards common

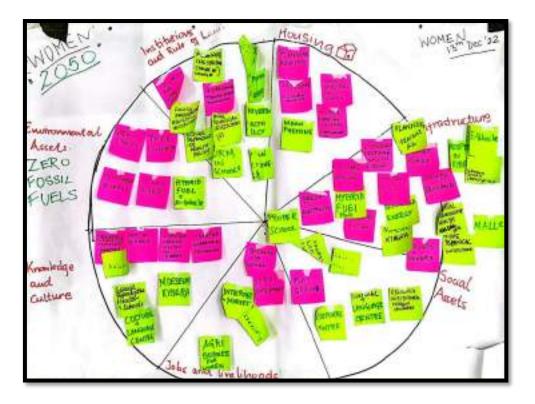|	
	within Kibera. They also wanted the station to be fully efficient when disasters occurs within the settlements.
	• Toilets and sewers- the women wanted a Kibera with well and properly constructed toilets inside people houses to avoid the pay to use toilets located outside their homes which exposes them to diseases. Properly constructed sewer systems to allow the disposal of waste.
	• Sexual reproductive health hub- the building of sexual reproductive health centers to enlighten and educate the women about their sexual health .This puts them in a space to be able to make informed decisions about family planning thus enabling them focus on growing as individuals and improving their livelihoods.
	• Business Malls- the construction of malls as places of business in Kibera. This will attract more investors in Kibera stimulating its growth as well as providing job opportunities for the community.
	• Better transportation routes- in order to improve accessibility of emergence response vehicles such as ambulance and fire brigades in case of emergencies resulting from fire and flood, the women envisioned a Kibera with wide and passable roads .The roads to be constructed to the standard width and be properly maintained.
	• Hospitals in Kibera- by 2050, there should be construction of more hospitals in Kibera as the available ones were not adequately serving the community. There should be the construction of more hospitals and the existing ones upgraded to level 4 for provision of better services to women and children.
Social Assets	• Community halls- by 2050, the providence of community halls was discussed as important as places of the women converging to share their opinions and experiences on various matters pertaining them thus empowering each other.
	• Religious institutions such as churches, mosques, cultural and language centers were discussed as assets to be preserved- these would provide spaces for seeking spiritual hope and guidance which is an important aspect in one's life.
	• Playgrounds- by 2050, more playgrounds should be designated for the children to play different sports and as points of relaxing.
	• Cemetery- the cemetery was a crucial social asset to the women who mentioned that it should be preserved to 2050.

Jobs and Livelihoods	• Business for women- the women envisioned a Kibera with designated spaces such as market places for women to sell their items. This would reduce the conflicts with various authorities as the kiosks and temporary market spaces along roads will be moved to formal spaces. They suggested that the current Toi market should be upgraded vertically to fit in more businesses.
	• Urban farming and agribusiness- with the proper housing, better water amenities, and the women envisioned that they would be allowed to practice small-scale urban farming within the green spaces.
	• Internet for online marketing- according to the women by 2050, there would be vast digitalization. They therefore suggested steady internet so that they could engage in online marketing for their goods and services.
Knowledge and Culture	• Training community on risk and disaster management- the women suggested that there should be vast training and disaster awareness programs with the community members on what to do to in cases of fire and floods. They suggested that this should be included in the primary and secondary school curriculums.
	• Disaster warning system for Kibera- there should be a disaster warning system for the inhabitants of Kibera to avert loss of lives and widespread destruction of property.
	• Museum in Kibera- the existing cultural center in Kibera should be upgraded to a museum for the preservation of the cultural aspects in Kibera such the history of the various tribes living there.
	• Cultural and language centers- there should be a major cultural center in Kibera by 2050.
Environmental Assets	• Green spaces- Kibera should have green spaces within the vertical housing projects.
	• Tree plantation- the women suggested that there should be increases afforestation in Kibera by 2050 to increase the water capacity supply to residents and to control the flood risk often at the areas within the river.
	• Clean river- by 2050, the river should be cleaned and restored to its former good state to improve the aesthetics of Kibera as well as reduce pollution, which had detrimental effects on the life.
	• Hybrid fuel and e-vehicles should be encouraged by 2050. The women envisioned a green economy Kibera that would protect the environment even with the growing economic activities.

Figure 22: Mapped Women Aspirations in the Wheel of Urban Assets

To envision their future aspirations, the Kibera women group came up with their 2050 visioning map as illustrated in Figures 23 and 24 below:
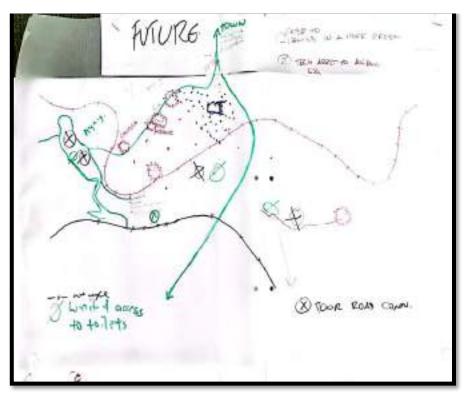

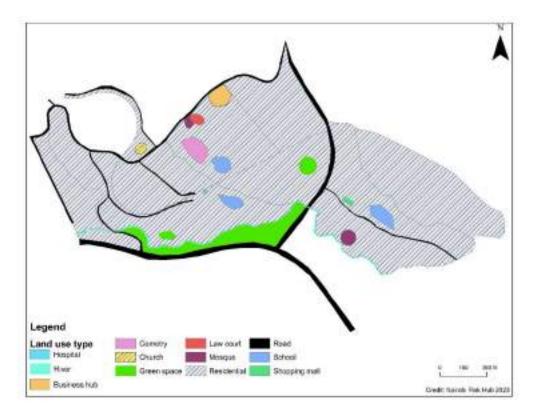**Figure 23: Women group Proposed future land use map of Kibera.**

Figure 24: Women Proposed land use map

4.3.3 Interventions and Possible complications

Based on their aspirations, the Kibera community women came up with policies that can help achieve the future safe, clean and prospering Kibera by 2050. These policies are discussed below:

- A policy to ensure that no buildings are put up on top of drainage lines. This is to ensure the safety of the residents of the houses as building on top of drainage lines causes the risk of houses being washed away when it rains.

- A policy to ensure that the riparian land is preserved along the river. In order to promote green farming on the riparian reserve, the women suggested buildings to be constructed 100 meters away from the river banks. Some part of the riparian land to be used to grow root crops such as arrowroots and the rest 50 meters for growing other food crops such as maize. This will as well ensure continuous food supply to the women and children on top of preventing cases of houses being built along rivers preventing risks of being affected by floods and water logging of the houses.

- A policy for proper waste management. This is to ensure that people do not dispose their waste in the river causing its clogging which leads to flooding from overflow of water when it rains as water finds alternative channels to move when its natural path is obstructed.

- A policy on gender safety in emergency response to disasters

- A policy for renovation of drainage systems in Kibera. This will ensure properly planned drainage systems are constructed to the best standards to serve the community in Kibera.

- There should be a policy to create awareness on Disaster Risk and management in schools. A curriculum on the same should be developed to ensure that the children are taught how to respond in case of floods or fire as they await professional help. This will help in minimizing the adverse effects of such hazards.

- There should be a common policy to encourage urban farming in the vertical housing. This is to create food security for the women to be able to feed their families as food will be easily available. It will also address malnutrition.

- A policy should be put in place to ensure allocations of space of amenities identified on the map with various purposes such as amenities to be preserved, to be built and upgraded. This is to ensure that the voice of people through public participation is heard, and their contributions considered when developing Kibera.

- There should be a policy to relocate people living along riverbanks and compensate them. This will ensure that they are moved from the high flood risk areas to safer areas within Kibera.

- There should be a policy to ensure that there are two functioning emergency stations in Kibera. The emergency stations to be properly built and fully equipped to ensure faster response to calamities and disasters. This will help in saving many lives, as members of Kibera will be receiving better response to disasters thus averting undesirable effects of hazards.

- A policy for building materials to be used in constructing houses in Kibera. Strong and durable materials such as stones and bricks should be used instead of iron sheets which act as a catalyst for fire causing rapid spread across many houses. The use of strong and durable building materials will prevent the risk of fire spreading to other houses as they act as a barriers.

- There should be a policy to ensure that the vertical houses are equipped with fire extinguishers to ensure rapid response by the members of Kibera in case of fire incidences.

- There should be a policy for all companies selling LPG gases to create awareness on what to do in case of incidences of fire to ensure safety of households. This is because of the frequent fire outbreaks from mishandling of LPG and M-gas while cooking in Kibera.

- A policy to encourage the use of renewable energy such as wind power from the Ngong hills. This will provide clean and affordable source of energy for the residents of Kibera thus help in doing away with the illegal power connections, which was noted to be a major cause of fire in Kibera.

- A zero fossil fuel policy. In order to ensure a just transition to green economy, there should be a policy to upgrade diesel and petrol cars, encourage clean cooking by minimizing the use of charcoal.

- There should be a policy to upgrade the existing cultural center to a digitalized museum to preserve the historical information about Kibera and ensure that information is passed to the next generations.

- A policy should be put in place to upgrade the schools to ensure that they are built vertically and that they accommodate innovation hubs for empowerment.

4.4 KIBERA BUSINESS COMMUNITY

Vision Statement*: *Favourable and modern infrastructure through an inclusively planned, just and developed business environment in Kibera.*

4.4.1 The river of Life for Kibera from the Business Community Lens

The river of life brought out salient features concerning the business environment and experiences of individual businesses in the past, what they currently experience and how the future, 2050, would be if pragmatic changes were made. Significantly, the river of life also pointed out disasters, floods, and fire, and how they impacted businesses. The businesses discussed were part of the Micro, Small and Medium Enterprises (MSMEs), which are a lifeline and an important source of livelihood for residents of Kibera. Examples of businesses pursued by the people of Kibera include vegetables stalls, ice cream parlours; a roadside chips parlours, a general shops/kiosks, play station places, poultry stalls and general groceries. For most businesspeople involved in the visioning exercise, they felt that currently there is a relatively congested business environment and infrastructure that is at high risk of disasters especially fire. For this group, the future should have clearly planned business centres that are risk proof.   The river of life for Kibera for the social group is summarized in the table below:

The Historical Kibera from the Business Community perspectives	The Present Kibera from the Business Community perspectives	The Future Kibera from the Business Community perspectives

Kibera was spacious to accommodate the population and the businesses. There was low competition among businesses as they were few. The environment was clean and water was available from the river. The road network was poor but the residents relied on the footpaths to access shops and markets. Kibera was safe for most businesses and there was great harmony as people knew their neighbors and the level of trust was high to even get credits from shops.	Currently, the room to do businesses is small and the vendors have to compete with residential houses for commercial activities. The nearby market is congested and there is lots of competition in every business. The demolitions for infrastructure developments has left many businesses struggling and many vendors operate on temporary structures mounted on top of drainage, alongside the roads and on every open spaces and corridors where many people pass by. The congestion has seen businesses operate even in riparian lands and accommodate illegal and counterfeit products for survival. Businesses struggle during floods and fire, whose risk have increased significantly.	A Kibera with well designated business centres, free from flood and fire risks. Business centres with malls markets which can safely accommodate the increasing populations and accessible to all traders and buyers. A safe Kibera with fair business competition.

4.4.2 Kibera Business Community Aspirations by 2050

In future, in 2050 the business community in Kibera are aspiring for:

- A business location that will not be destroyed by floods and fire hazards but accessible for all including persons with disabilities. A plan for a business area that will be developed into a business district incorporating the MSMEs into the plans.
- Kibera with green spaces where customers would have time to relax and access shops. Green spaces are to encourage more customers to visit the premises.
- Business areas with proper drainage network, sanitation and protected walkways to attract more customers.
- The business community aspire for firm structures that cannot be washed away during rainy seasons. The constructions should beware of the future possible floods and rainfall patterns.
- Resolved land ownership and tenure systems to allow for more permanent business structures to be developed and an end to overnight demolitions.
- Knowledge and access to business loan and other incentives from the government and private sector.

- Due to frequent fires at Toi Market in Kibera, the business community pointed out that fire stations will be needed near business premises to avert losses. In the past businessmen/women would lose stock due to frequent fires.
- Fire training and drills to be continually conducted in Kibera to avert future fires.
- More training on customer relations and entrepreneurship.
- Have waste segregation and recycling zones to create employment opportunities.
- Have an awareness programme on the residents' association and sensitization programs on elections and peace processes to avoid arsonists during elections.

To envision their future aspirations, the Kibera Business group came up with their 2050 visioning map as shown below:
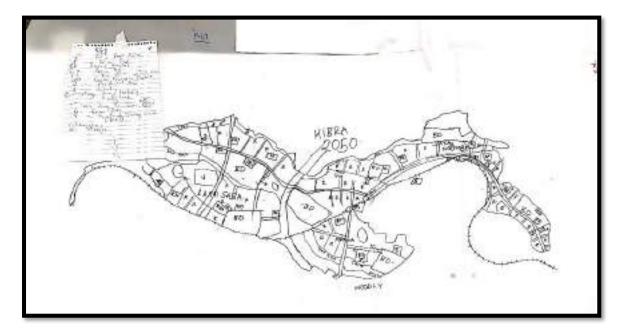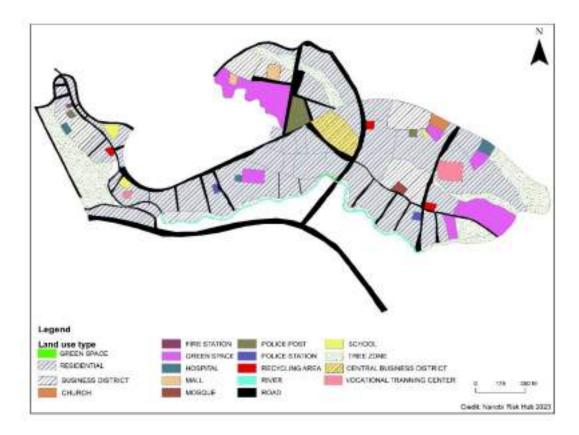

Figure 25: Business group Proposed future land use map of Kibera.

Figure 26: Business group Proposed future land use map.

4.4.3 The classification of the Aspirations in the Wheel or Urban Assets

The listed aspirations of the Kibera Business Community were then collectively mapped into the Wheel of assets, to sort and classify the aspirations. The exercise revealed that of significance to the business community was the role of infrastructure and the institutions and rule of law on businesses. Significantly infrastructure through enforcing building codes, fire stations, planning for business district, proper drainage systems and accessible walkways was key. Considering institutions and rule of law, business permits, participation in planning and developing building business premises, security, penalizing polluters were significant to the entrepreneurs.
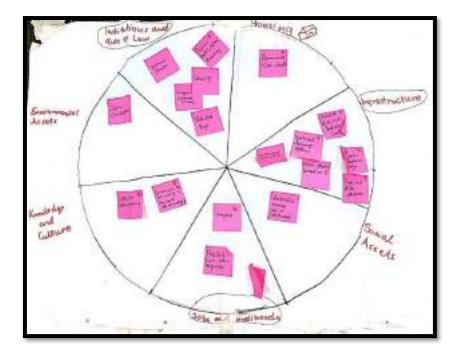
Figure 27: Mapped Kibera Business Community aspirations on the Wheel of Urban Assets

The grouped visions and aspirations of the Kibera business community on the wheel are as follows:

Infrastructure: The businesses community in Kibera aspire for a designated business districts in all 5 villages of Kibera, with fire stations, police stations and access roads with non-motorised facilities from one end of Kibera to the other. A functional rail is also desired to facilitate the movement of goods.
Social Assets: Social halls where the local businesses can discuss their issues and a strict business community group set to implement agreed by laws.
Jobs and Livelihoods: More business parks and malls to create more local jobs for the residents.
Knowledge and Culture: The business community pointed out the need for capacity building and training on entrepreneurship and customer relations. In this regard, TVET (technical and vocational training) opportunities were desired by the businesses to focus on these skills. Also, the business community pointed to the need to conduct sensitization and awareness on peacebuilding to avert arsonist attacks on businesses during elections.
Environmental Assets: Clean environment and green spaces were desired by business community as they attracted customers to their enterprises.
Institutions and Rule of Law - permits and taxes were seen as enablers to businesses and for service provision by the county government. More security patrols and regular checks to ensure clean business. Need to implement polluter pay principles to keep the area clean. Further, the business group noted the need for public participation in planning for businesses. In addition, the businesses saw title deeds as an enabler in building future infrastructure and for investments.

> **Housing:** Affordable housing through vertical buildings with clean water and affordable electricity was a key priority for businesses. Title deeds are desirable to encourage investment in housing.

4.4.4. Interventions and Possible complications

The business community in Kibera also identified the possible policies to support the interventions that can help achieve the vision 2050. These include:

- Introduce a strict policy and heavy fine to preserve trees and green spaces. Cut trees at your own risk. By cutting down trees one risks a fine of Kshs. 100,000 for each tree cut down.
- Bring an end to land grabbing in Kibera to enable visioning fruition through implementing Kibera land and physical urban plan.
- Implement a reward/bonus scheme for tree planting in Kibera to enable community led tree planting and growing. Introduce a scheme for annual reward for a tree plated and grown.
- Properly design and build residential and commercial houses that explore the vertical space with basement parking to attract local and external businesses and investors.
- Ensure security is well planned and coordinated by locals and the government authorities. To secure businesses and other forms of investments in Kibera, security must be offered by the national government and the locals.
- Implement a polluter pay policy to ensure businesses keep their spaces clean and take their wastes to the right destinations for dumping.
- Develop a waste management plan that integrates waste segregation at the source through the polluter pays principle and collaboration with local youths.
- Implement a local content policy which provides for 80% of labour to be from Kibera in implementing the vision plan.

KIBERA'S SOCIAL GROUPS: CHARTING A PATH TO A SAFE, THRIVING, AND EQUITABLE COMMUNITY

Kibera informal settlement comprises diverse social groups with different cultures and backgrounds and interest all of which have a stake in the future of the settlement. For the Tomorrow's Cities Decision Support Environment framework, Kibera provides a setting where urban planning complexities and diversity is experienced and tested.

The visioning exercise brought together a diversity of social groups whose interests shape planning processes and outcomes in Kibera. Unlike most, approaches to planning, this visioning exercise as stipulated under the TCDSC approach recognises that the urban poor present a complex set of diversity and aspirations that define future. Additionally, the approach recognises that disaster risk management is a developmental challenge especially in developing cities such as Nairobi where risk is widely driven by social factors including poverty, governance among others.

From of the exercise, various highlights can be drawn. The vision for Kibera in 2050 is for a city with well-planned infrastructure, a shared aspiration among all social groups. However, the experiences and aspirations of the various social groups is widely shaped by their positioning in the community as well as their social characteristics which shape ways in which they view the future.

For the youth, it is envisaged that due to their demographic dividend, they are key change drivers for the future. The youths aspire for more job opportunities and platforms for interactions and exchanges. Representation and institutionalization of youth voices in decision processes is a key intervention that most youth feel would enable the desired change. Additionally, various infrastructure plans and upgrades including housing, roads, social amenities are key areas that would serve multiple purposes including enhancing opportunities but also safeguarding the community against the risk posed by common hazards including fire and flooding. Overall, the youth remain in the frontline in pushing for social change whether through negative or positive tactics. They have been actively involved in mobilizing community members to take position on certain decisions including urban, private housing schemes in their area, certain land use plans which they feel is unfavorable to their aspirations, among others. In other words, the role of the youth in frontline advocacy remains important- thus capturing their aspirations in DRR plans is valuable. However, a key impediment lies in the fact that this very important frontline advocacy is in most cases informal and not framed within institutional mandates to enable long lasting change. This makes the youth to be vulnerable to different interest groups but also to have their aspirations not considered in planning processes. In the context of DRR, for instance, the youth again remain key in emergency response especially in case of fire of evacuation from flooding events. Yet, their role in DRR as local response teams or early warning teams is not institutionalized.

For the elders and men, the aspect of inclusion remains important. They feel that the present Kibera is not inclusive and does not recognise the needs of marginalised groups such as the aged. It is survival for the fittest. In this, when disaster strike, they are more vulnerable. For the men, the burden of reconstruction and the social responsibility of being family heads has meant that disasters impose more responsibilities on them and sometimes affects their ability to plan for a better future. Any savings they make is often at risk of being swept away by reconstruction costs among others. The future for the elders should be more inclusive and with enhanced social safety nets for the

marginalised groups. Insurance schemes for the elderly should be socially inclusive even as infrastructure remain critical. While the institution of elders in the Kenya society has been important in local decision making and shaping opinions including how various disaster risks are handled, the fast-paced growth and changes in urban processes and informal settlements such as Kibera presents new challenges to such traditional institutions and inclusion in contemporary urban planning processes. In these settlements, new forms of informal powers have emerged supported by a range of external interventions including politics, to the exclusion of wisdom and indigenous knowledge of the elders.

For the women, the 2050 aspirations of Kibera is underpinned by livelihood security as well as safety and security for children through protection of primary health care, education systems and general gender protection in the face of disaster risks.   The women aspirations are hugely aligned to the livelihoods as well as safety of their families especially children. Most women have felt the impacts of disaster risks on their livelihoods and welfare. The lack of proper evacuation centres especially for women and girls often put them at double risks both from the prevailing disasters but also from other human rights abuses such as sexual harassments – especially when disasters occur. They therefore recommend the need for accessible and gender secure evacuation centres. Despite their concern about limited roles in decision making, most women aspirations were more around livelihood and social security for them and their children than strengthening their representation in decision making spaces as often reported in most participatory or public consultation processes.

For the business group, currently there is a relatively congested business environment and infrastructure that is at high risk of disasters especially fire. For this group, the future should have clearly planned business centres that are risk proof.

Overall, there is believe across social groups that a future Kibera that is provides opportunities for secure livelihoods, jobs and social amenities will not only enhance the quality of life for various residents in an inclusive way but will also immensely contribute to safeguarding them from the impacts of disaster risks. In other words, for these groups, development is seen as part and parcel of DRR challenge for the present and future Kibera and this underscores the strength of the TCDSE approach as an integrated concept that considers DRR as part of wider developmental challenge for the urban poor. Some of the common visions across the groups included better housing infrastructure and designs that are inclusive and accommodative of the growing population and, the need for green spaces and social amenities to support opportunities for livelihoods, jobs and social cohesion. Additionally, DRR response systems such as evacuation centres, community information centres and fire response that are gender responsive are critical to ensure safety of vulnerable groups such as women, children, girls and the elderly. These groups sometimes suffer double exposure such as sexual harassments and competition for services during emergency responses. Land tenure security remains critical for planning the future of Kibera and needs to be addressed. Additionally, institutionalising the different voices in the decision-making processes is desired and for the various social groups, this will enable their aspirations to be actualised through policy and practice. Methodologically while the TCDSE supports the opportunity for profiling the voices of local communities especially the urban poor in planning and decisions for the future, the framework does not clearly consider options and structures through which these voices can be institutionalised to make change. Additionally, the Kibera visioning case reveals wider land governance issues and power relations that shape decisions and including how and who is included in the planning process. Embedding some understanding of

the political cultures and power relations in the TCDSE framework would be useful in understanding the diverse drivers of decisions that sometimes create implementation deficits for ''well neat'' and community driven plans.
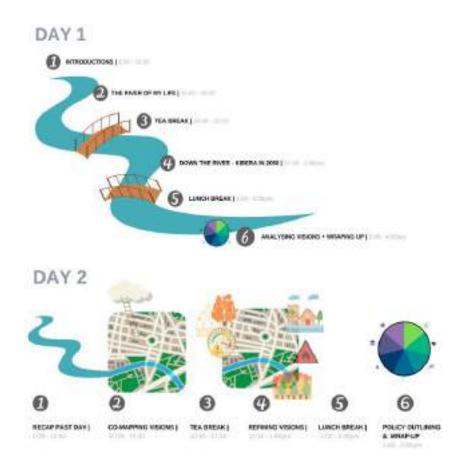
6. CONCLUSIONS AND NEXT STEPS

The visioning exercise provides a good opportunity to understand the local aspirations with regards to disaster risk planning. These aspirations from key part of the decision support environment for developing risk proof plans that could contribute to disaster risk reduction for the urban poor in tomorrow's cities. These local voices are therefore fundamental in setting the agenda but indeed require a well understood and validated input of the wider urban planning and DRR stakeholders. To this end, the next step will involve validating these aspirations seeking inputs of policy makers and other stakeholder groups at the city and national level.

7. APPENDICES

i. Workshop Program

ii. List of participants