YOUTH URBAN RESILIENCE HACKATHON

"Driving Innovations for Better Cities"

Introduction

Kenya Red Cross Society (KRCS) is a humanitarian relief organization created through an Act of Parliament, CAP 256 of the laws of Kenya on December 21st 1965 and operates through a network of county offices all over the country. KRCS vision is to be the most effective, most trusted and self-sustaining humanitarian organization in Kenya and the mission is to work with vigor and compassion through networks and with communities to prevent and alleviate human suffering and save lives of the most vulnerable during emergencies. The organization runs a youth program under the organizational development which runs in 8 regions and in all the 47 counties in Kenya with a vision to empower, educate and create an enabling environment for youth engagement in the humanitarian action. In early 2018, KRCS and UN-Habitat UPDB signed a MOU to collaborate on urban resilience and regeneration. The United Nations Human Settlements Programme is the United Nations agency for human settlements and sustainable urban development. It was established in 1978 as an outcome of the First UN Conference on Human Settlements and Sustainable Urban Development held in Vancouver, Canada, in 1976.

Background Information

Cities are facing unprecedented demographic, environmental, economic, social and spatial challenges where phenomenon shift towards urbanization has been experienced, with 6 out of every10 people in the world expected to reside in urban areas by 2030. Over 90 per cent of this growth will take place in Africa, Asia, Latin America, and the Caribbean. In the absence of effective urban planning, the consequences of this rapid urbanization will be dramatic. The growth of informal settlements, slums and poor residential neighborhoods is a global challenge where an estimated 25% of the world's urban population live in informal settlements, with 213 million informal settlement residents added to the global population since 1990 (**UN-Habitat, 2013**). Informal settlements are residential areas where (**UN-Habitat, 2015)** inhabitants often have no security of tenure for the land or dwellings they inhabit –for example, they may squat or rent informally, neighborhoods usually lack basic services and city infrastructure, housing may not comply with planning and building

regulations, and is often situated in geographically and environmentally sensitive areas. A number of interrelated factors have driven the emergence of informal settlements: population growth; rural-urban migration; lack of affordable housing; weak governance (particularly in policy, planning and urban management); economic vulnerability and low-paid work; marginalization; and displacement caused by conflict, natural disasters and climate change (**UN-Habitat, 2015**).

The humanitarian impacts of disasters, both natural and man-made, are increasingly concentrated in cities in as much as it is in traditional ASAL areas which are hit by perennial water shortages. Cities are now experiencing more flooding, fire, epidemics, infrastructural collapse, road crashes; whose impacts include not only massive damage of properties, loss of life and injuries but also damage to critical infrastructure, such as hospitals, water and electricity supply networks. Given the deeply interconnected nature of cities, the impact can also multiply much faster causing complexities of urban crisis. Solutions for sustainable urban resilience and development such as waste management, open space innovation, land and housing, conservation and sustainable water use in both urban and ASAL areas are often overlooked. Hence, Kenya Red Cross is organizing a 3-day Hackathon for youth innovators from Nairobi and ASAL areas to be held on 28th, 29th and 30th urban resilience hackathon. The innovators will hack for solutions (specific to urban settings) to three thematic areas as follows:

a) Environmental conservation and water use

b) Open and public spaces

c) Innovative business solutions for livelihood and youth employment.

THEMATIC AREAS.

1. ENVIRONMENTAL CONSERVATION AND WATER USE

Amid a changing climate, population growth, rapid development and pervasive urbanization, an unprecedented threat to environment and water supply is more apparent than ever before. Climate change and over-exploitation of natural resources has had negative impact on the environment resulting to land degradation and large scale pollution resulting to poor social and economic performance of communities. Water scarcity problems, greatly affect many parts of Kenya and represent a growing challenge all over the world despite being an essential natural resource upon which all life depends on. 'Recent studies suggest the world may face a 40% water shortfall by 2030, threatening social and economic development'. The increased development of informal settlements will be the dominant form of urbanization in most developing

countries where rapid urbanization and its related consequences have been difficult to handle and manage, particularly in countries like Kenya (NDUKUI, 2013). However, research shows that with the right policies and technologies, this phenomenon can be improved to a large extent. While 70% of the Earth's surface is covered with water, only a small fraction—some 0.01%—represents readily potable water. This must be carefully managed to ensure water security for all.

Informal settlements face challenges of extensive environmental degradation which include untreated industrial effluent, uncollected garbage and flooding. Lack of access to safe water coupled up with flooding and poor sewerage systems, - which contaminate piped water, exposes the communities to risks of outbreaks of epidemics. In addition, improper garbage disposal in the slums is an immense health risk. Slums are also endangered due to the flammable building materials, illegal electricity connections and use of paraffin and charcoal for cooking in overcrowded houses. Water pollution is a substantial threat. At least half the world's population suffers from polluted water (Jones, 2009). Furthermore, 'over-exploitation and lack of clean water are putting ecosystems under extreme strain' [European Commission, Future Brief: Innovation in the European water sector].

It is vital to bear in mind the significant role played by social innovation in many of the issues in this field. Towards this urban resilience hackathon aims at finding solutions (Technologies and designs) that would give out of the box insights to waste management, water purification systems, environmental conservation and water use for communities in urban setting and ASAL areas.

2. OPEN/PUBLIC SPACE INNOVATION.

Informal settlements are often characterized as "illegal" residential formations lacking basic infrastructure, security of tenure and adequate housing (Nations, 2013). These have exalted pressure on land distribution and the distribution of adequate and accessible open and public spaces. Public spaces have historically often been overlooked and undervalued by urban authorities but is increasingly being considered the backbone of urban settlements, including informal settlements. Public spaces are sites which are accessible and enjoyable by all without a profit motive and take on various spatial forms, including parks, streets, sidewalks, markets and playgrounds. Good public spaces enhance community cohesion and promote health, happiness, and well-being for all citizens. A key importance is to design and build high-quality public spaces in partnership with local governments. These physical spaces act as a catalyst for improving public space in the whole city, help improve the capacity of local institutions and communities and contribute to long-term change.

Besides SDG goal 11;" make cities and human settlements inclusive, safe, resilient and sustainable", land is also implied in several other proposed goals that relate to the sustainable use of natural resources and several depend on the adequate distribution of public space, and the use of land resources. The urban resilience hackathon aims at innovative public/open space solutions/designs that would socially enrich and revitalize the economy of their surrounding communities as well as gain insight on how open space should be more inclusive and accessible for all, contributing to overall urban health and well-being.

3. INNOVATIVE BUSINESS SOLUTION FOR LIVELIHOOD AND YOUTH EMPLOYMENT.

In Kenya, unemployment rate has affected youth more compared to other cohorts with youth in urban slum areas being particularly hard hit. There have been various interventions by the Kenyan government to address the challenge of youth employment through human capital development like the Youth Enterprise Development Fund (YEFD). Despite this, youth unemployment still remains a big problem making youth vulnerable to crime and social unrest. Urban youth unemployment in Nairobi's informal settlement has led to prostitution, school dropouts, radicalization, rape, HIV/AIDS infections as well as drug/substance abuse.

To solve youth unemployment in a bid to create livelihood for communities in urban areas innovation and entrepreneurship is fundamental priority areas. The country's landscape is undergoing major break in terms of new products and technologies driven by youth innovators who are up in exploiting immense opportunities in technology. Entrepreneurship and innovation has multiplier effect of job creation, economic growth and capital development. KRCS is championing   innovation through IFRC framework for resilience and is implementing urban resilience program in Nairobi's informal settlement targeting young men ravaged by hopelessness and involved in drugs as well as crimes with interventions of MHPS, life skill trainings and trainings on entrepreneurship and savings as well as creating linkages to marketing platforms. The Hackathon aims at unique solutions and technologies/designs for businesses that can be scaled by KRCs and partners to create employment and income.

HACKATHON ACTIVITIES

The urban resilience hackathon will be a three-day activity to be co-hosted by Kenya Red Cross and International Centre for Humanitarian Affairs on 28th to 30th May 2019. It will involve a host of partners and 50 Kenyan youth innovators selected through a set of criteria.

On 28th, the innovators will convene in a conference format to discuss issues on the hackathon thematic areas in relation to some of major challenges that affect their cities and urban areas and later do a site visit

to Mukuru informal settlement. This will be conducted through panel discussions (with community representation) and case studies in order to increase the capacity of youth to understand the urgent need of sustainable urban development, as well as to brainstorm innovative perspectives and contribute to sustainable solutions. This activity aims to achieve the following objectives:

1. Create a platform for inter-generational dialogue between youth and experts in urban development in particular regarding Environmental conservation and water uses, Livelihoods and public/open space.
2. Sensitize youth on climate driven risks and hazards facing urban/peri-urban areas focusing on their environs and their potential contribution to risk reduction, prevention and recovery;
3. Promote youth engagement on sustainable urban development as key players in planning, designing and managing urban spaces.
4. Strengthen the inclusion of young people in urban development processes including city planning by collaboration with relevant authorities

The outcome of this session will be a synthesis report of youth perspectives on key urban challenges.

On 29th, the innovators will participate in a hackathon aimed at developing sustainable solutions to the urban challenges identify in the first activity. This activity aims at achieving the following objectives;

1. Develop fully prepared, engaged and empowered young people with the cognitive, social, and cultural skills needed to solve challenging urban problems.
2. Develop sustainable solutions to urban challenges through youth innovation in Environmental conservation and water uses, Livelihoods and open/public spaces.
3. To provide a platform for engagement, networking, nurturing and incubating great youth urban solutions that may be eligible for implementation and potential up-scaling.
4. To facilitate capacity building for young people on solutions for safe and sustainable urban development.
5. To identify innovative public space intervention designed by youth and implement.
6. Provide forum to sensitize young people on the power of entrepreneurship/business solution as key livelihood drivers that can tackle youth resilience/unemployment.

On the 30th, the solutions hacked by innovators will be presented to a team of judges and corporate leaders and potential investors. KRCS together with partners will incubate and pilot the best solutions thereof while interest of other partners is being explored.