



## RAPID CLIMATE RISK ASSESSMENT (RCRA) FOR URBAN ADAPTATION AND RESILIENCE

# Mukuru, Nairobi, Kenya

### INTRODUCTION

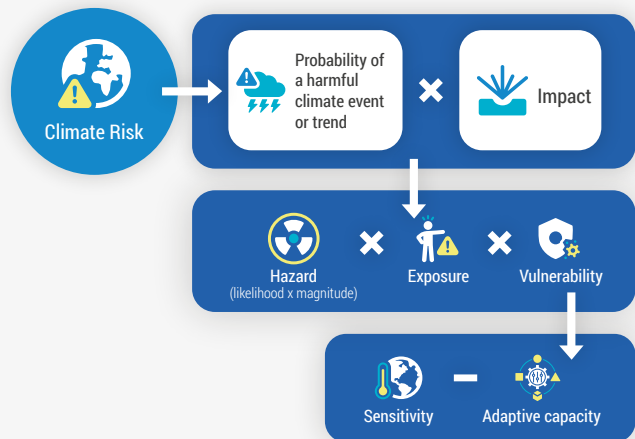
Flooding and extreme temperatures were identified as the major climate change hazards in the Mukuru informal settlement in a Rapid Climate Risk Assessment undertaken by the Global Center on Adaptation together with government, and other partners. Additionally, residents are affected by air pollution, landslides, extreme temperatures, and drought. The climate risk management and adaptation measures identified in the exercise are simple and within reach.

### CLIMATE CHANGE RISKS

Flooding is the main cause of climate change risks in the Mukuru informal settlement. These risks include:

- Loss of lives and livelihoods
- Displacement of families
- Disease burden due to waterborne and vector-borne diseases, as well as heat stress complications
- Infrastructure destruction
- Food and water scarcity

### What is climate risk?



Risk results from the interaction of climate hazards, exposure over time, and vulnerability (of the affected system)



Building Resilience in Mukuru  
*Adapted from Groupe Huit (2022)*

### Main Risks







## VULNERABILITY





Area residents' vulnerability to these hazards is exacerbated by a high population density and poverty, with about 30% of the adult population being unemployed. Poor drainage systems increase the likelihood of flooding, while limited physical and

financial access to health facilities worsens the effects of water, vector-borne diseases, and other illnesses.

## ADAPTATION ACTIONS

The Nairobi City County government has declared Mukuru a Special Planning Area (SPA) as a key step towards instituting well-planned socio-economic systems, housing, and other infrastructure, as well as environment management strategies. The following adaptation actions were identified for Mukuru:

-  Include climate change risks in urban planning and implementation
-  Enhance drainage system management in line with the SPA's river restructuring plans
-  Adopt sustainable solid waste and sanitation management practices and provide adequate sanitation facilities
-  Strengthen the link between public spaces and buildings, and create and give public spaces a resilience function

-  Plant trees and other crops for carbon sequestration and other economic benefits
-  Preserve the Ngong River's riparian area, as it is the only outlet for flood waters
-  Build a network of stakeholders to raise awareness on climate change, and push for resilience measures
-  Establish a working group to collect, analyze and disseminate information on climate change, and formulate recommendations on adaptation

