



Rwanda Green Building Minimum Compliance System

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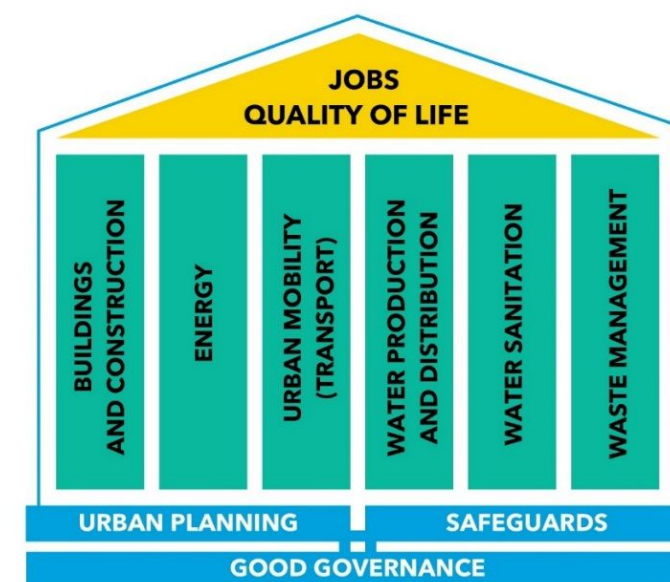
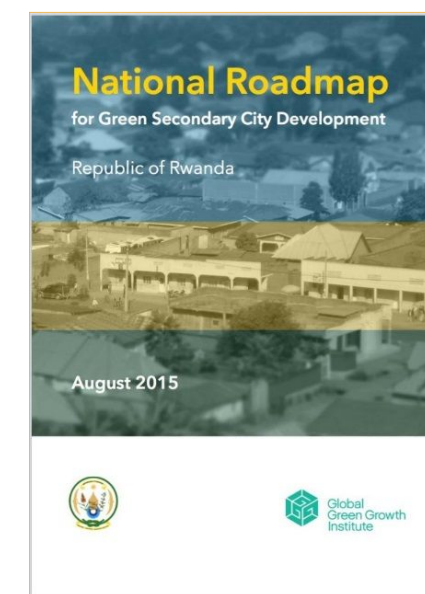
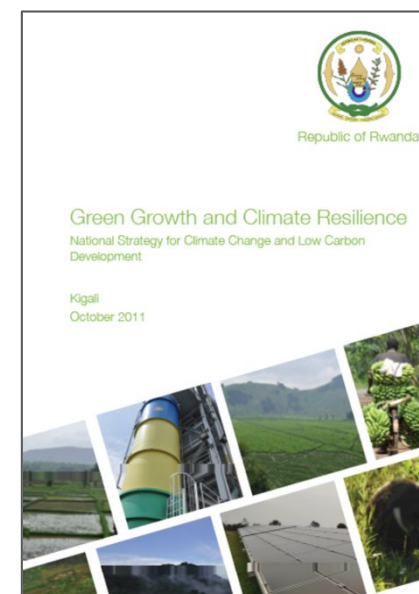
Presented during:

Virtual Regional Technical Expert Meetings on Mitigation 2020

CLIMATE SMART COOLING SOLUTIONS FOR SUSTAINABLE BUILDINGS IN AFRICA, 19 AUGUST 2020

Rwanda's Urbanization and Building sector emissions

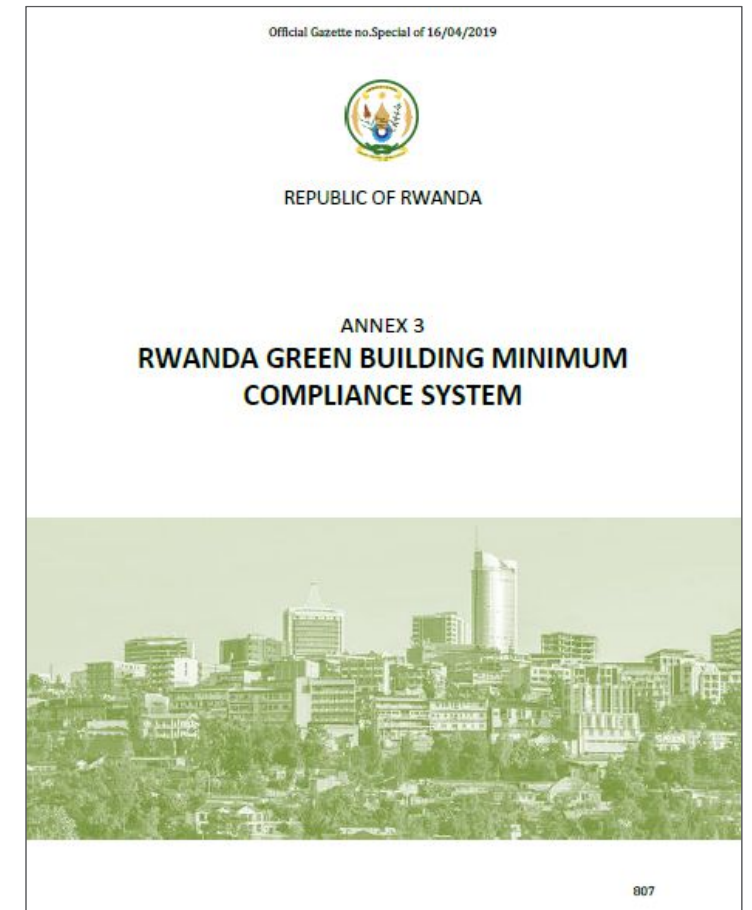
- Rapid Urbanization (4.4% annum)
 - 18.4% in 2017 and 35% target by 2024
- Increasing need for urban built environment
- 75% of the building stock is yet to be built (UN-Habitat estimate)
- Building Sector emissions
 - 1 MtCO₂e in 2012
 - 6 MtCO₂e by 2050 (under BAU scenario)
 - Opportunity to reduce the emissions by 50%
- Long-term plan needed
 - Inclusive and resilient
 - Low-carbon, and
 - Resource-efficient



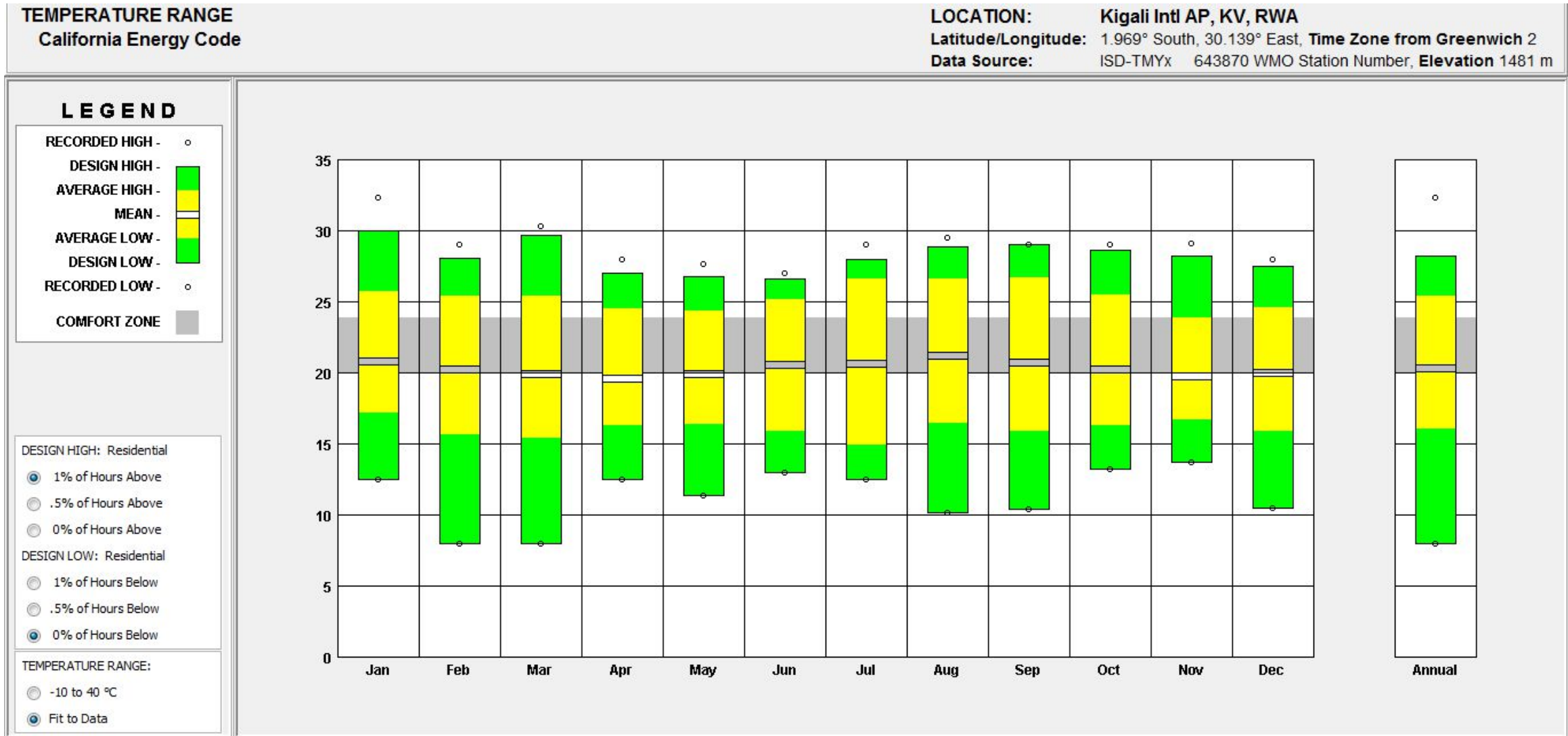
Rwanda Green Building Minimum Compliance System



- Approved in 2019. Annex 3 of the Rwanda Building Code 2019
- A mandatory system with in-built flexibility
- Applicable for all new Category 4 & 5 buildings
- Shall be administered by District One Stop Centers (Building Permitting Centers) and Rwanda Housing Authority (Central Agency)
- Point-based system
- Potential emission reductions 3 MtCO₂e by 2050



Kigali Temperature Profile



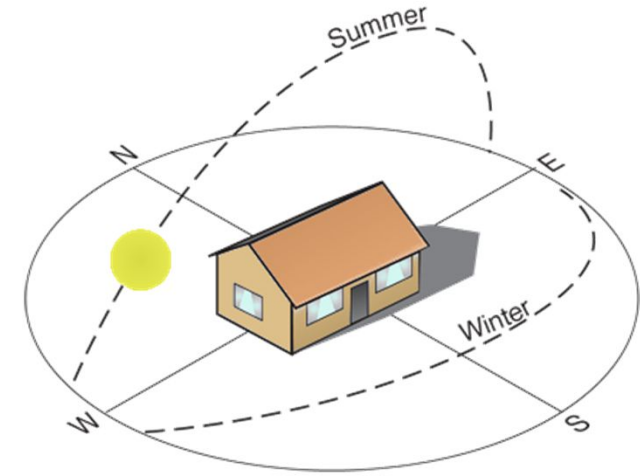
Extracted from Climate Consultant 6.0

Most parts of the country under Upland Zone – Moderate daytime temperatures and rarely exceed the upper limit of comfort zone

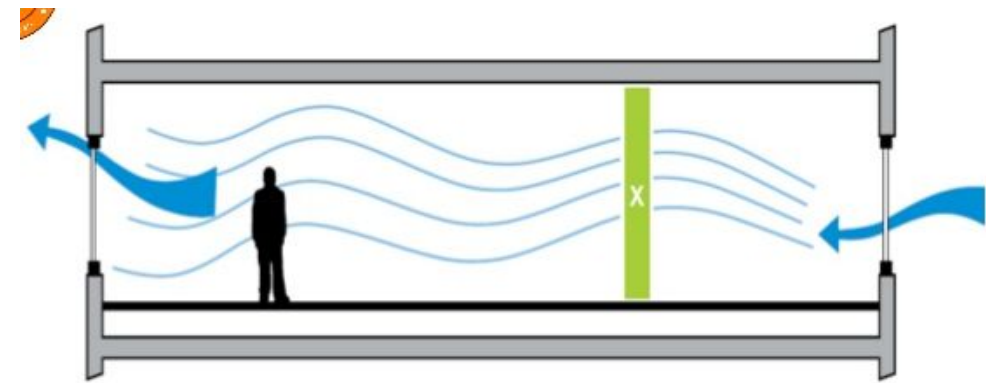
Climate Smart Cooling Solutions in GBMCS



- Building Orientation and Envelope
- Natural Ventilation
- Greenery Protection
- Cool Roofs
- Green Innovation
 - Vertical greenery system, green roofs etc.
- Energy-efficient air conditioning system



Representational image of building orientation



'Avoid – Shift – Improve'

Success and Lessons Learnt

- Perhaps 1st Mandatory Green Building Code in Africa
- Robust stakeholder consultation
- Series of awareness raising programs
- Excel-based tool developed to aid the implementation
- Need to have a long-term and continuous capacity building program
 - Practitioners, Officials, Academia etc.
- Green Building demonstration projects and green building technologies
- Maximize usage of locally produced green building materials
- Green Financial Mechanisms and Incentives to encourage uptake



Courtesy: I&M Bank Rwanda Headquarters



Courtesy: RICA Campus, Bugesera, Rwanda

Thank You

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