Challenges of urban sustainability in Africa: Rhetoric, realities and required transformations

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Mistra Urban Futures, Phase 2 2016-19

- **Vision**: Sustainable urbanisation where cities are accessible, green and fair

  Mission: To generate and use knowledge for transitions towards sustainable urban futures through reflective co-creation at local and global levels

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Accessible, Green and Fair Cities

- core urban attributes – all have equity/justice element
- draw attention to central – and often contested – dimensions of urban sustainability and its management
- in combination, they constitute MUF's approach to key dimensions of urban sustainability (cf. Brundtland Commission's 3 attributes – social, envir, economic)
  - social
  - cultural
  - environmental
  - economic
  - political /institutional should be added
- land tenure issues cross-cut these – v important in Africa

see D. Simon (ed) 2016 *Rethinking Sustainable Cities: Accessible, green and fair.* Bristol: Policy Press, and open access

SDG 11: To make cities inclusive, safe, sustainable and resilient

Targets

- **11.1 Housing**   *By 2030, ensure access for all to adequate, safe and affordable housing and basic services, including the upgrading of slums*

- **11.2 Transport**   *By 2030, provide access to safe, affordable, energy efficient and accessible transport systems for all people and goods, improving road safety and expanding public and non-motorized transport, with attention to the needs of those in vulnerable situations*

- **11.3 Land Use**   *By 2030, achieve more equitable and efficient land use through participatory urban and regional planning and management*

- **11.4 Cultural and Natural Heritage**   *Strengthen cities' efforts to protect and promote cultural and natural heritage*

- **11.5 Disaster and Risk Prevention**   *By 2030, significantly reduce the social, health, economic and ecological risks and impacts of disasters, environmental change and disease outbreaks by better designing and managing cities, protecting people in vulnerable situations*

- **11.6 Environmental Impact**   *By 2030, reduce the adverse environmental impacts of cities, paying special attention to biodiversity loss, air quality, construction materials, and waste management*

- **11.7 Public Space**   *By 2030, provide, maintain, and encourage access to safe, inclusive and multipurpose public space*

Urban transitions/ transformations

- **transitions – gradual, incremental**
  - **often linked to elite transitions**

- **transformations – step change, thresholds, more substantive/radical change**

- **derived from climate change discourse**
  - **adaptive transformation / tranformative adaptation**
- **broad urban transformations to current practices, planning, construction required for sustainability**
  - **diverse local meanings and implications**
  - **What implications in face of widespread poverty and deprivation, as in African cities?**

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Urban & Environmental Security

- **Urban environmental security: safe & sustainable**
  - **ultimately a dimension of human security**

- **Urbanisation and urban areas lie at heart of climate/environmental change**
  - **urban land take and resource demands**
  - **urban waste products and their disposal both affect far wider territories than the built-up areas**

- **Cities are dense demographically and in terms of economic/social activities, networks & interactions**
  - **creates both challenges and opportunities**

- **Urbanisation, economic and social development and environmental change create winners & losers**
  - **concern with socio-spatial justice and environmental security is thus vital**
  - **holistic greening or blue-greening a key element**

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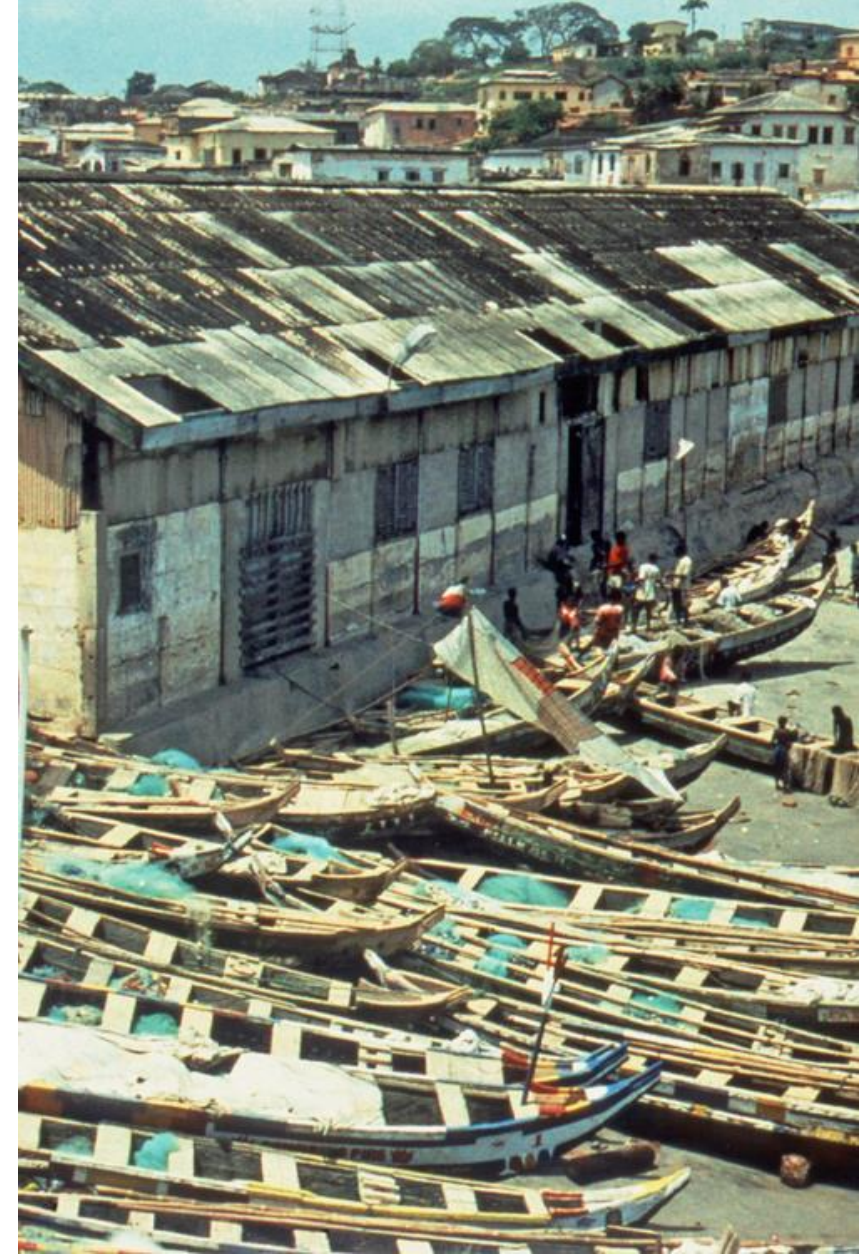
Diversity of urban 'greening' initiatives

can help reduce poverty, create jobs & promote climate resilience

- sustainable & integrated urban transportation
- often net employment generation
- deploying renewable energy systems
- maximising recycling & minimising waste
- retrofitting existing buildings
  - temperate and (sub-)tropical contexts
- appropriate new 'green' building designs
- food security: urban/peri-urban agriculture (UPA)
- conserving/rehabilitating natural habitats & ecosystem services
  - e.g. green/blue infrastructure – multi-purpose
  - green roofs/walls and UPA

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UPA and climate / environmental change

- **new lens on a longstanding research focus**

- **little explicit existing literature**

- **literature review – limited coverage**
    - **(partly) commercial UPA often flexible livelihood production strategy**
    - **responsive to changing tastes, mkt demand, security of access to, and use of, land**
    - **diversification as risk spreading/minimisation and vulnerability reduction/resilience promotion**

Exploring the linkages

- **UPA can help stabilise soils, mitigate heat island & sequester GHGs – a form of 'productive greening'**
  - crucial in many African cities of all sizes
  - depends on topography, water table, evapotranspiration, climate risk profile, nature of land under UPA

- **livestock enteric digestion creates GHG emissions**

- **poultry, fish waste – ammonia contamination**

- **wastewater (grey, recycled, runoff) irrigation**
  - subject to health & contaminant checks, reduces waste volume

- **sustainable livelihood & urban food security enhancement**
  - possible governance, marketability, cultural acceptability constraints

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Intensive household-scale commercial UPA in Kampala

- **household feeds self and supplies one city centre restaurant, earns steady money income**

- **provides demonstration effect and training to neighbours**

- **established the organic UPA association**

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UPA, public health, recycling, value added and livelihood diversification

Greater Kampala: green spaces help to mitigate heat island effects and floods

- multifunctional blue-green infrastructure
- rehabilitation /stabilisation of wetlands and rivers - including illegal encroachment
- public open space
- UPA as urban (re-)greening

N

Kilometers

0   1.25 2.5   5

Data Source: Google Maps

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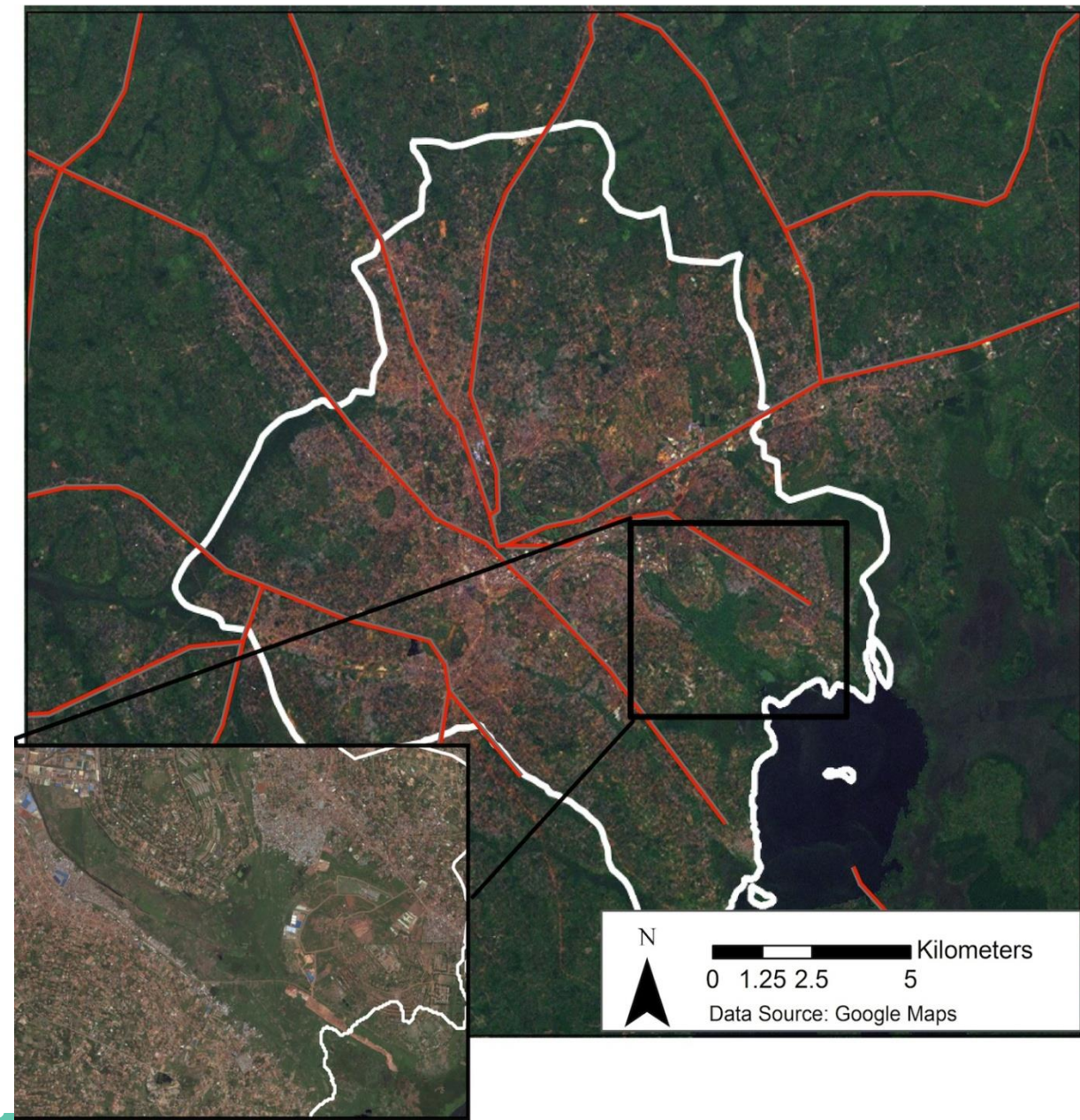
Nyalenda, peri-urban Kisumu, Aug 2019

Dar es Salaam PUI – Ununio, June 2012

Innovative methodology: co-design/-production

- converse of traditional top-down, expert-led knowledge

- broad methodological approach - many forms

- deep forms of participatory methodology
  - long lineage, e.g. PRA (Chambers and others)
  - no blueprint or magic bullet
  - each initiative or project must be individualised

- transformatory potential beginning to be explored

- key challenge: overcoming short-termism and self-interest by individuals, households, firms, city governments, regional and national institutions (reinforced by recession)

- scale and inclusiveness are important
  - similar issues to other participatory approaches
  - can they get beyond the 'tyranny of participation'?
  - scalability probably limited

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Conclusions

- sustainable urbanism needs holistic, multifaceted urban greening
  - far beyond elite / middle class aesthetics and leisure concerns
    - e.g. avoid problematic golf course syndrome
  - also need to understand and address popular & farmer conceptions as central to co-produced coping/adaptation strategies
  - variable household and urban societal 'sustainable adaptation' potential via UPA & other green livelihood diversification
  - but potential individual, household, cultural & societal constraints

- productive greening diverse and has many co-benefits
  - includes environmental stabilisation and increased urban biodiversity, microclimate moderation, GHG mitigation, health co-benefits from outdoor work and leisure, integrated low/no carbon urban transport system, renewable energy (micro-/meso PV, wind, bio-energy), composting and biogas digestion, and solid waste reuse/recycling

- more locally appropriate forms of 'smart' urbanism/urbanisation and ecocities than hi-tech elite visions, using co-production approaches