

ICLEI Resilient Cities
10th Global Forum, June 2019
Delivering Resilience for Informal Settlements in
the Global South

Vulnerability of Informal Settlements in Rapidly
Growing African Cities

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Research on Water Resilient Cities in Africa (WGA) Funded by the Danish
International Development Agency (DANIDA)

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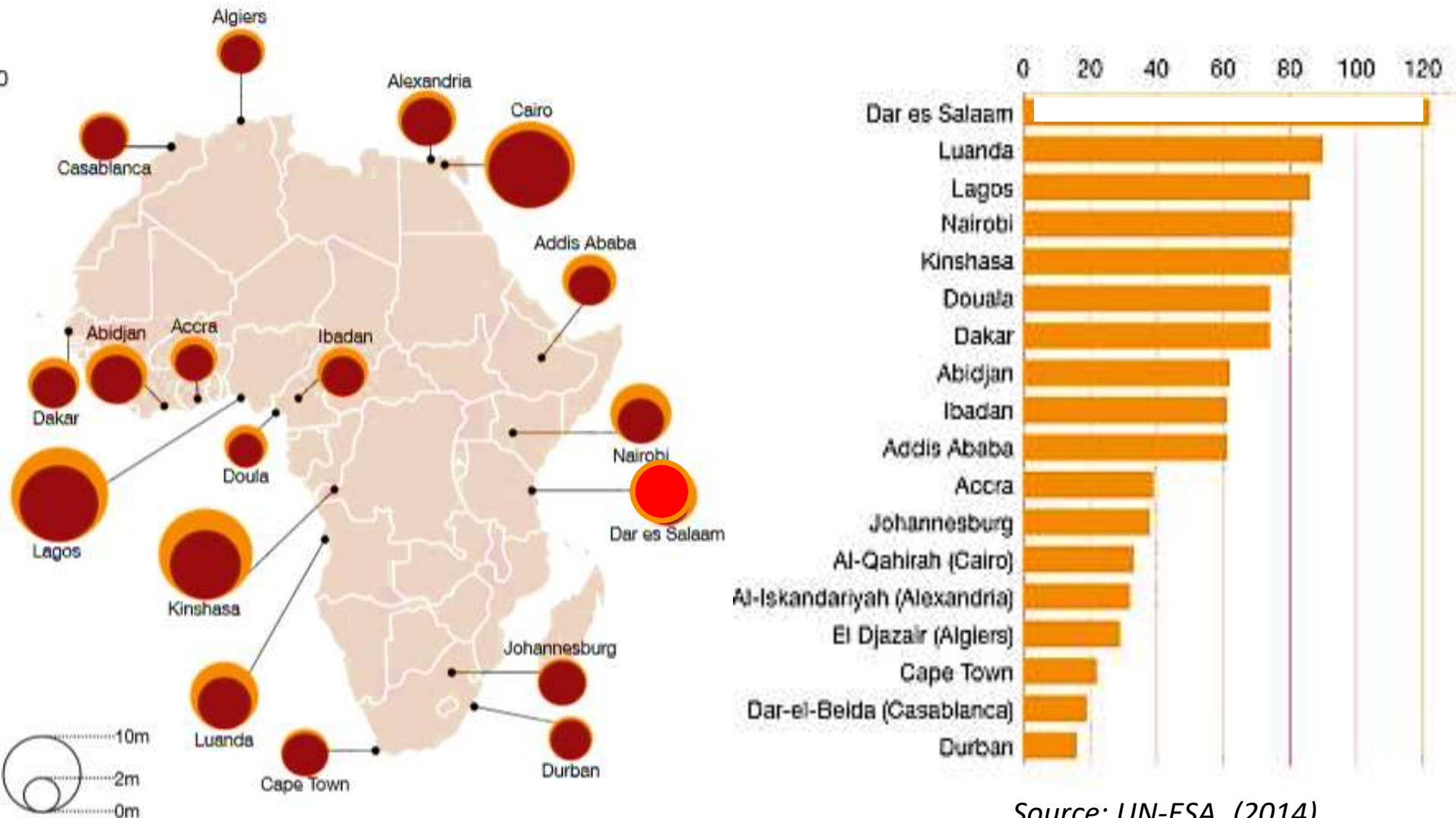
Context of informality & vulnerability in Africa cities

- Unprecedented urbanization is rapidly transforming Africa cities, giving rise to protracted and unresolved environmental and socio-economic challenges
- Widening socio-spatial inequalities – including high levels of poverty and lack of basic infrastructure services make urban poor living in informal settlements particularly vulnerable to the increasing natural hazards – floods, drought ...
- Uncertainties about growth patterns and unregulated consolidation in informal settlements are accentuating vulnerability; meanwhile, the proportion of informality is projected to increase by 10% per year.

Context of informality and vulnerability in African cities – urbanisation trends cont...

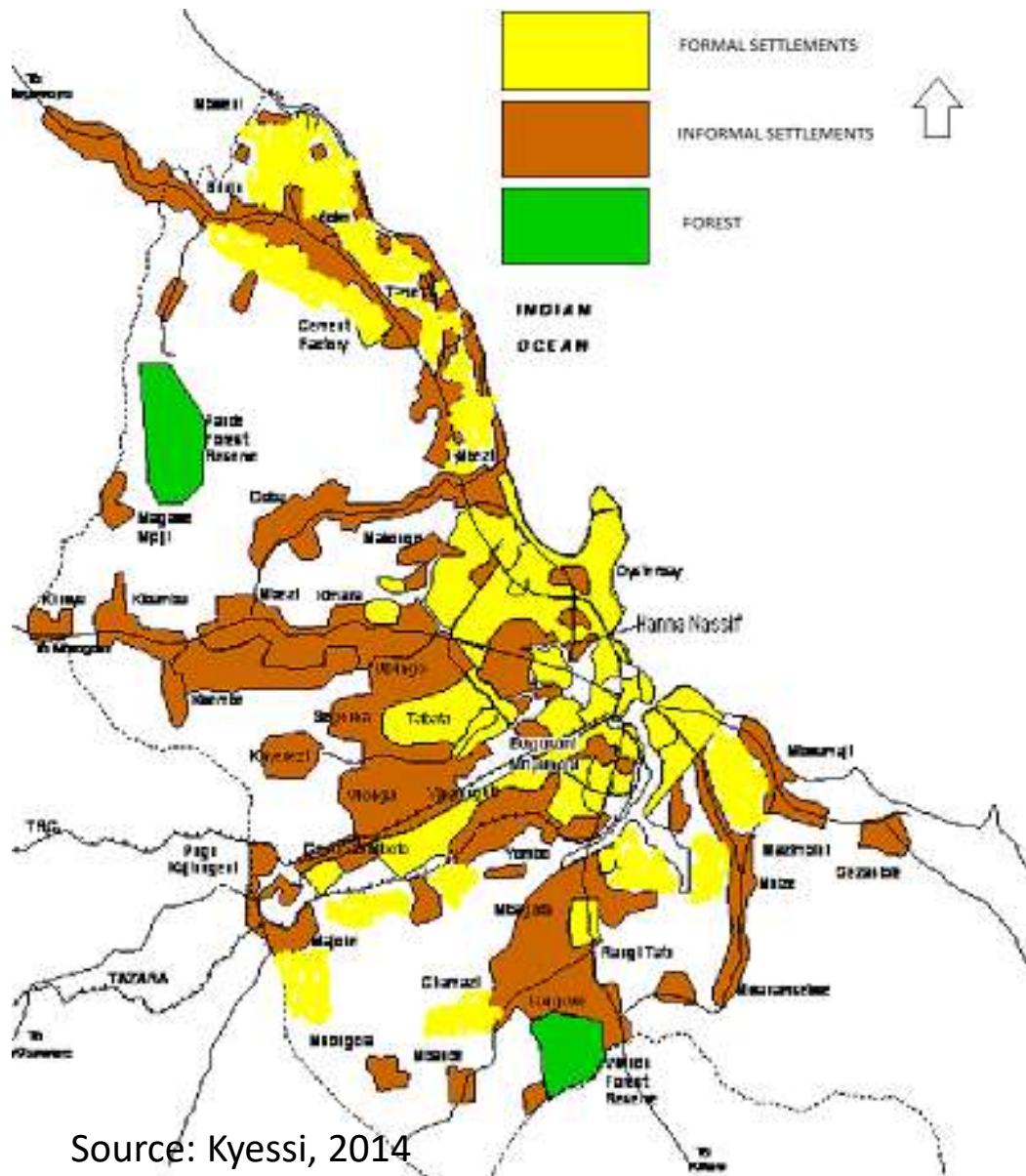
Percentage Increase of urban pop. 2010 -2015

2010 2025

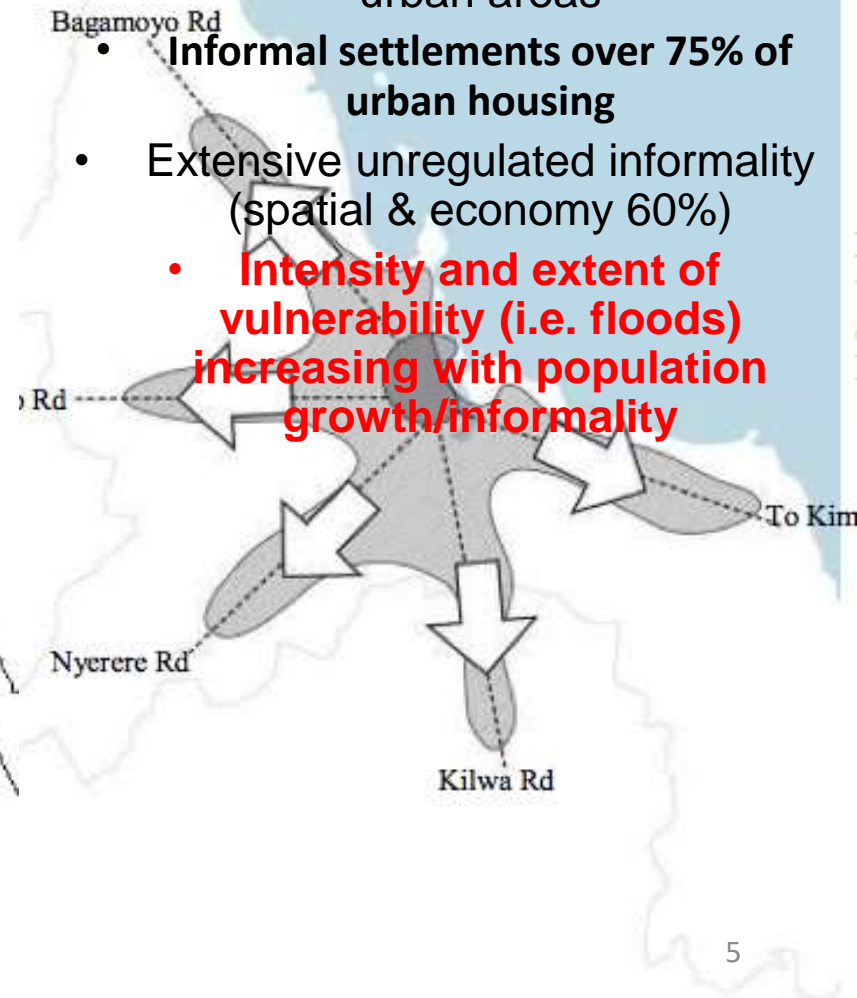


Source: UN-ESA, (2014)

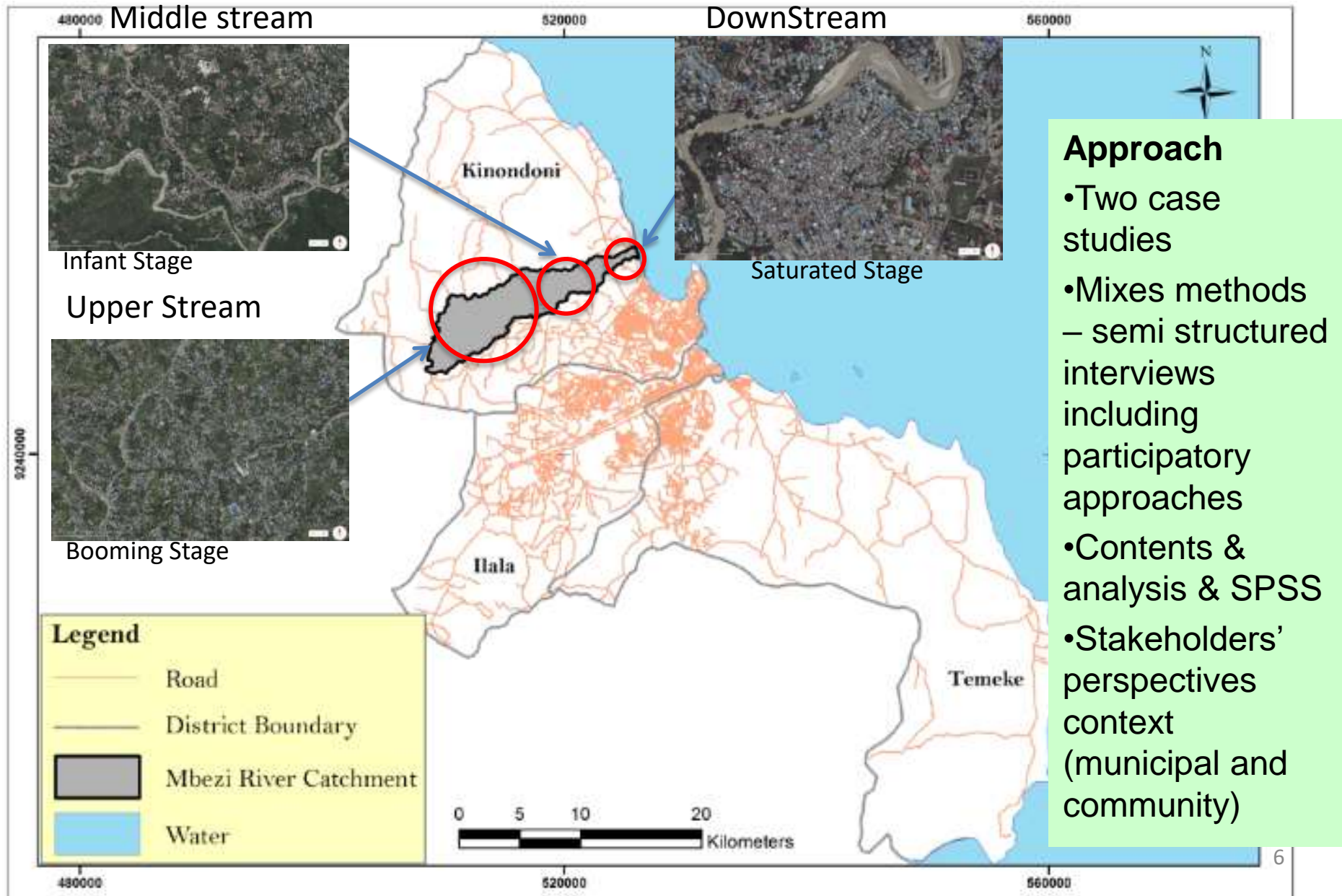
Context of informality and vulnerability in African cities - Dar es Salaam City 2014: A predominantly Informal city



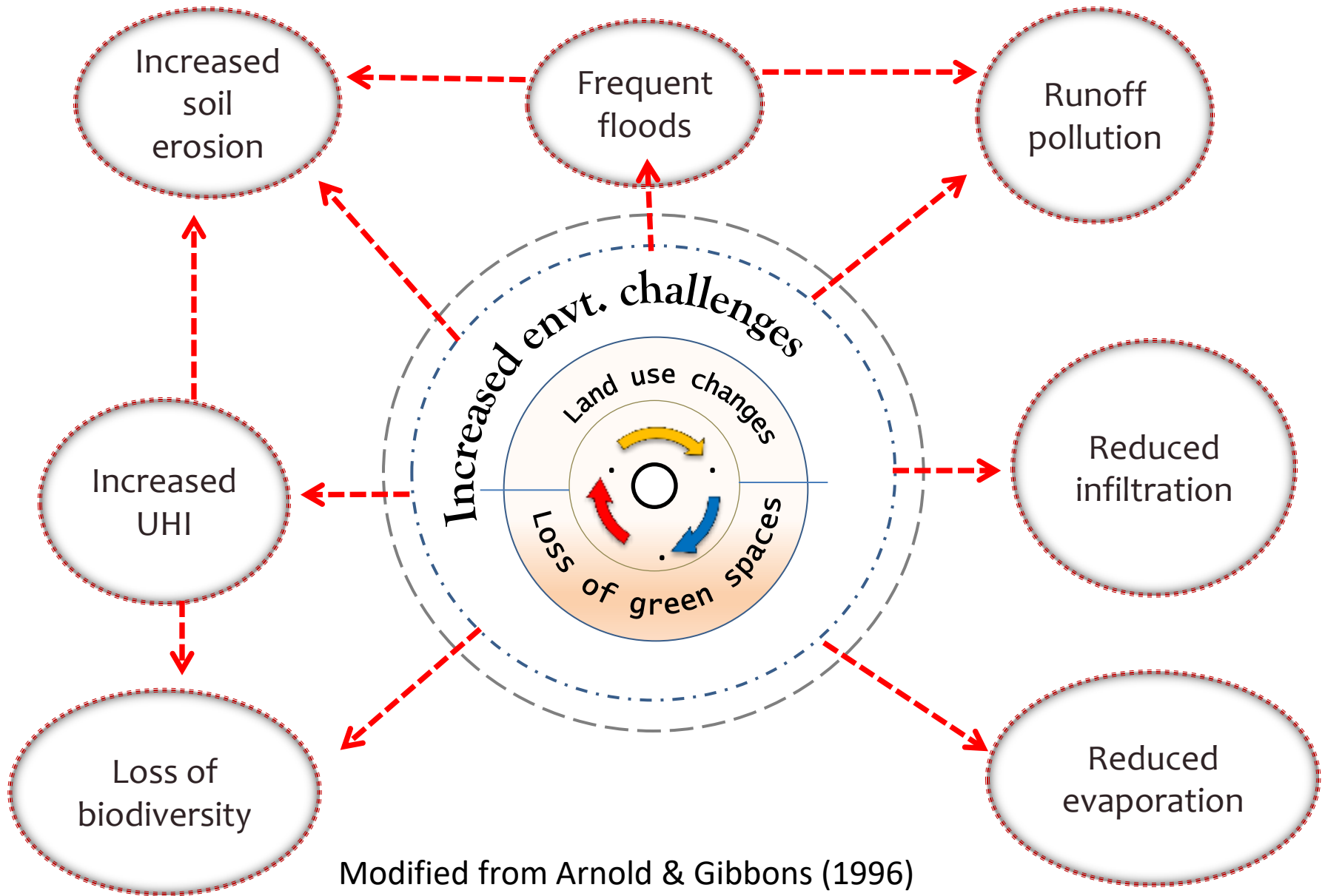
- Dar es Salaam **growth rate 4.2%**
- **Increasing pressure on land** peri-urban areas
 - **Informal settlements over 75% of urban housing**
 - Extensive unregulated informality (spatial & economy 60%)
 - **Intensity and extent of vulnerability (i.e. floods) increasing with population growth/informality**



Vulnerability in Two Settlements in Mbezi River Catchment Area - Infancy and saturated settlements



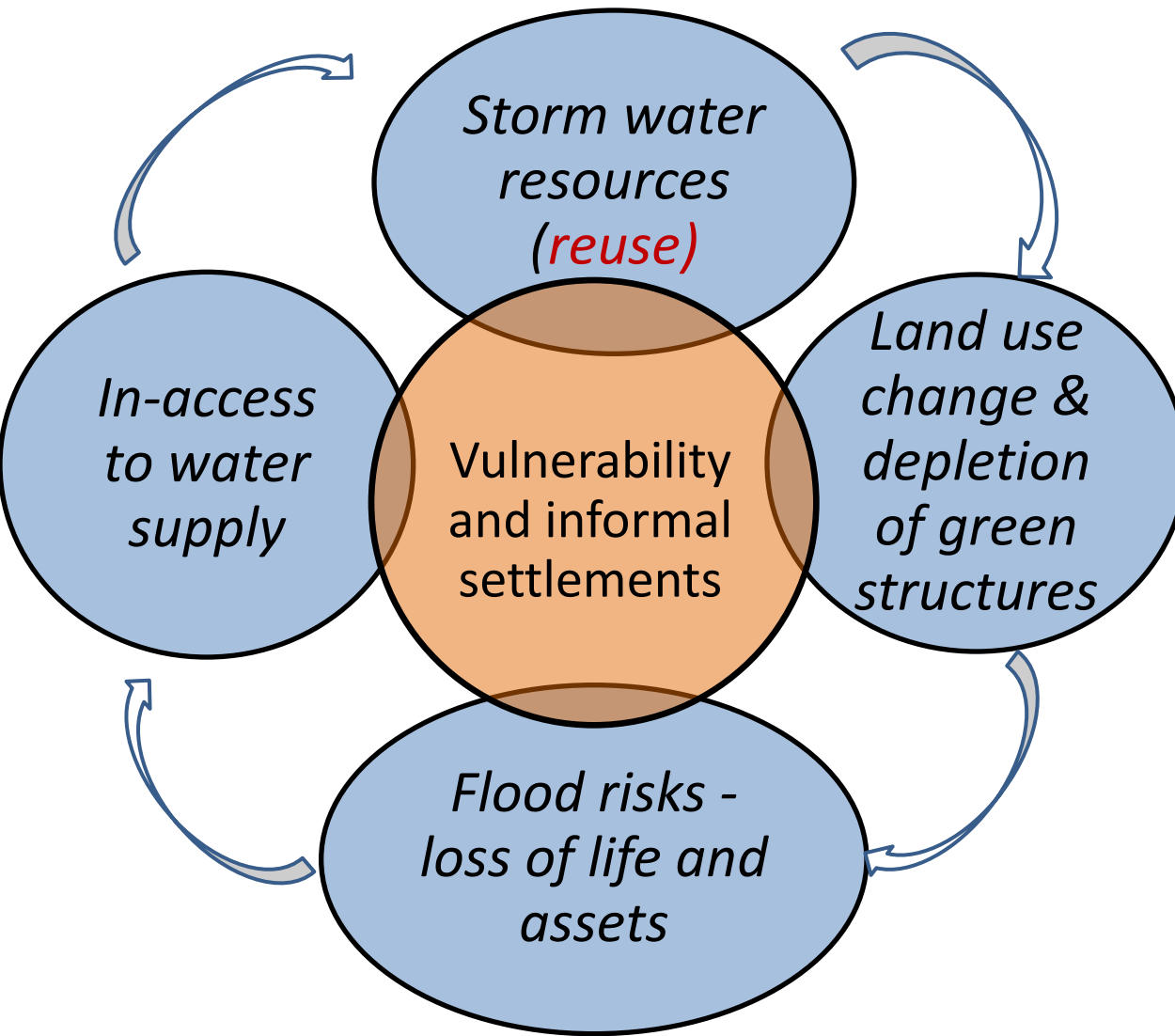
Context of informality and vulnerability in the two settlements in Dar es Salaam



Context of informality and vulnerability in Dar es salaam cont...

- Loss of life and property/assets of the public and private sectors
- Livelihoods opportunities of the poor increasingly destroyed/disrupted/displaced
- Settlers in informal settlements suffer most – location on flood plains, poor basic infrastructure services, limited adaptive capacities and mitigation measures
- Raising incidences of flash floods in areas with limited or no storm water drains , potable water supply or adequate sanitation
- Poor governance of land and green structures in informal settlements and encroachment on fragile ecosystems accentuating vulnerability & undermining resilience
- Existing coping strategies exist - at varying geographical scales (plots, neighborhood & valley levels) and by multiple actors - largely individuals - isolated, horizontal palliative and short-lived (i.e. inadequate to facilitate bouncing back nor forward)

Informality and vulnerability conceptual Framing



Key issues

- Green structures area increasingly depleted (loss of biodiversity); incidences & intensity drought and flash floods
- Increasing gulley & river (banks) erosion
- Declining of access to safe and clean water
- Severe public resources capacities and apprehension to change and complement conventional with ecosystem based interventions

Context cont...unregulated land use changes and housing densification in the case study areas

2003

2016

Luis



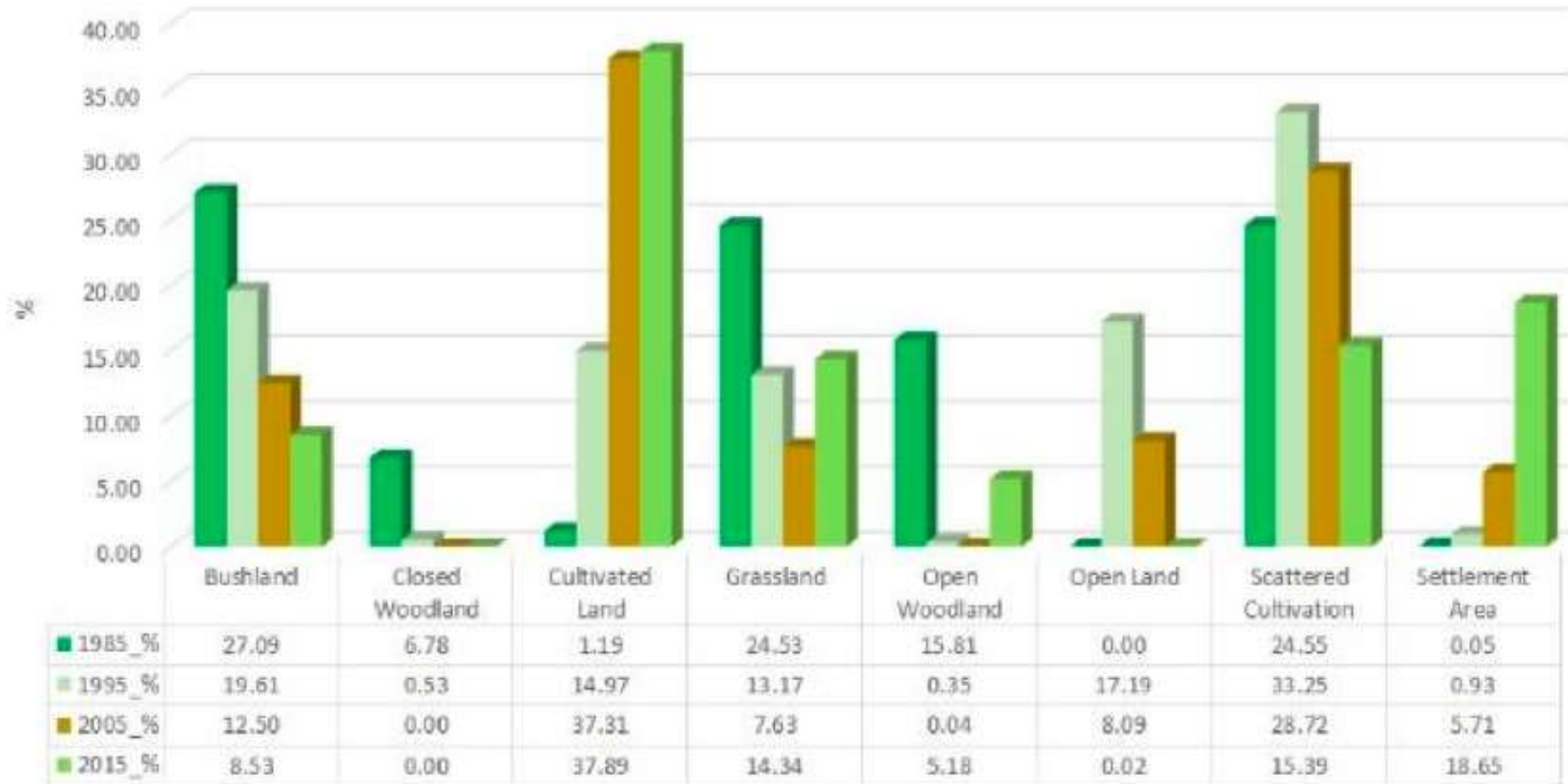
Kibululu



Ukwamani



Land Use Changes between 2005 – 2015: built area 5.7% to 18.65%; open area from 8.09 to 0.02; grass and wood land increased – catchment area



Nature of vulnerability in informal settlements ...water scarcity amidst flooding in the case study areas



Shallow wells in river bed



Shallow wells

Vulnerability and conventional and local responses

- Conventional SWM systems unable to cope to floods trends
- Do not actually address the causes/core problems
- Restrained resource capacity only 12% of the built up part of Dsm has storm water drainage system



Local interventions are enhancing resilience -albeit limited and varying geographical scales

Rainwater harvesting, greening and retention ponds



Vulnerability, local voices and concerns

- Participatory processes and social networks offered co-learning platforms for multiple actors:

“...after charette I planted trees and grass and terraced my plot”.

“...I have sensitized my neighbors and they have embarked on rain water harvesting”

“ ...awareness among local communities, leaders and technocrats on vulnerability, environmental concerns limited .”

- The weak working relationship between municipal -local community -civil societies coupled with the disregard of grassroot actors' role in land development are critical weak governance concerns:

“...we often receive little or no support from LGAs or National Environmental Council whenever we contact them”

“...illegal sand miners are smart; they collude with and corrupt police officers”.

Key observations: Conclusion

- Improved governance of land/green structures and storm water reuse lies at the centre of future initiatives to mitigate problems of vulnerability in informal settlements
- Land use change processes that are accentuating environmental degradation increasing storm water run-off and floods are often interconnected and self reinforcing. Collective approaches that focuses on participatory governance of land and natural ecosystems
- Informal settlements are not homogeneous. They present varying contextual opportunities – land value, levels of land consolidation; amount of green structures and local capacities
- Priority intervention settlements for improved land management ought to be upstream and mid-stream settlements where opportunities for conservation of green structures and fragile ecosystems still exist.

Directions for Policy and Action

- Enhanced public awareness on the self-reinforcing relationship between flooding-drought-environmental degradation-green structures is critical entry point
- Current land use planning system and practices have to be re-engineered to play more critical and proactive role in mitigating vulnerability in informal settlements
- Strategic land use planning that prioritises and adapt bottom-up identification, demarcation and protection of fragile ecosystems is wanting – rivers, valleys and floodplains and exercises zero tolerance on informal development of land on high risks areas
- Institutionalising a multi-level land governance to regulate informal land development settlements is a critical policy direction – this includes empowering local community leaders at Mtaa and ward levels to monitor and manage land use changes and development in their areas of jurisdiction