

Bridging the knowledge-practice gap in climate response at city-region scale in Africa: the case of climate knowledge co-production in the City of Lusaka (Zambia)

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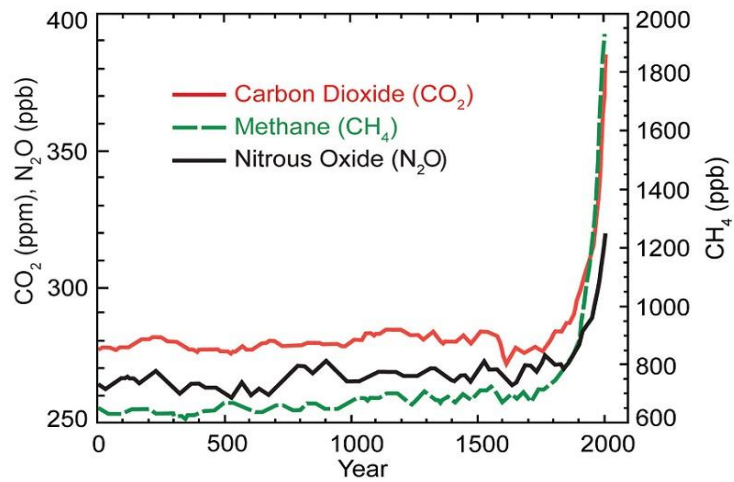
Impacts World 2017

Counting the true costs of climate change the international conference on climate-change impacts for scientists & stakeholders, 11-13 October, 2017, Potsdam- Germany

Workshop: C10- An educated guess: decision making towards adaptation strategies for the most vulnerable

Presentation outline

- About Fractal
- The research issue
- Research innovations, activities and outcomes in Lusaka
- Conclusions



The challenge:

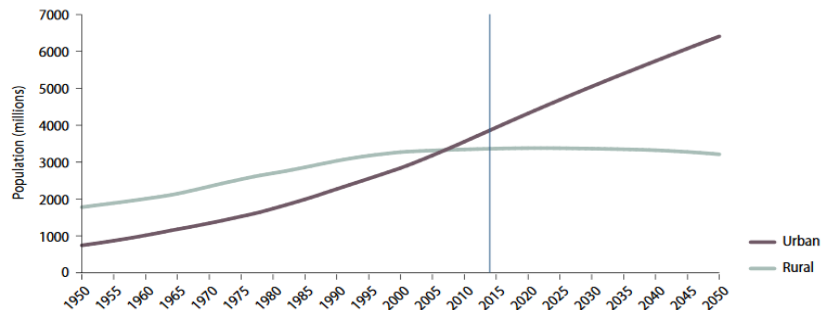
[Moving] From “it’s real” to “here is the information you need to make good decisions for your stakeholders” Chris Field, IPCC AR5 WGII co-chair



FRACCTAL

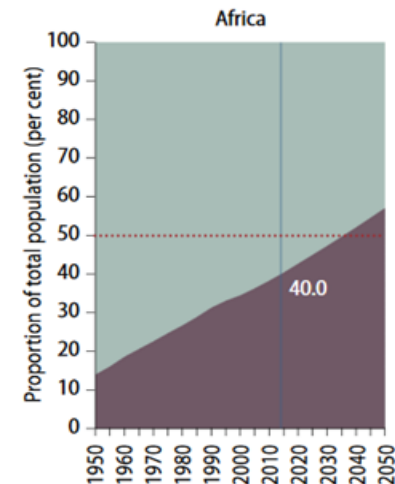
FUTURE RESILIENCE FOR AFRICAN CITIES AND LANDS

Figure 2.
Urban and rural population of the world, 1950–2050



A majority of the world’s population lives in urban areas

Africa generally urbanizing at 4%, the largest of any continent, but with major infrastructure deficits and capacity constraints



Overarching aim(s):

- **Advance scientific knowledge on regional climate responses to global change;**
- Enhance **knowledge** on how to integrate this information into **decision making at the city-region scale** (decision-making/governance);
- Responsibly **contribute** to decisions for **resilient development pathways** (case studies);
- Approach through **iterative, transdisciplinary co-exploration/co-production processes** and enhance understanding of these (co-production of climate knowledge).

The issue

- Africa experiences a different form of urbanisation
- Urbanisation of poverty and concentration of climate risks
- Municipal decision making lack reliable climate information
- Climate scientists need to move out of their 'comfort space'
- Bridge the gap between climate science and local development processes and needs
- Urban informality needs special focus
- 60% of Lusaka population live and work informally.



- Learning Labs – Identify burning issues & explore solutions
- Training workshops – new skills & knowledge
- Embedded researcher – bridging research & practice
- Inter and intracity learning- knowledge exchange
- Targeting decision makers



A **city learning lab** is a multi-stakeholder platform for addressing a particular complex social challenge. City Learning Labs build on active participation of diverse stakeholders, and take an experimental and systemic approach to designing potential solutions.

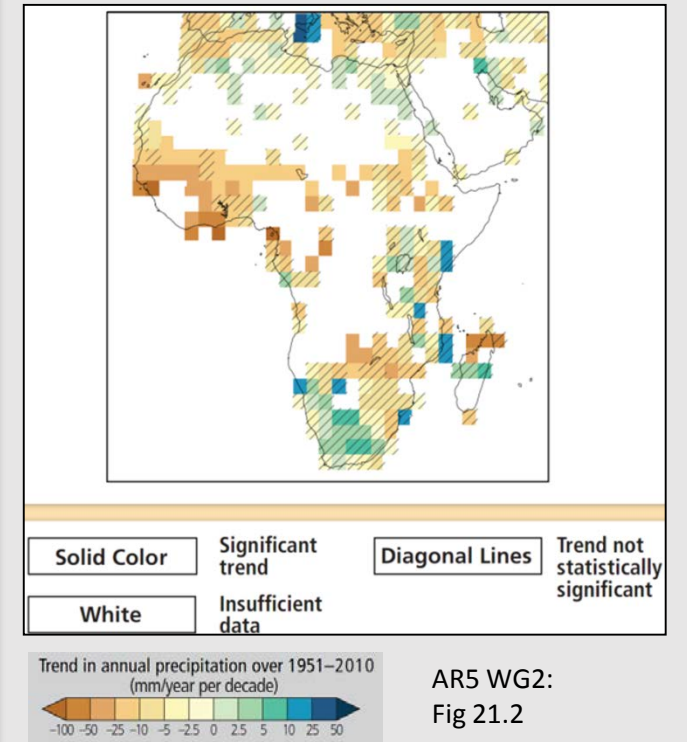


Substance:

- Governance analysis and mapping
- Climate baseline and projections data & guidance
- Climate impacts assessment & threshold identification
- Contributions towards urban resilience, climate adaptation & risk management planning

Format:

- Policy / planning briefing notes
 - Training & capacity building workshops
 - Networking forums – local, regional, international
 - Reports & journal articles
 - Conference sessions
 - Web portals
- ... through co-production, we are responding to local urban contexts



- **An exemplar for integrated, user-informed climate change research** to guide future investment in development and research
- **Alter how Lusaka include climate change** in development planning
- **Increased understanding of regional climate information** informed by co-exploration with decision makers
- **Fundamental changes in key decision pathways** (around water, flooding and energy) to increase the resilience of city-regions
- **A legacy of new knowledge, capacity and learning exemplars**
- **Balance in a research landscape** dominated by actions with national, sectoral or rural foci





Session A Theme 2
ADDRESSING WATER + SANITATION CHALLENGES IN PERI-URBAN AREAS / UNPLANNED SETTLEMENTS

1. Unpacking

Session A Theme 2

quantity → most people depend groundwater
 opt latrines
 ↳ water table high - latrines not constructed properly (contaminate)
 ↳ not according to standards
 ↳ no government invest. in sustainable sanitation options (pro-poor)
 ↳ unplanned - developed by themselves (illegal)
 ↳ difficult to construct proper water systems → but is possible → policies pushing towards inclusive city planning but conflict with practice ↳ finances?
 * Stems from lack infrastructure ↳ on-site/centralized treatment
 * Mil. Challenge ↳ provide funds - we are not finding

need to look @ sust. of water source and affordability
 * need to look @ structure before tariff/process of planning ↳ how can someone in these areas afford?
 Master plan → many projects with lots of funds
 Kafue river too far (bad planning) ↳ touching on issue of quantity
 quantities not adequate/sustainable
 ↳ linked to infrastructure ↳ currently only have "pockets" of solutions
 REGULATION → many illegal activities re: groundwater ↳ climate change component this
 ↳ monitoring groundwater areas
 ISSUES relating to recharge → vegetation/land



for LSK
Ng'ombwa
 host:

Addressing water & sanitation challenges in peri-urban areas/unplanned settlements!
 (Duncan)
 host:

Theme 3
TROPHIUS INDUSTRIAL/VEHICULAR EMISSIONS IN ZAMBIA

Theme 4
 DAVID
 Will the people & businesses of Lusaka city be water secure in the future?

Summary messages

- Fractal involves climate scientists, urban development researchers, decision makers and city residents
- There is co-ownership of products and processes
- Demand driven research
- Science commutation is key
- Water insecurity for residents of informal settlements as burning issue
- We are pioneering integrated climate research in Africa
- Advancing adaptation efforts at the local scale

