

# **'Relevancing' Cities**

The last frontier – Ethiopia/Africa

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on

ETHIOPIA 2050, GRAND CHALLENGES and OPPORTUNITIES,  
ADDIS ABABA, ETHIOPIA

# **The FUTURE**

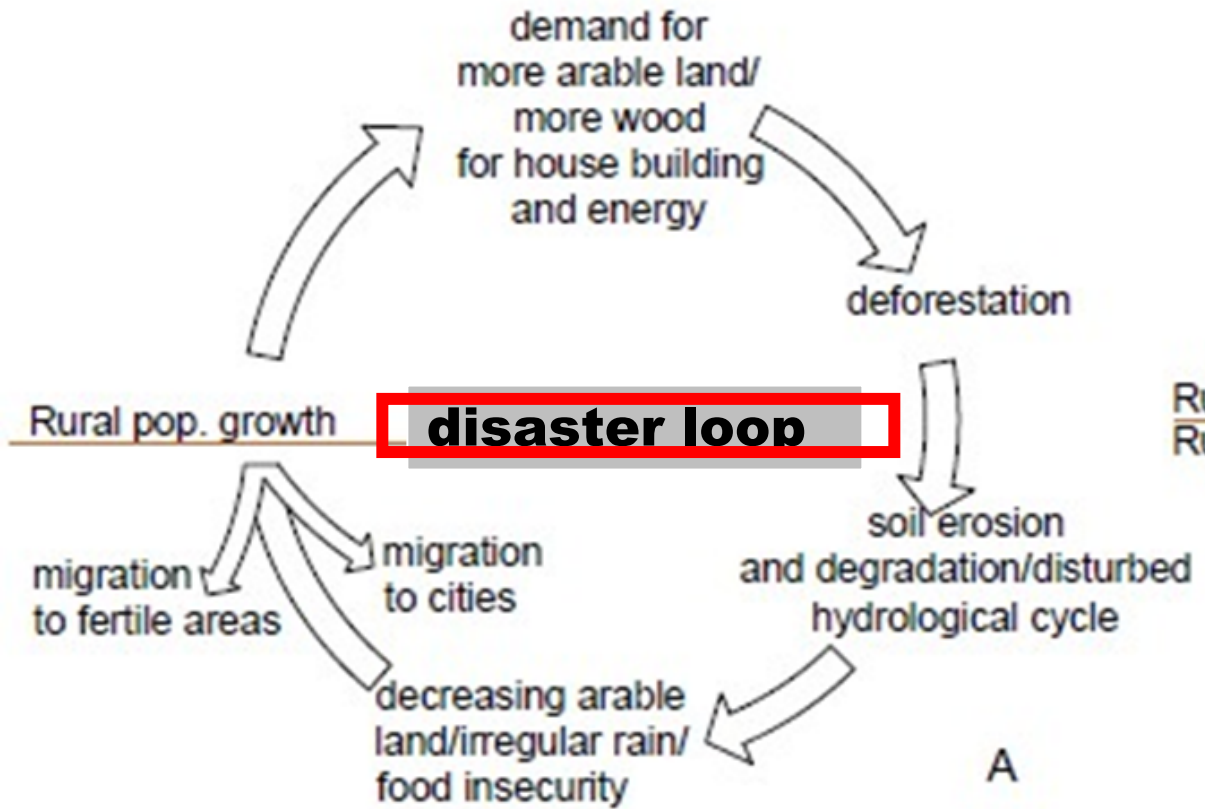
Hope, Despair, and Technology

**Technology is the answer,  
but what was the question?**

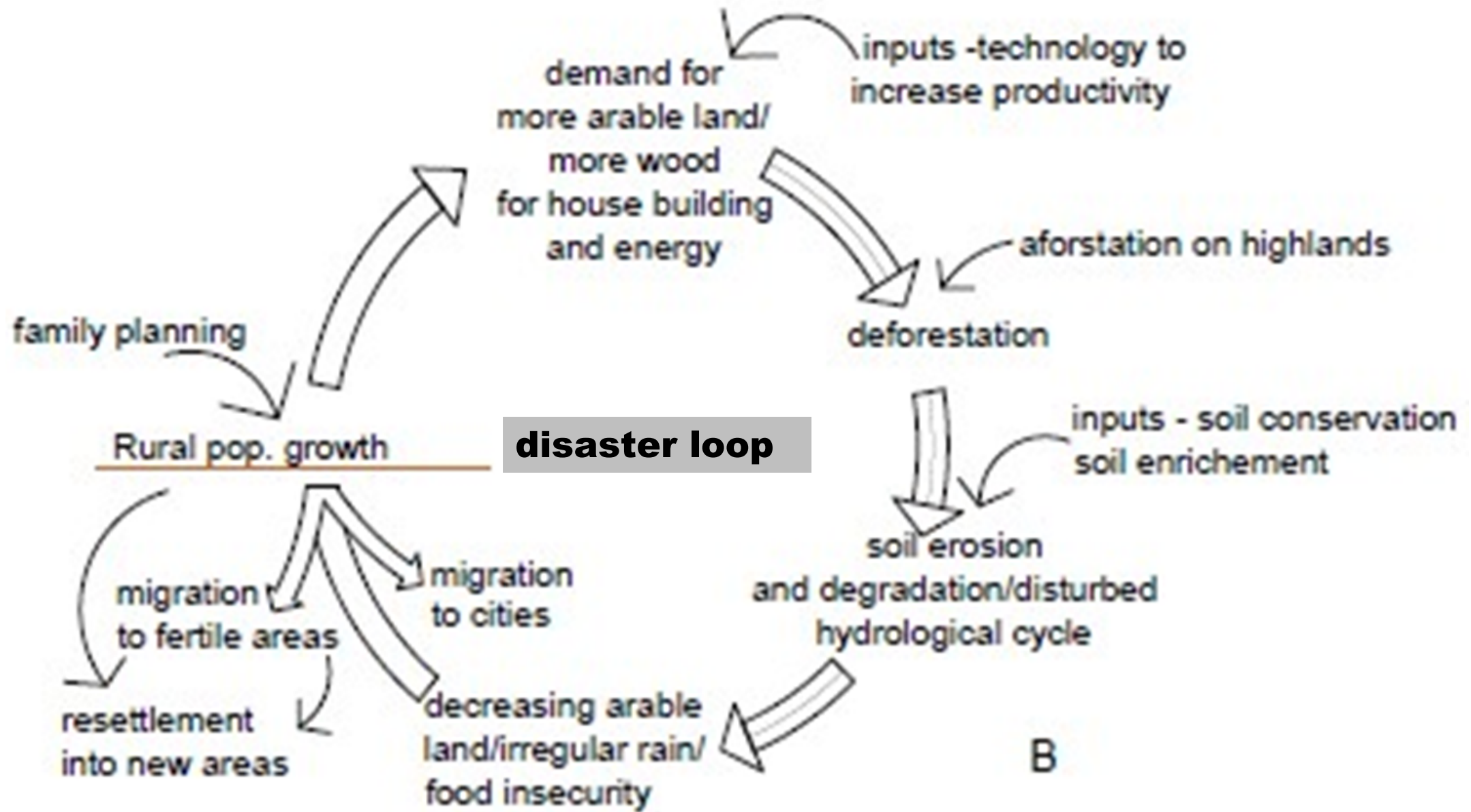
*Cedric Price, 1966*

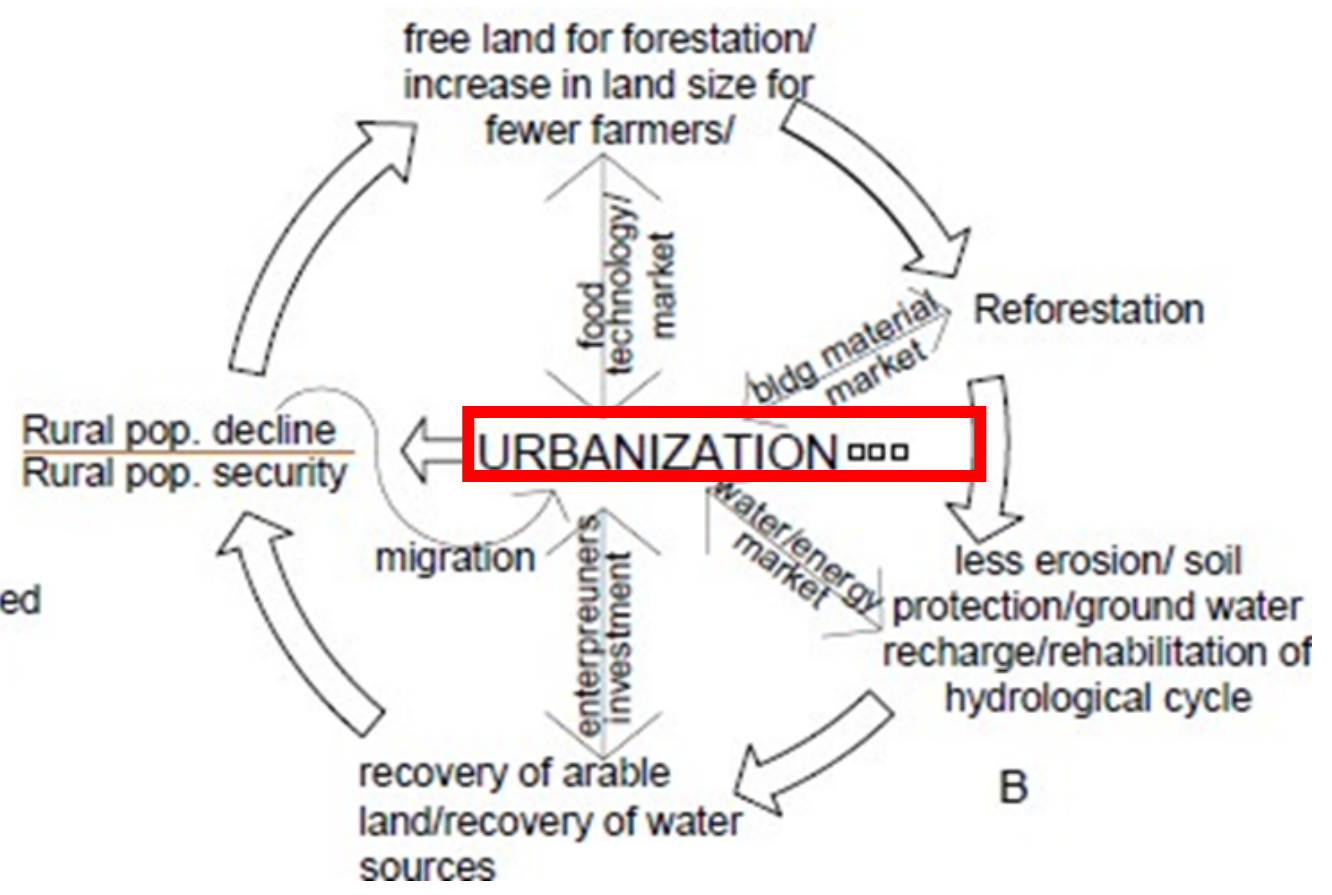
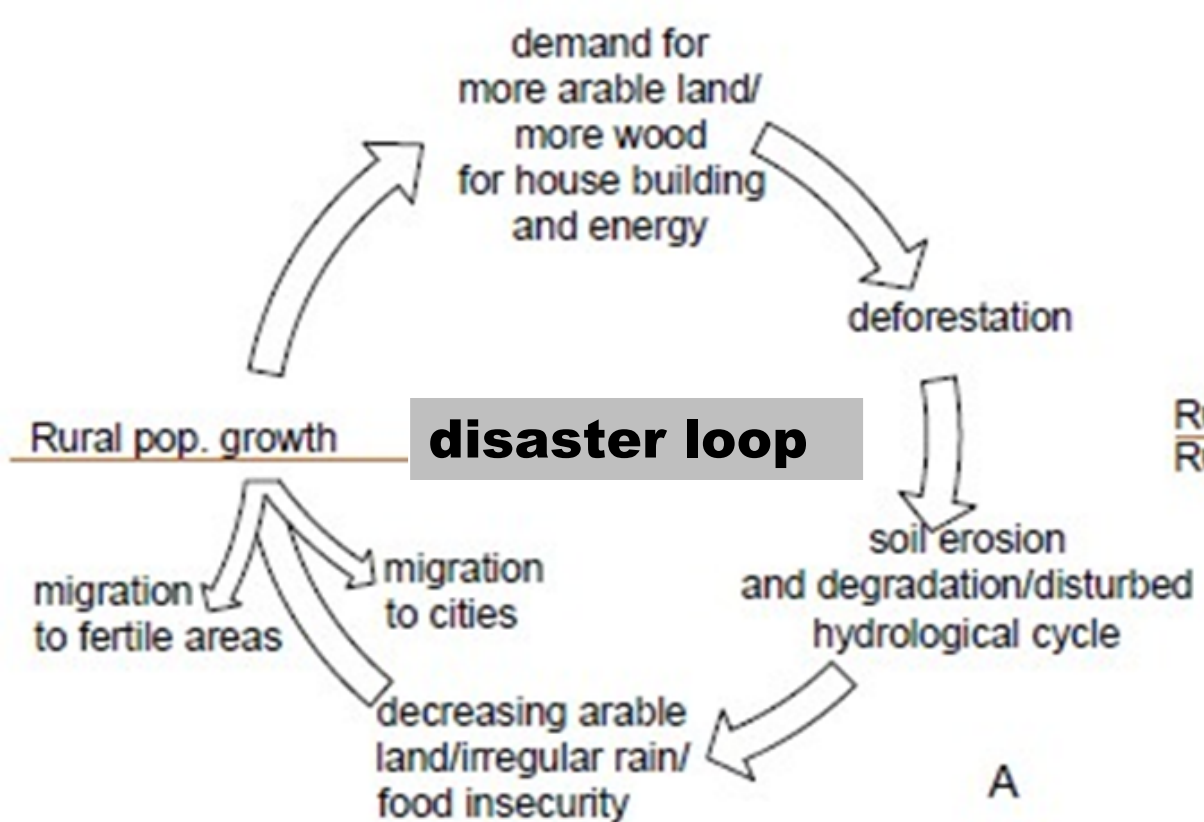
# 2050

- >Urbanization as a defining phenomenon!**
- >What sort of Cities shall we conceive  
(urban reality and urban systems?)**



**Scarcity of vital resources**  
**>water**  
**>Soil**



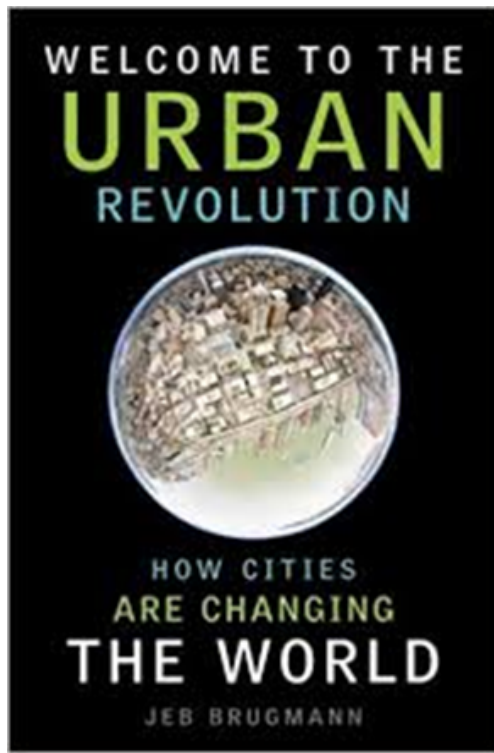


# Urbanization

>as a process of holistic socio-spatial transformation

*Rural-urban shifts* in demographic concentration, economic structure, socio-cultural organization, spatial configurations (land use) and political structures.



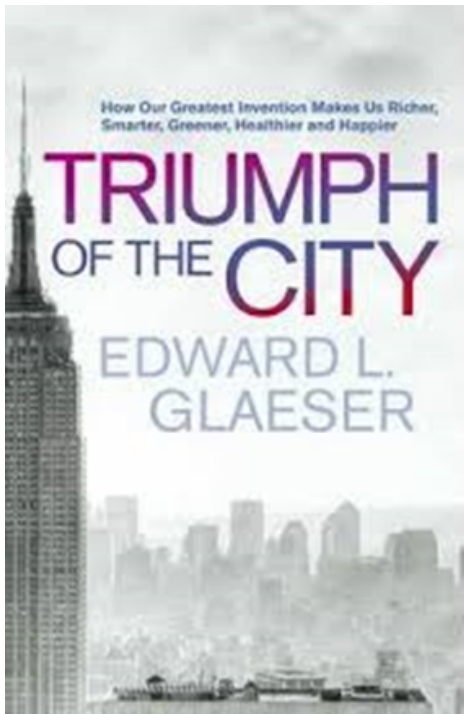


# The **FUTURE** is **Urban**

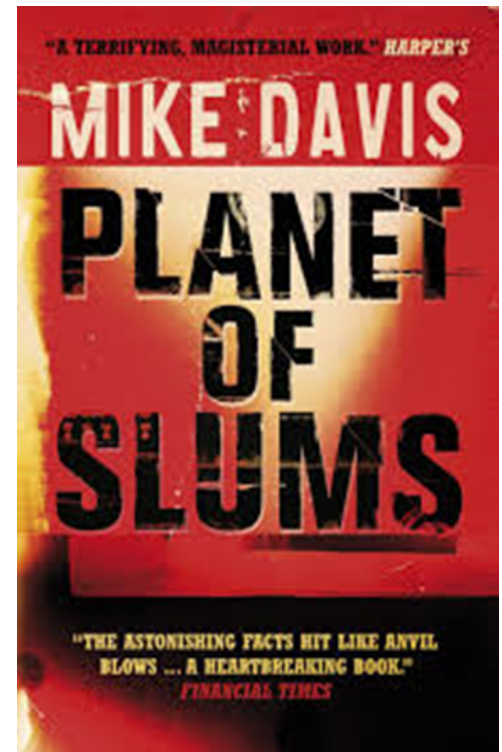
The  
Urban Revolution

Foreword by Neil Smith  
Translated by Adam Bennett

Cities are the heart of the urban civilization



# The **FUTURE** is **Urban**



Cities are the heart of the urban civilization

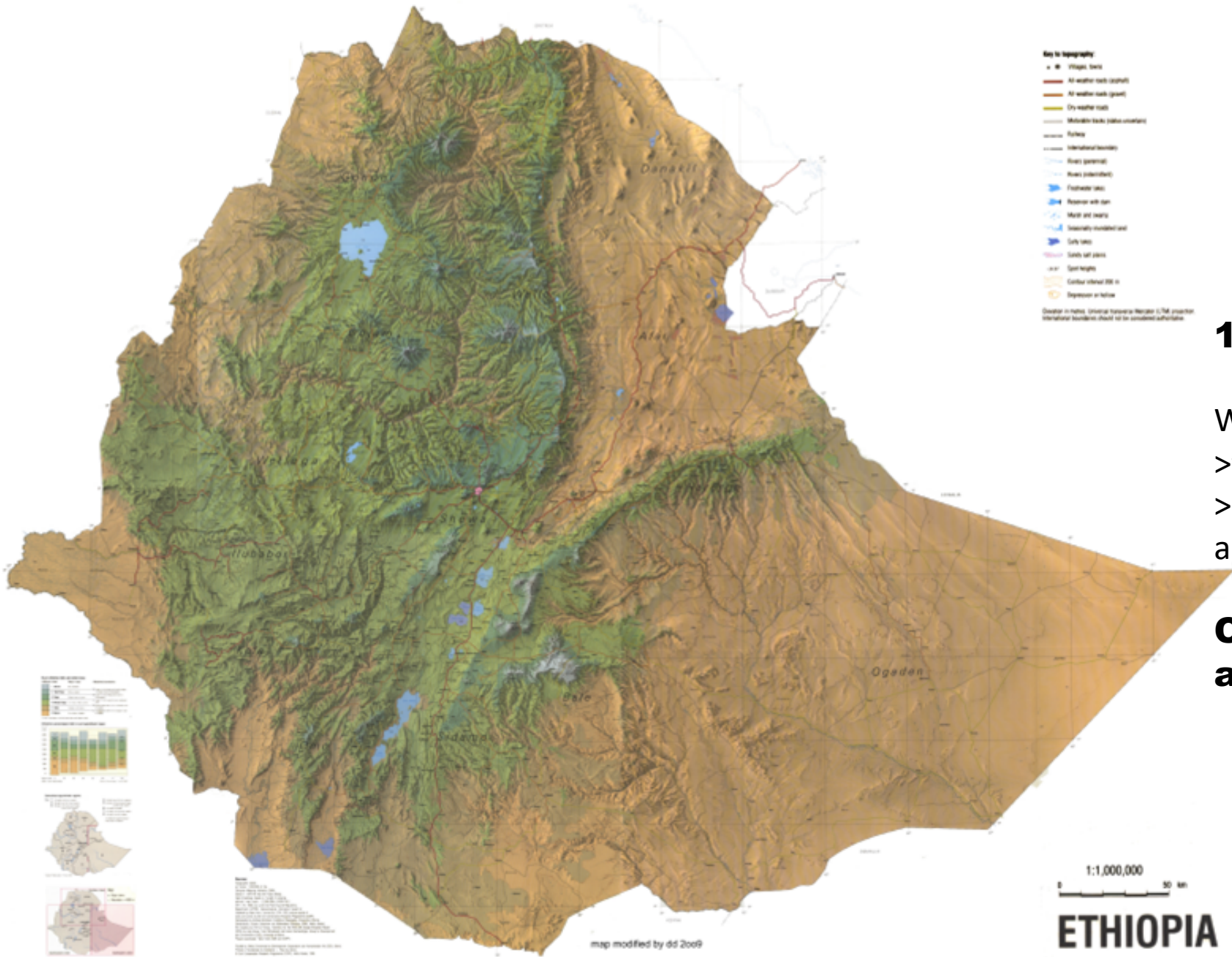
Venues of **Hope** or **Despair**

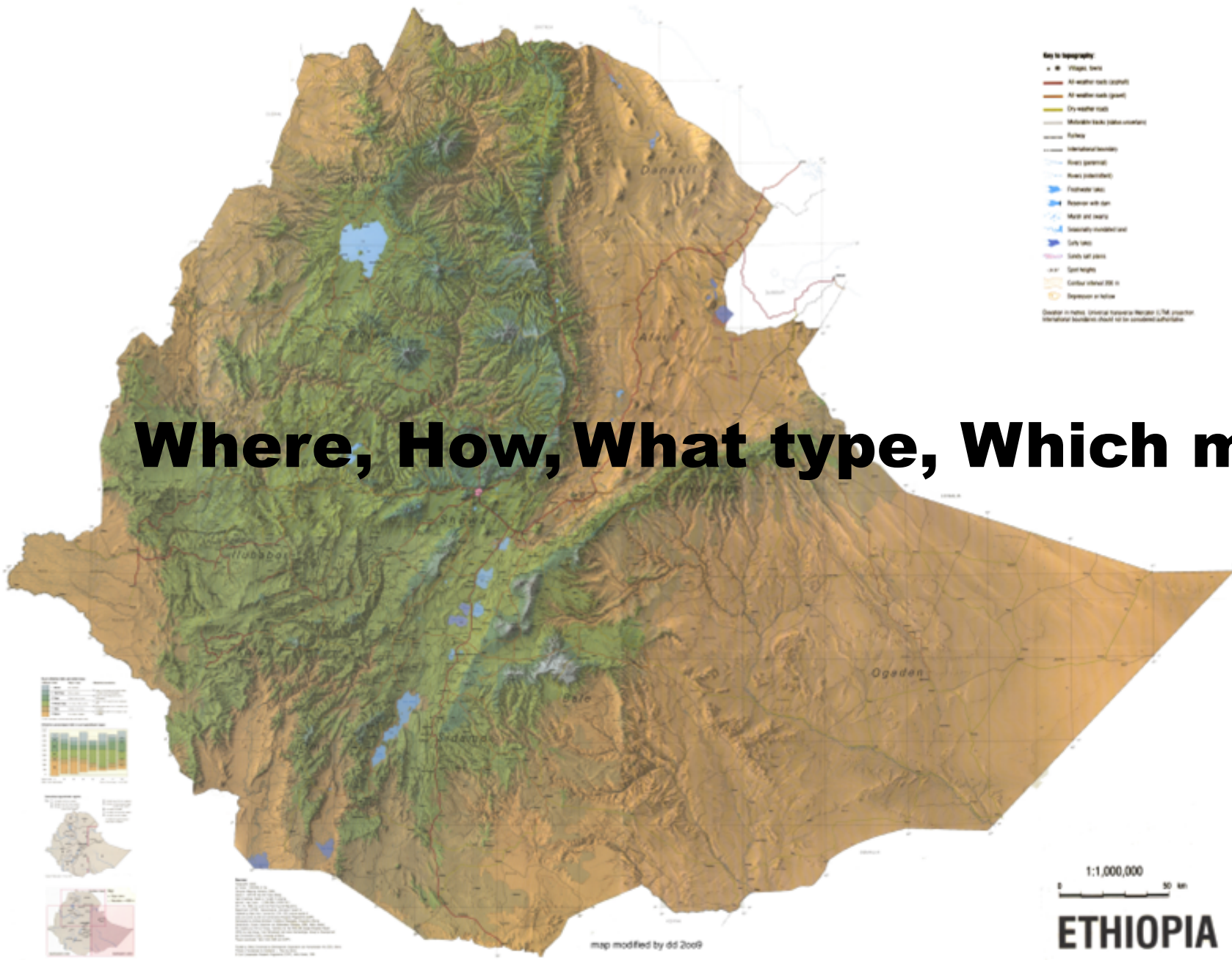
# 2050

**100 mill new souls in 30 years**

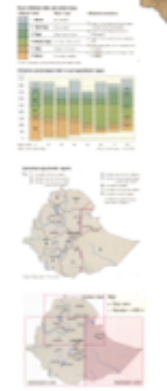
While we know  
>the rural landscape  
>and rural economy  
are getting saturated

**Cities of Ethiopia have to  
absorb all!**





**Where, How, What type, Which model, ...???**

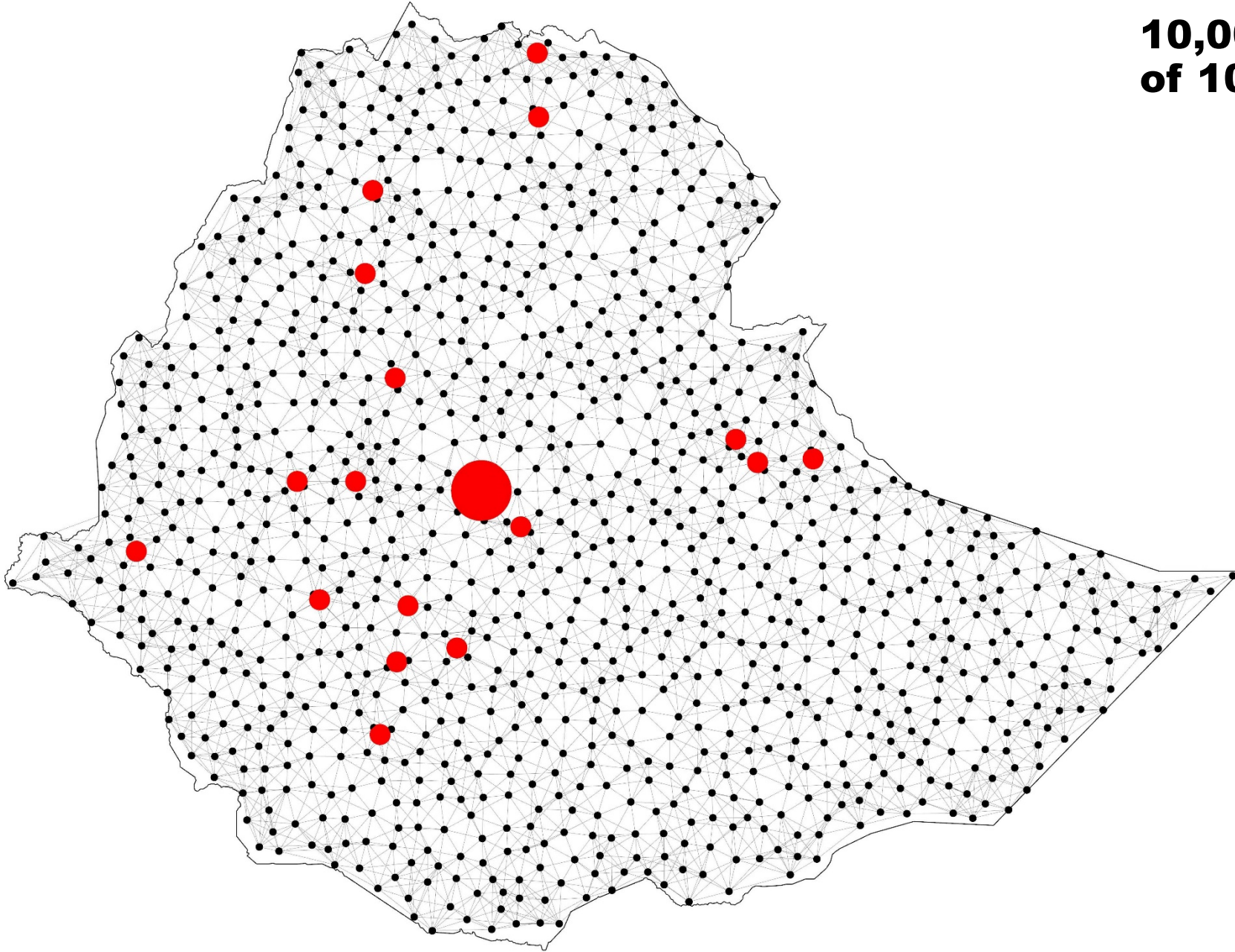


- Key to topography**
- • Village, town
  - All weather road (asphalt)
  - All weather road (gravel)
  - Dry weather road
  - Main roads (asphalt)
  - Other
  - International border
  - River (perennial)
  - River (intermittent)
  - Freshwater lake
  - Reservoir with dam
  - Marsh and swamp
  - Seasonally flooded land
  - City lake
  - Sandy salt pans
  - Spot heights
  - Contour interval 200 m
  - Depression or hollow
- Quoted in part, General topographic Map 1:750,000 for Ethiopia  
International boundaries should not be considered authoritative

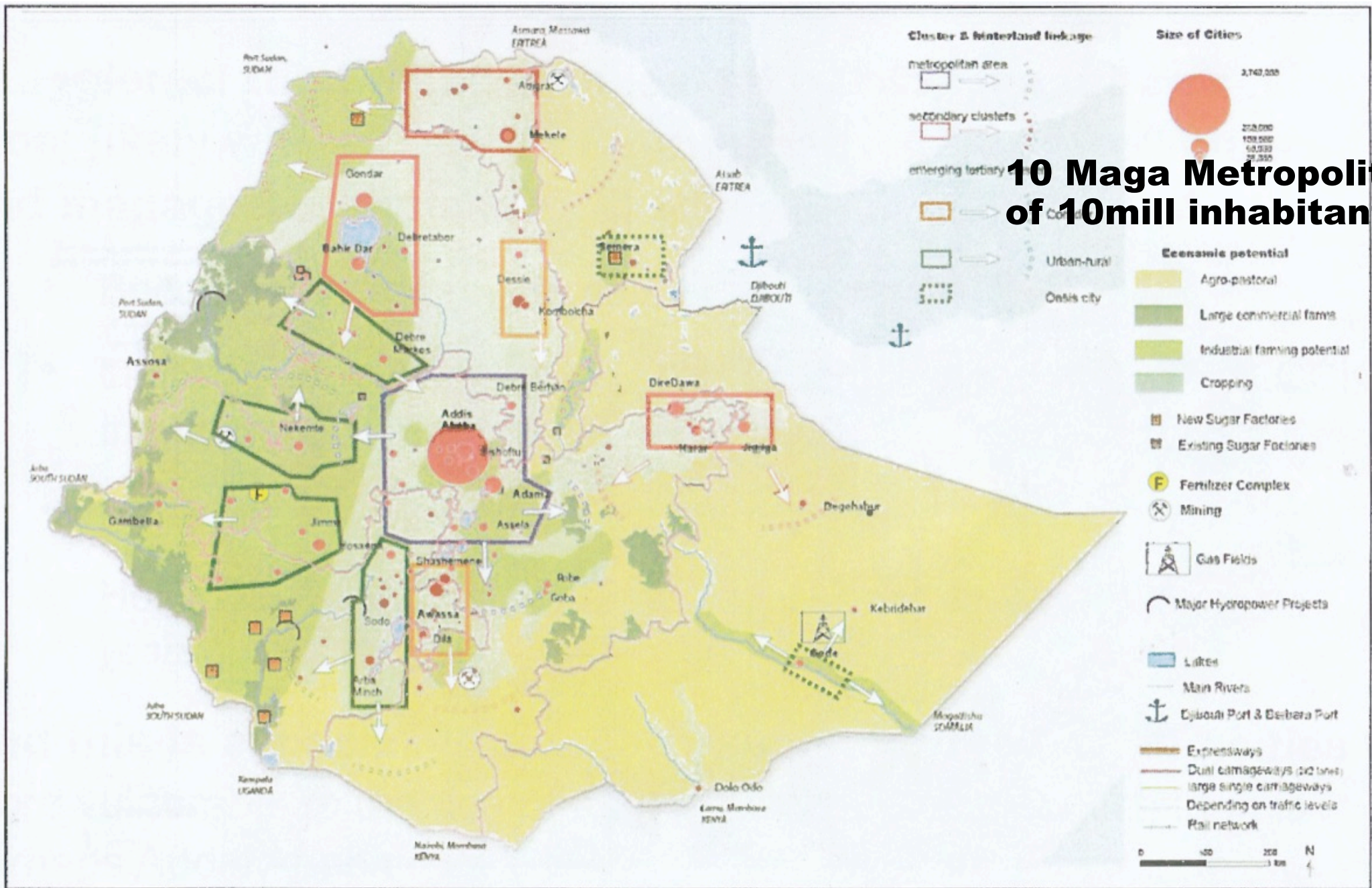
1:1,000,000  
0 50 km  
**ETHIOPIA**

map modified by dd 2009

**10,000 small networked towns  
of 10,000 inhabitants**

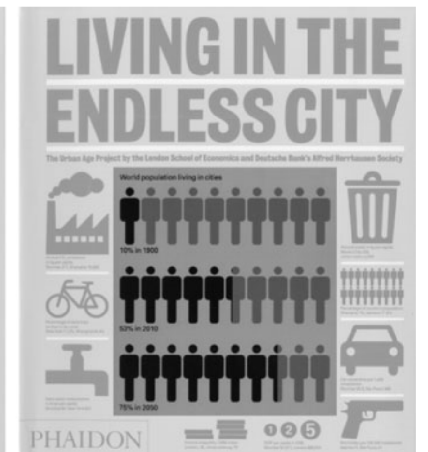
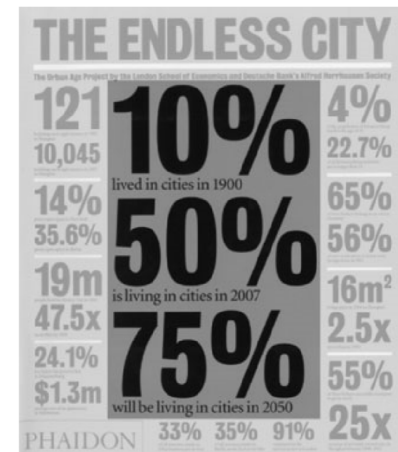


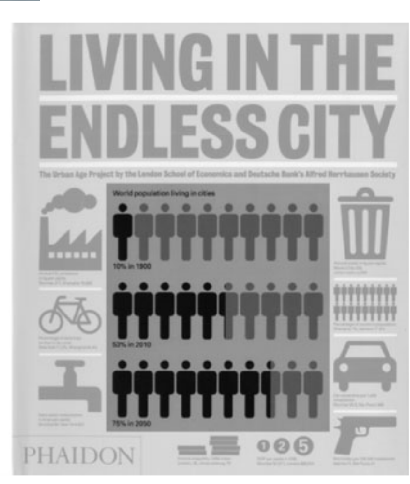
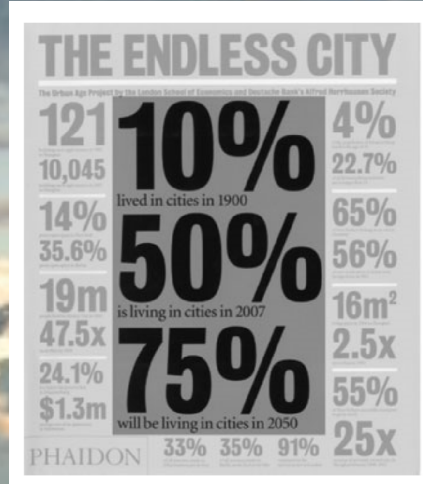
# 10 Mega Metropolitan regions of 10mill inhabitants





## The endless horizontal carpet laminating the landscape





**The universal suburbia**  
**Fossil based urbanism**



**The exclusive city model of the Middle East**



## The high speed urbanism of China



**How and who would finance it?**

**..... Billion USD**

**How are these organisms will respond to realities  
(Local and Global)**

# **What is the real question....**

**>if Urbanization is a process of holistic transformation of societies**

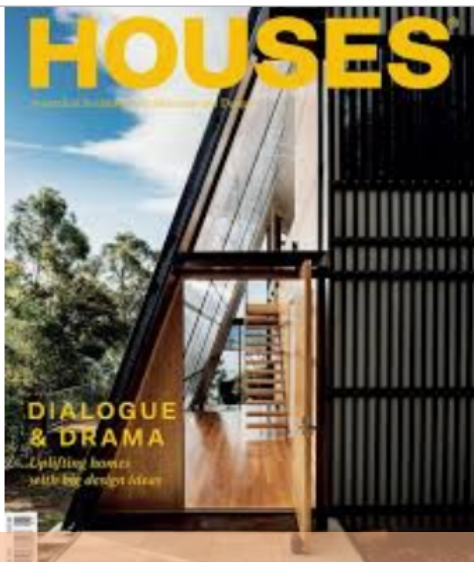
**How and what type of Cities to Build??**

**Or**

**How and what kind of Communities to build??**

**Or**

**How can we Build communities through  
Building cities**



Houses | ArchitectureAU  
architectureau.com



May 2017 - Issue - Arc...  
ebuild.in



20 Best architecture m...  
pinterest.com



768 x 432

In The Magazine | Architectural Digest  
architecturaldigest.com

Books, curriculum, teachers





768 x 432

Architecture/planning (education and practice) established on norms/dreams of a distant elsewhere







An aerial photograph of a densely packed informal settlement, likely a slum. The majority of the buildings have corrugated metal roofs in various shades of brown, grey, and red. The structures are tightly packed together, with narrow, unpaved paths or alleys visible between them. In the lower-left quadrant, a large, modern building with a white facade and a dark roof stands out significantly from the surrounding informal housing. To the right of the settlement, a paved road with several cars is visible, bordering a more open, less developed area. The overall scene suggests a stark contrast between informal, low-cost housing and modern, high-quality infrastructure.

*Transform!*







*Transform!*

*Transforming to fit what and to fit whom??*

**Contemporary Architectural and Engineering Education has to be based on a fair reading of :**

***Local, Regional, and Global Realities***

# Africa and Ethiopia: The last frontier of urbanization



*Local, Regional and Global Realities*



Probably the earliest inhabited region  
With a solid land mass and rich resources

## The Continent Africa

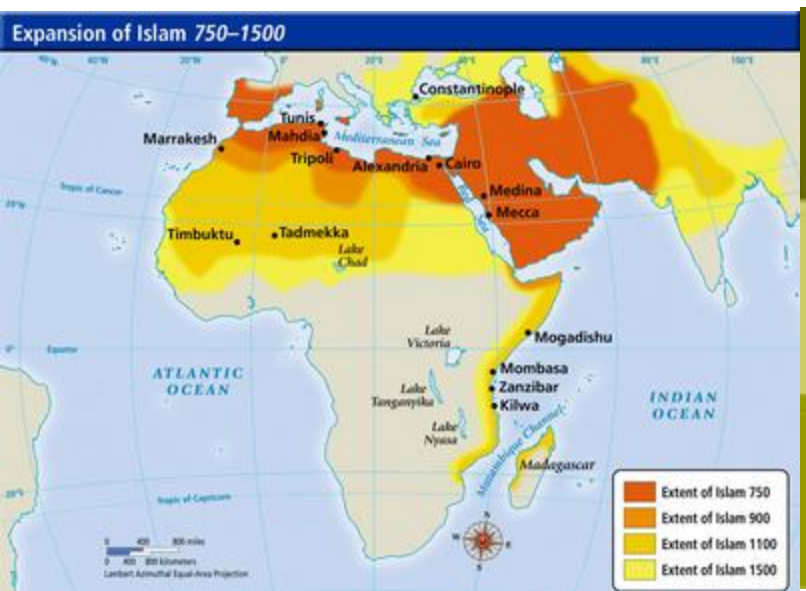
– influence on social and economic structure

History (three notably defining global forces)

>Islamic expansion (7<sup>th</sup>-15<sup>th</sup> C)

>European colonization (18-20<sup>th</sup>)

>Globalization and the rise of China (21<sup>st</sup> C)



## Colonial Africa as of 1914

By 1914, 90% of Africa was under European control

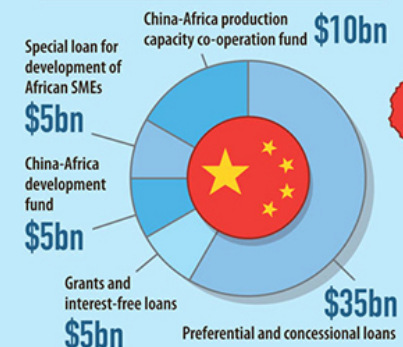
- England took 30% of African population under its control
- France 15%
- Germany 9%
- Belgium 7%
- Italy 1%



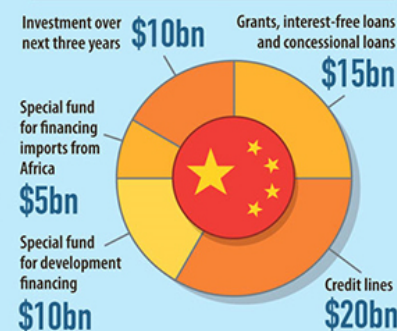
## \$120-billion for African growth

Financial pledges to Africa made by the Forum on China-Africa Co-operation

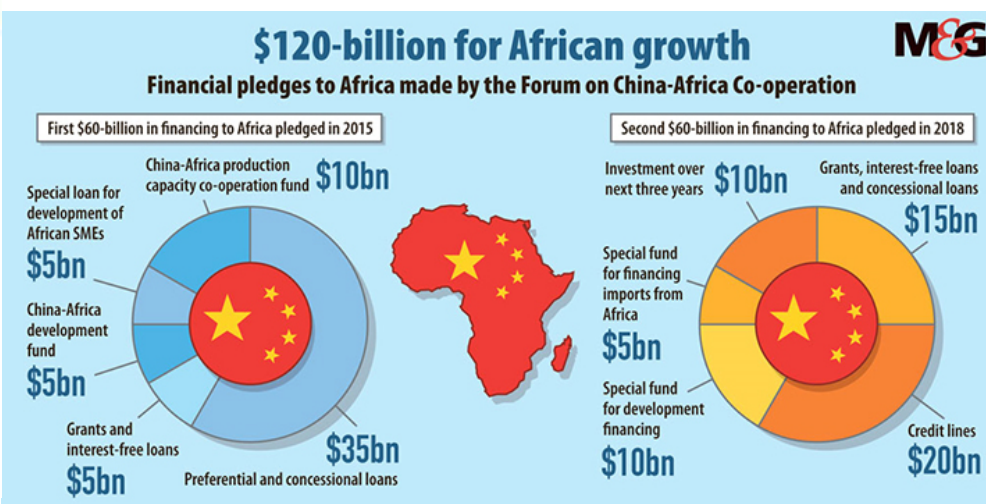
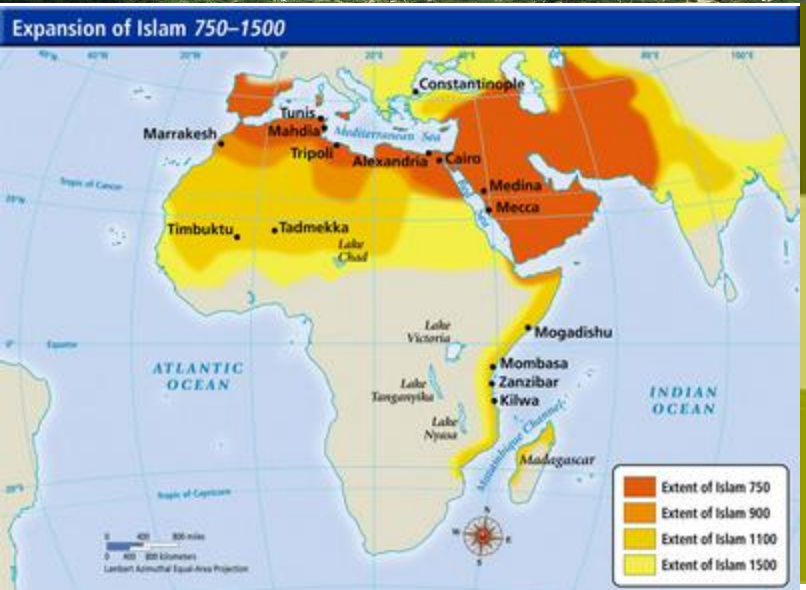
First \$60-billion in financing to Africa pledged in 2015



Second \$60-billion in financing to Africa pledged in 2018



# What happened to the indigenous city?





**the Ethiopia of Today...**

**Between Despair and Hope....**



# the Ethiopia of Today...

## Despair/grand challenges

### Higher Rate of Urbanization

(Without industrialization and modernization)

(Due to distress migration)

### Rapid Population growth

### Expanding natural and manmade crisis

>climate change

>global economic uncertainty  
(failure of rural economy)

>Political uncertainties



# the Ethiopia of Today...

## Despair/grand challenges

## Grand Opportunities

### **Higher Rate of Urbanization**

(Without industrialization and modernization)  
(Due to distress migration)

### **Rapid Population growth**

### **Expanding natural and manmade crisis**

- >climate change
- >global economic uncertainty  
(failure of rural economy)
- >Political uncertainties

### **Young population**

Fairly rich and recoverable **Natural resources**  
(water, soil, and sun)

### **Digitalization/Globalization**

Easier technologies

### **Backwardness**

More chances not to repeat mistakes of history



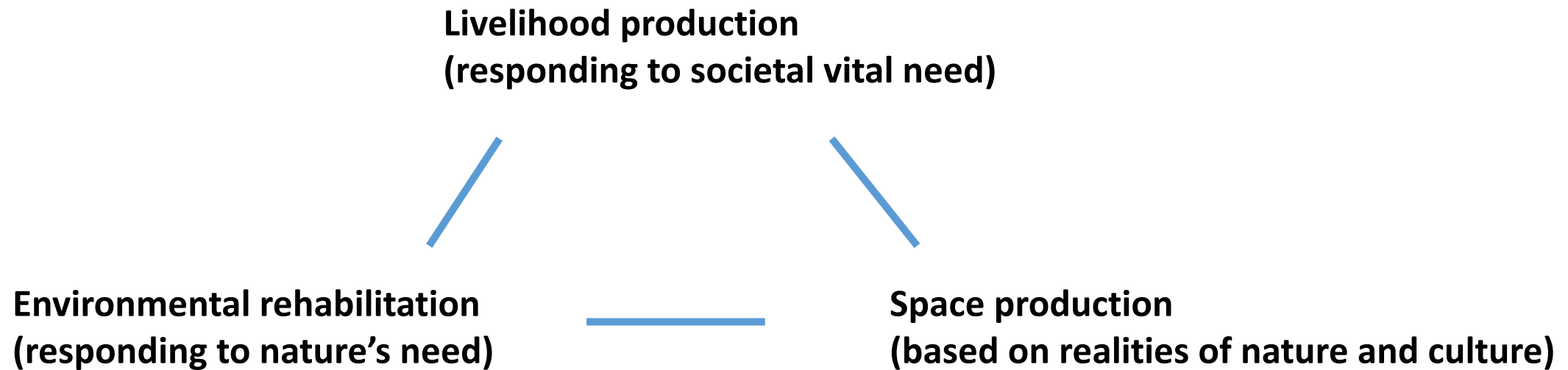
What's architecture got to do with these??



**Architecture and city making in Africa/Africa is betraying both nature and society and hence made itself irrelevant!**

Proposal: **re-inventing architecture and city making!**

**Architecture and City making as an enterprise to coordinate and link core processes**



# Research in EiABC, AAU

**ECL-AA, EiABC**  
**emerging cities lab-Addis**  
**Ababa**

**Guiding rapid urbanization**  
**Focusing on grass root**  
**reorganization**  
**>Architecture (as a Process of**  
**livelihood production),**  
**>Environment (rehabilitation),**  
**and**  
**>reinvention of urban tradition**  
**(belongingness and**  
**Participation in City making)**



Use architecture to create urban and rural jobs through the creation of SME (small and micro enterprise):

prefabrication as a tool through component building  
use local materials, and recycling





# strategy + planning model for shared work

## material

Local, available, renewable, easy to use...

## process

Job creation, community building, tolerant for less skills business model and sustainable(econ., env., and societal..)

## technology

Speed, efficiency, optimization, quality  
And  
Easy and futuristic



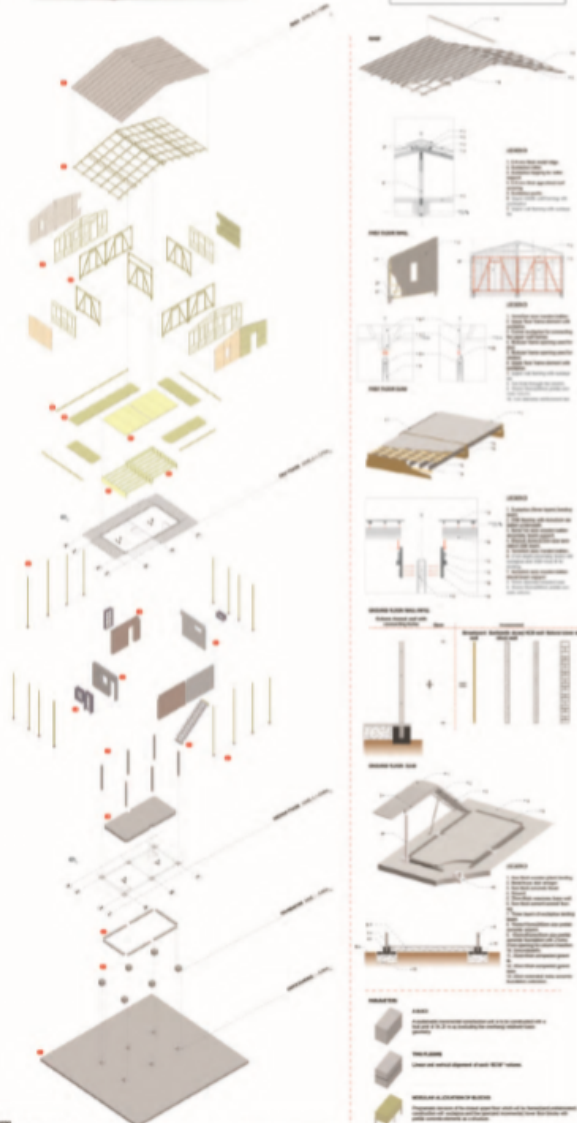


**Main Author**  
Architects and Engineers:  
[List of names and affiliations]

**Further Author**  
Calculator (s):  
[List of names and affiliations]

**Project Data**

**Function:** Prototype Unit (Housing / Office)  
**Client:** Local Administration of a certain neighborhood in Addis Ababa (Use of the building is yet to be defined)  
**Location:** Meskela 4, Lideta Sub-city, Addis Ababa  
**Date of start of work:** October 2012 - September 2013 (Project Period)  
**Plot Size:** 4.75m x 3.3m  
**Floor area:** 43 m<sup>2</sup>



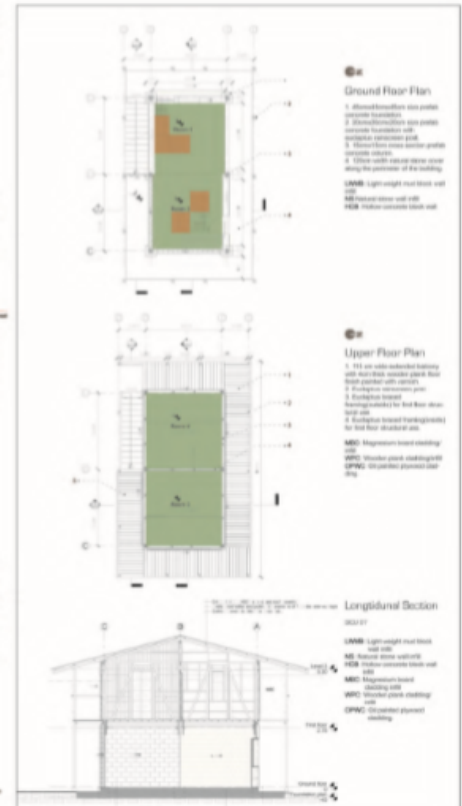
**Presentation of the Project**

SICU (Sustainable Incremental Construction Unit) is the second experimental process-oriented building prototype that is being constructed by EIABC and EABC, in the streets of Addis Ababa, with the idea of a modular building strategy that breaks down and simplifies the complex construction process into very easy and self-representable steps and procedures, to allow mass production as well as encourage dwellers to build their own houses. It will be a show case where the team of architects with their users will research and explore possibilities of designing and making an incremental housing unit in an urban context. SICU is part of the "Science Africa" project (2012 - 2013) at DfID (UK) (UK-Africa Academic Exchange Service) which is an international academic research project between the Ethiopian, French, Indian and UK academic communities.

Currently, the building industry in Ethiopia urban centers is flooded with a complex construction process, which consumes large amounts of time and resources, imported building materials, generic and international construction techniques and very high building costs are the order of the day in construction sites all over the city, calling for alternative methods and strategies that allow inhabitants to make a life out of a little.

The SICU prototype house is a double-story and comprising of prefabricated concrete lower structure and lightweight modular fixtures for the upper floor. It is a self-build construction where the homeowners will be able to finish the core structure themselves, making building components, such as enclosure walls, windows, internal partitions, and fixtures according to their needs.

The ultimate goal of SICU is to provide an alternative for the construction industry in Ethiopia. By lowering costs and applying such a method or system to modular building strategies, it would be possible to self-construct a very affordable housing unit in a very short time. It also enables it possible to achieve private ownership and create private work force to start economy housing units for Ethiopia, which introduces the possibility to "live with less".



Thank you