

Ruanda - Subsistenzmodell im Städtebau

Stadtentwicklung Nyanza

*Astrid Weisel, Architektin*

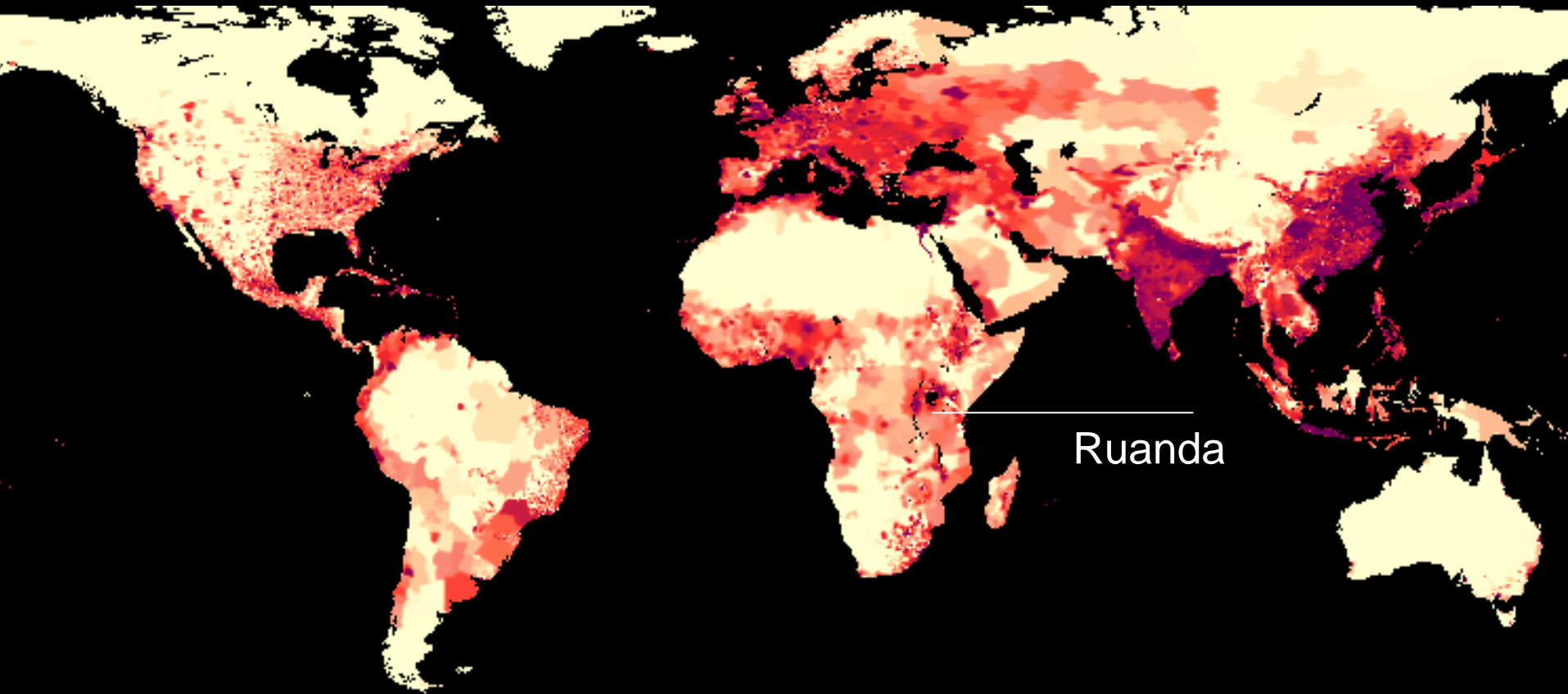
*TU München*

## Gliederung

- globaler Kontext
- Streusiedlungsmodell
- Vision Gartenstadt
- Strukturuntersuchung Distrikt Nyanza
- Planungsansätze für die Stadtentwicklung

Globaler Kontext

*El contexto global*



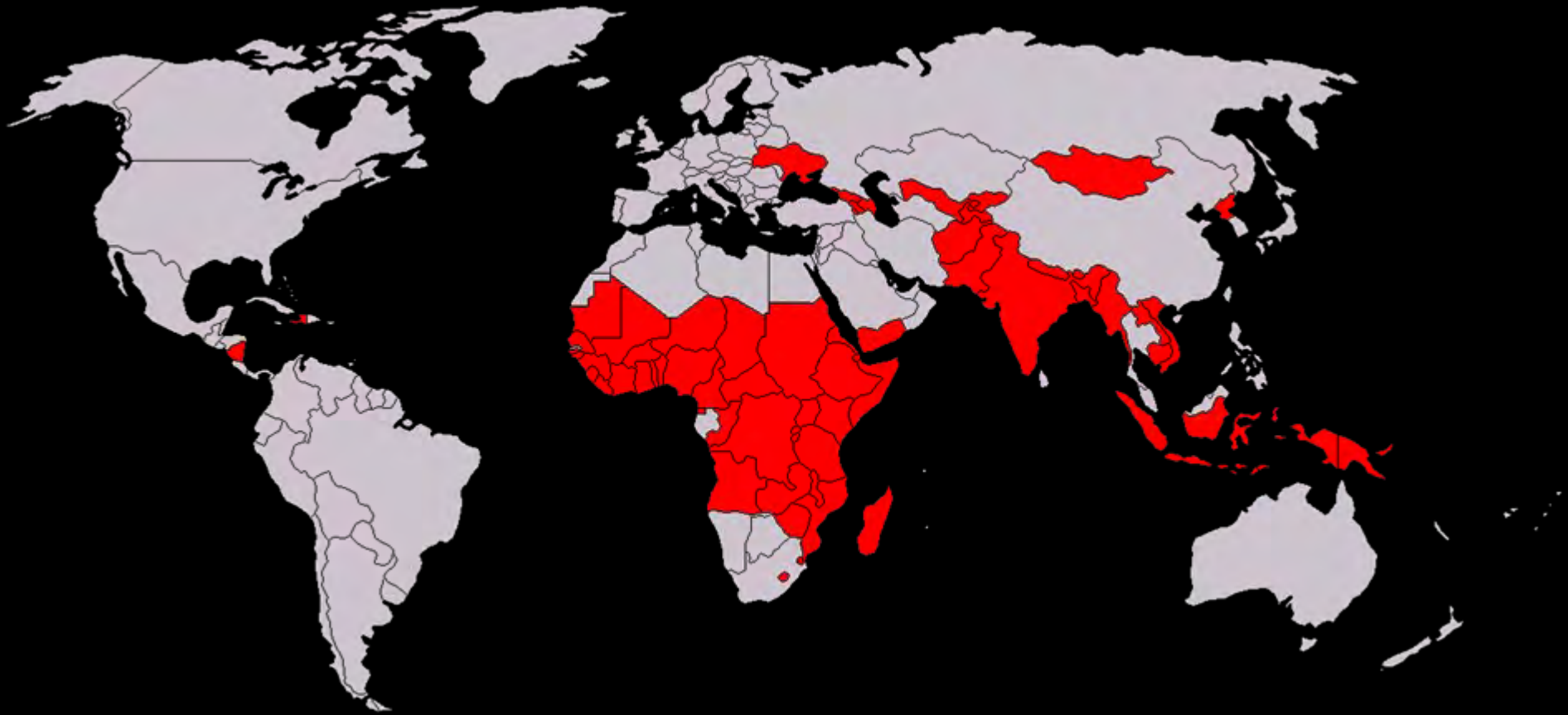
Ruanda

Deutschland: 356.945 km<sup>2</sup>/  
80,3 Millionen Einwohner  
225 Einwohner/km<sup>2</sup>



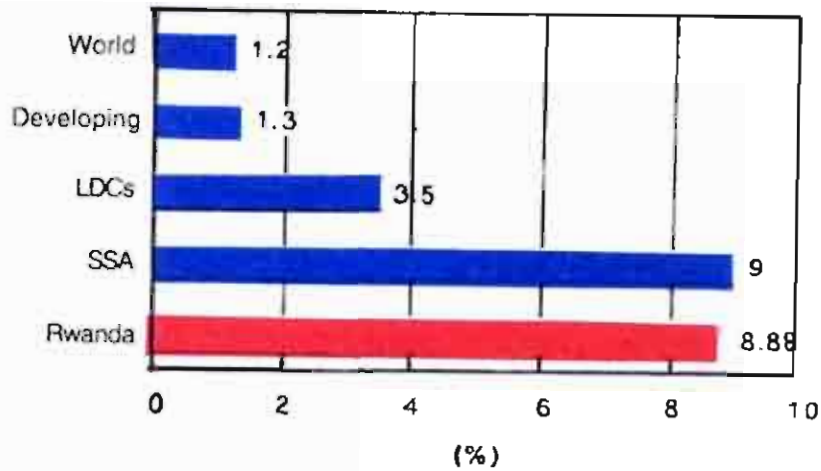
Mexico: 1.953.200 km<sup>2</sup>/  
106 Millionen Einwohner  
55 Einwohner/km<sup>2</sup>

Ruanda: 26.000 km<sup>2</sup>/  
8,4 Millionen Einwohner  
325 Einwohner/km<sup>2</sup>

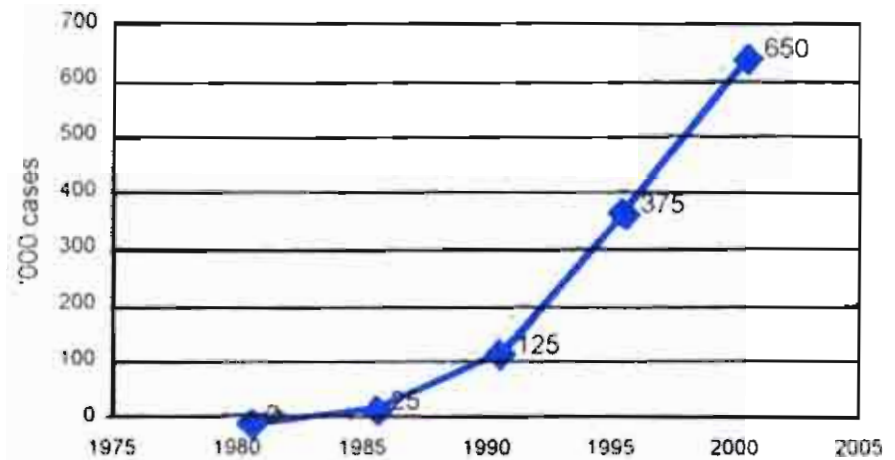


Verteilung der Armut, Quelle Weltbank 2001

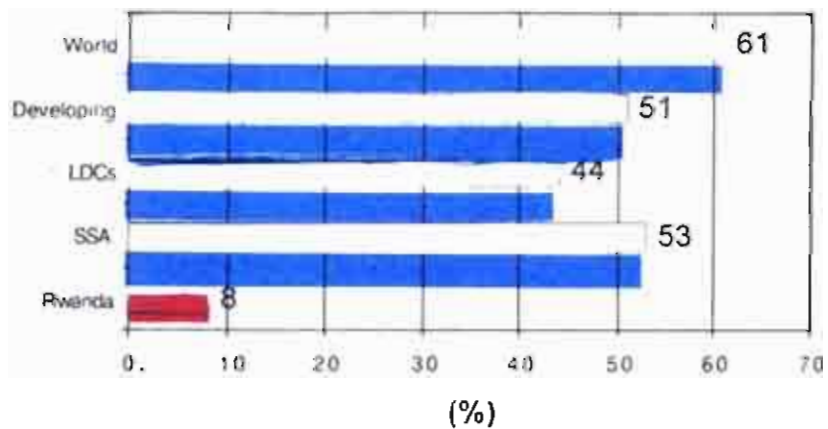
### Adults Living with HIV/AIDS (15-49), 2001



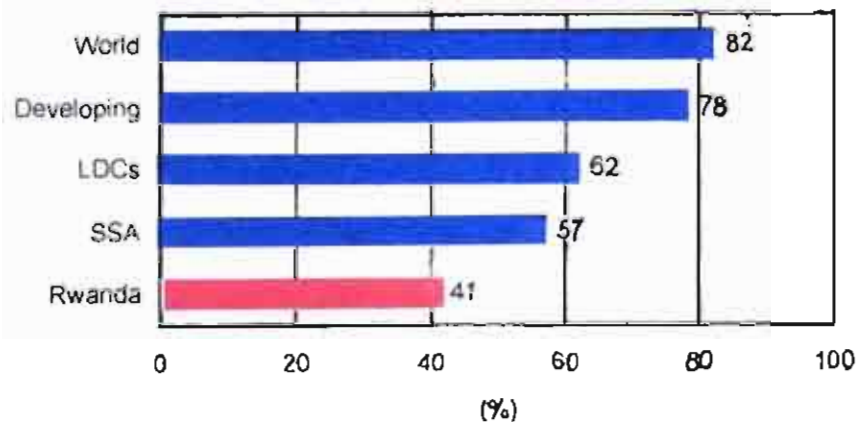
### Cumulative HIV/AIDS Cases



Pop. with Access to Improved Sanitation  
(2000)



Pop. with Sustainable Access to an Improved Water Source (2000)



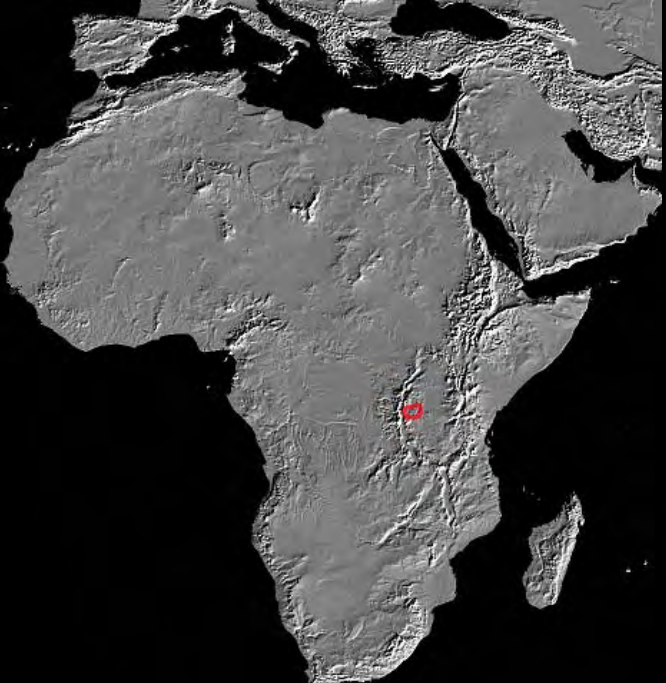


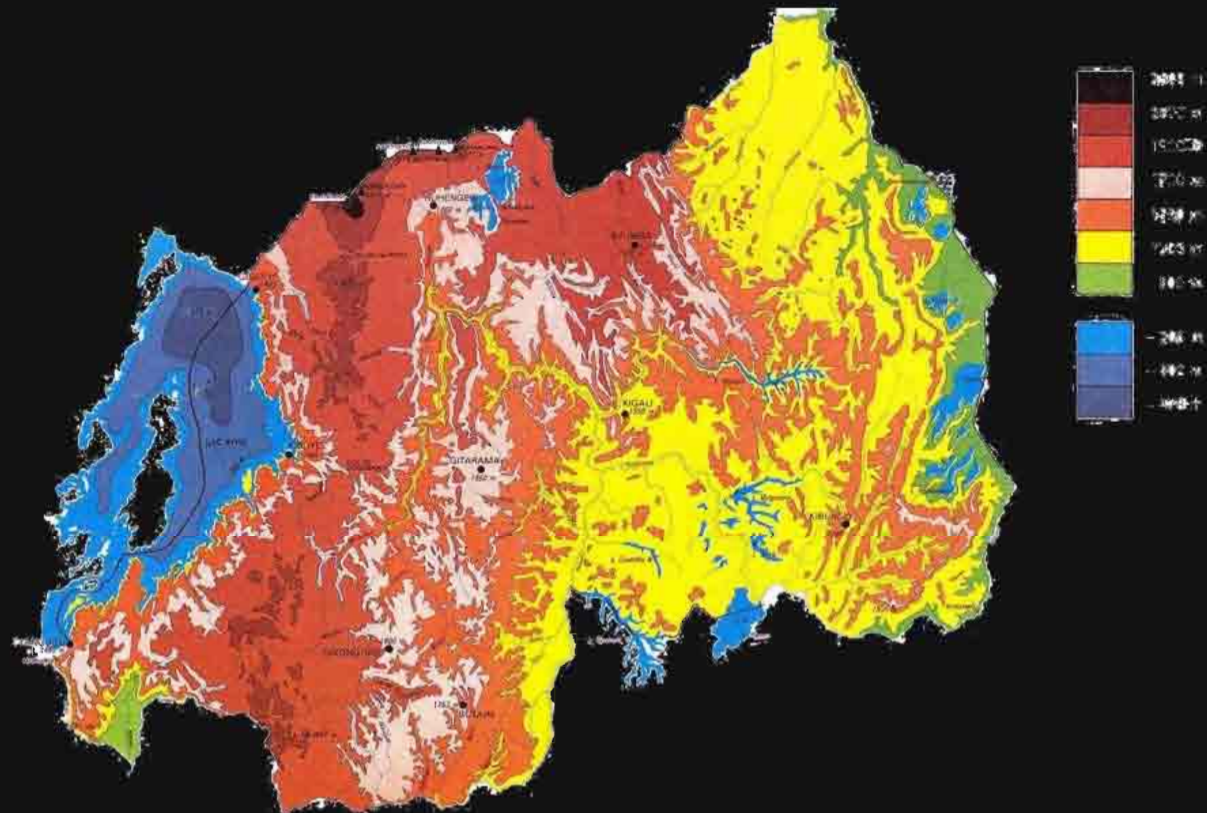
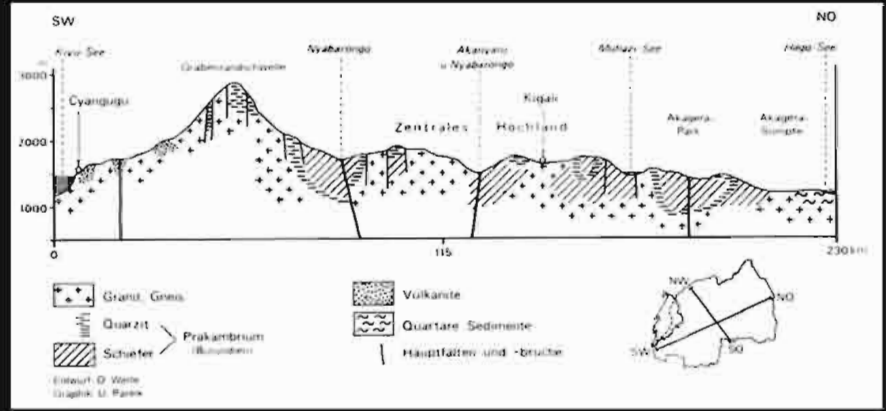
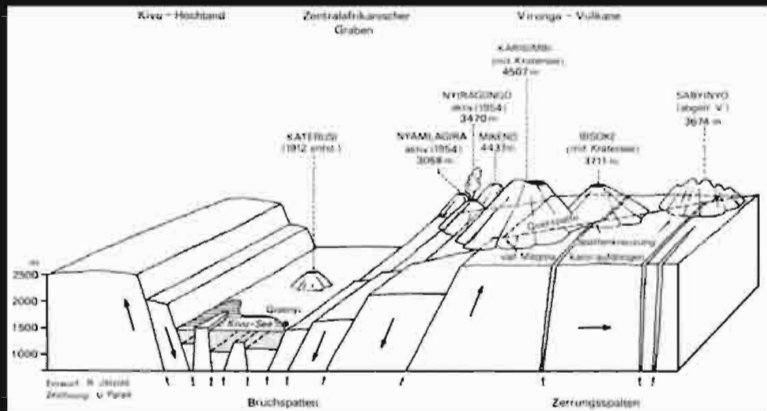
« Millenniums »erklärung der UN, 2000  
Ziele bis zum Jahr 2015:

- Armut und Hunger halbieren
- Primarschulbildung für alle
- Gleichstellung der Frau
- Reduzierung der Kindersterblichkeit
- Verbesserung der Gesundheitsverhältnisse für Mütter
- Kampf gegen HIV/AIDS, Malaria und weitere Krankheiten
- Ökologische Nachhaltigkeit
- Aufbau einer globalen Entwicklungspartnerschaft

Streusiedlungsmodell

*Modelo de un complejo urbano disperso*





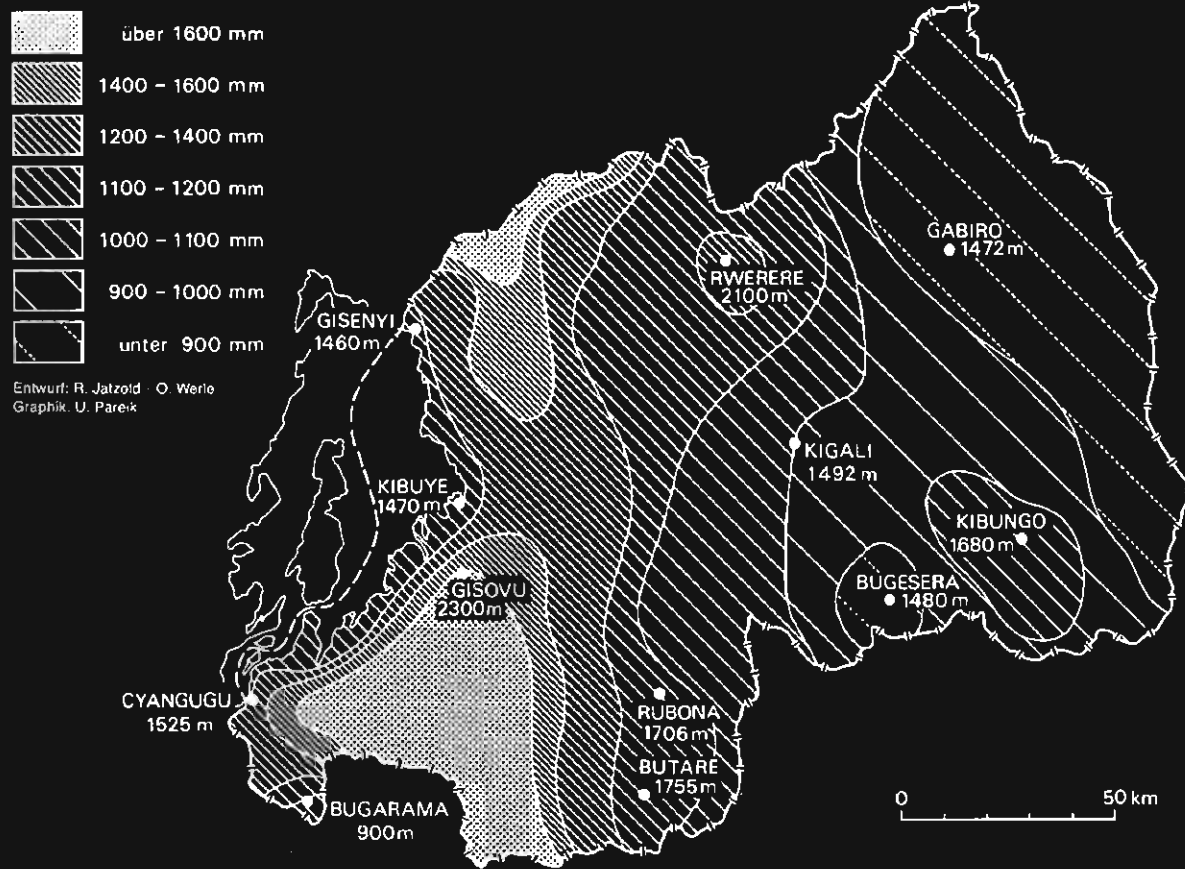
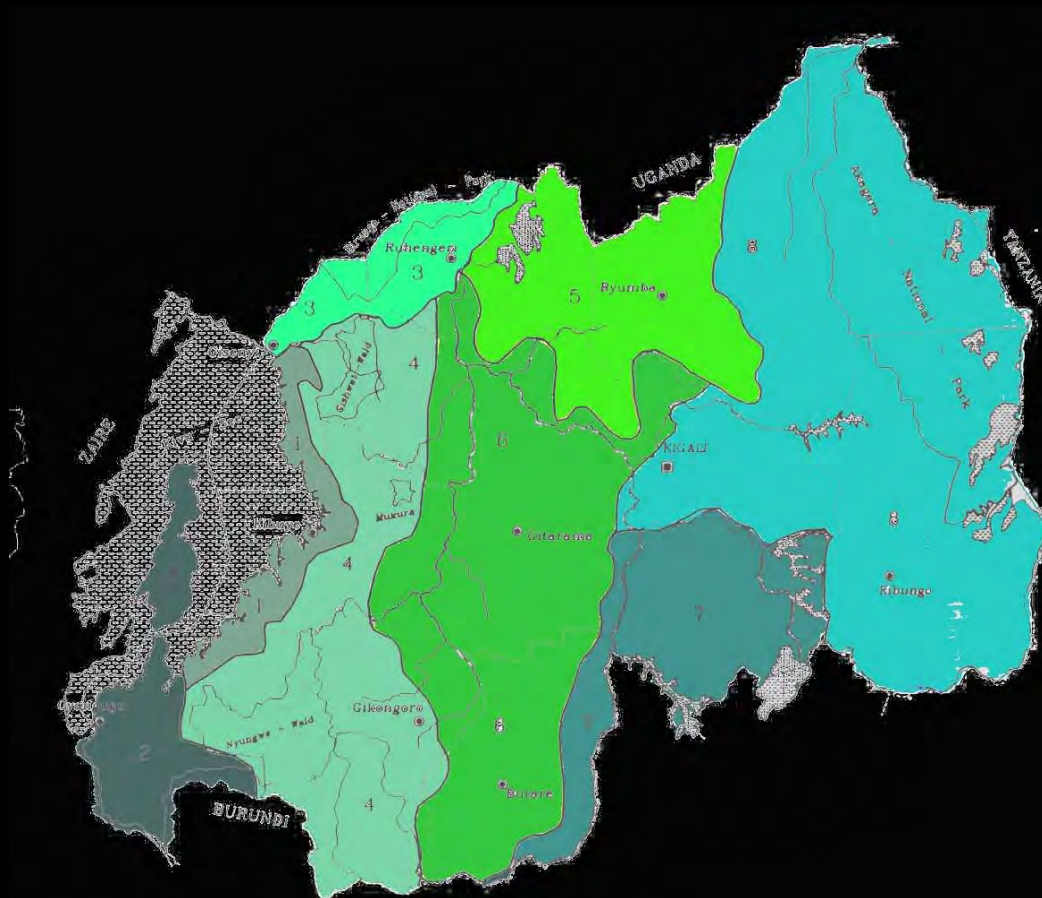
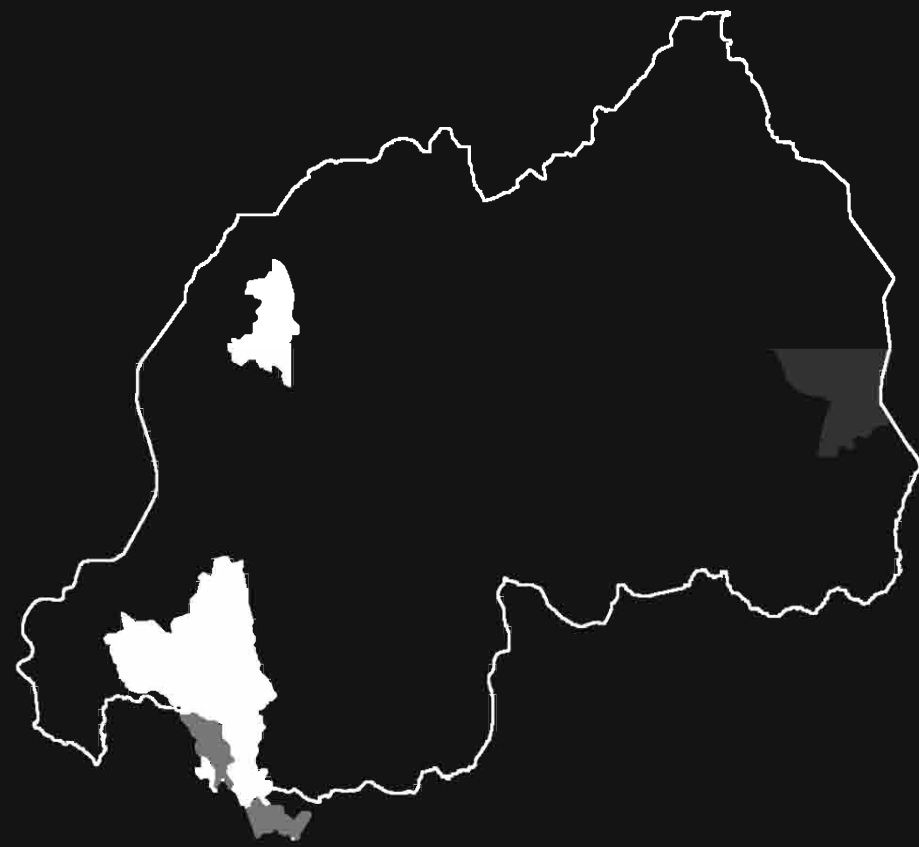


Abb. 5: Niederschlagsverteilung in Ruanda



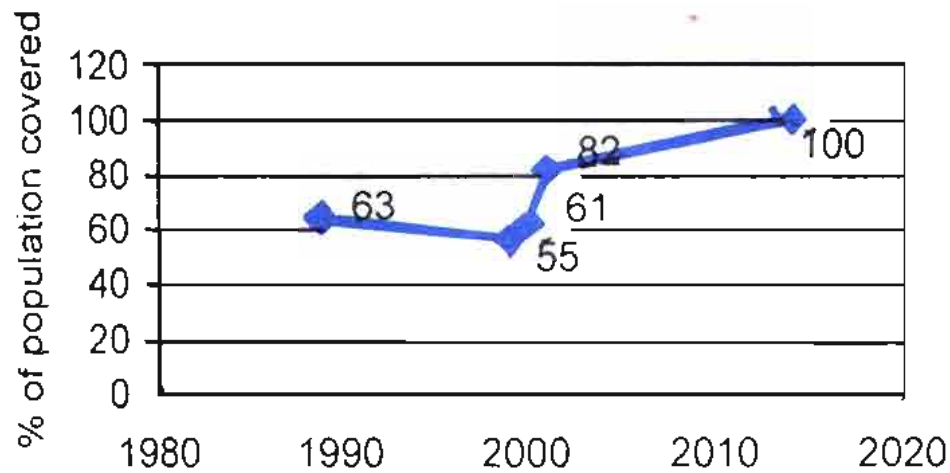
- Ostufer des Kivu-Sees
- Impala und Imbu
- Vulkanregion
- Nebelwaldregion der Crête
- Hochland von Byumba
- Zentralplateau
- Mayaga
- Östl. Savanne



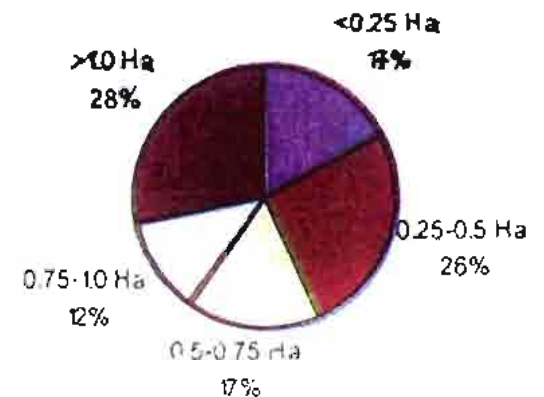
■ Wald = Nationalpark   ■ Nationalpark(Grenze)   ■ Nationalpark



**Domestic Food Production (Kcal)**



**Farmsize Distribution**

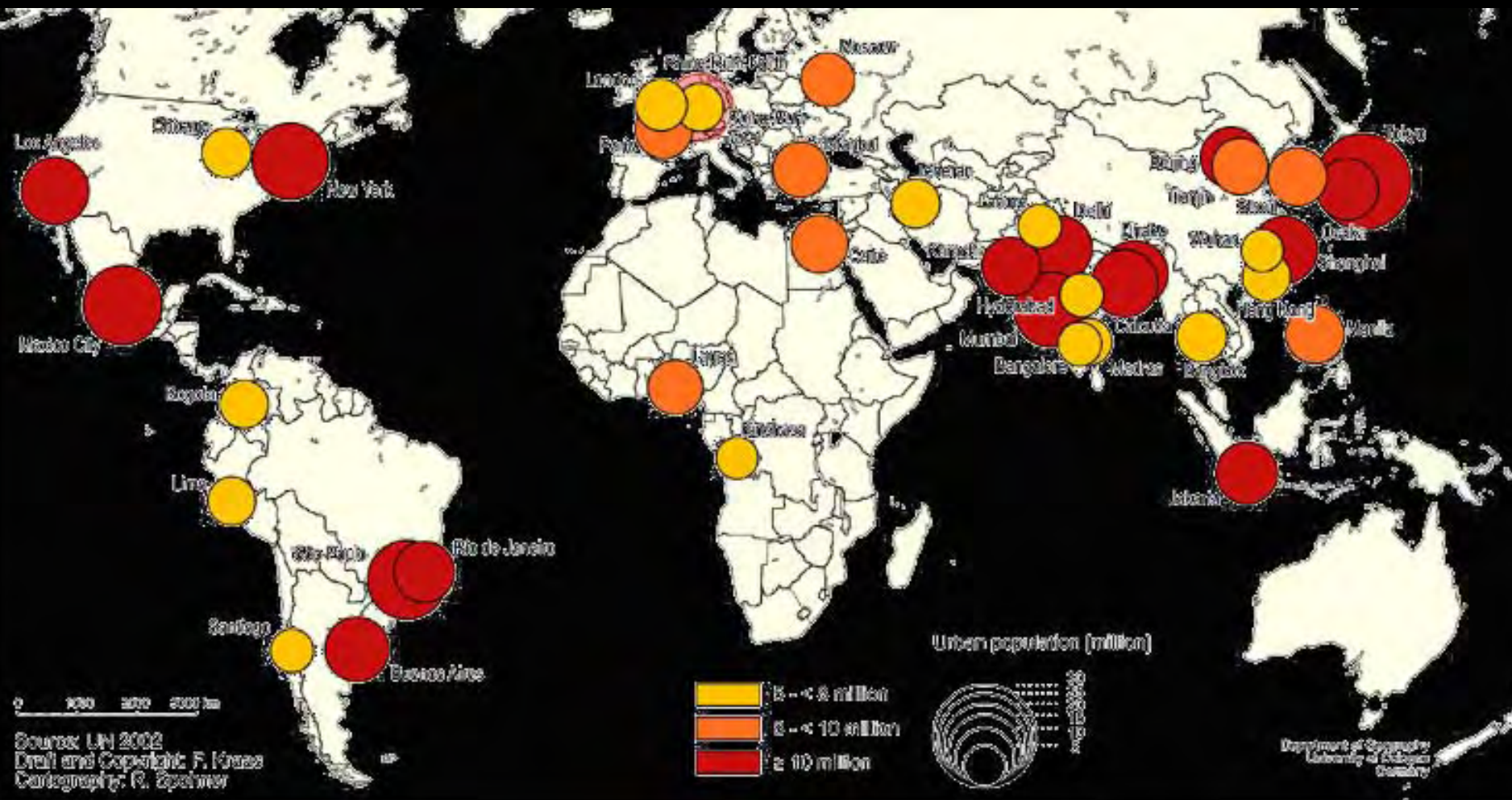




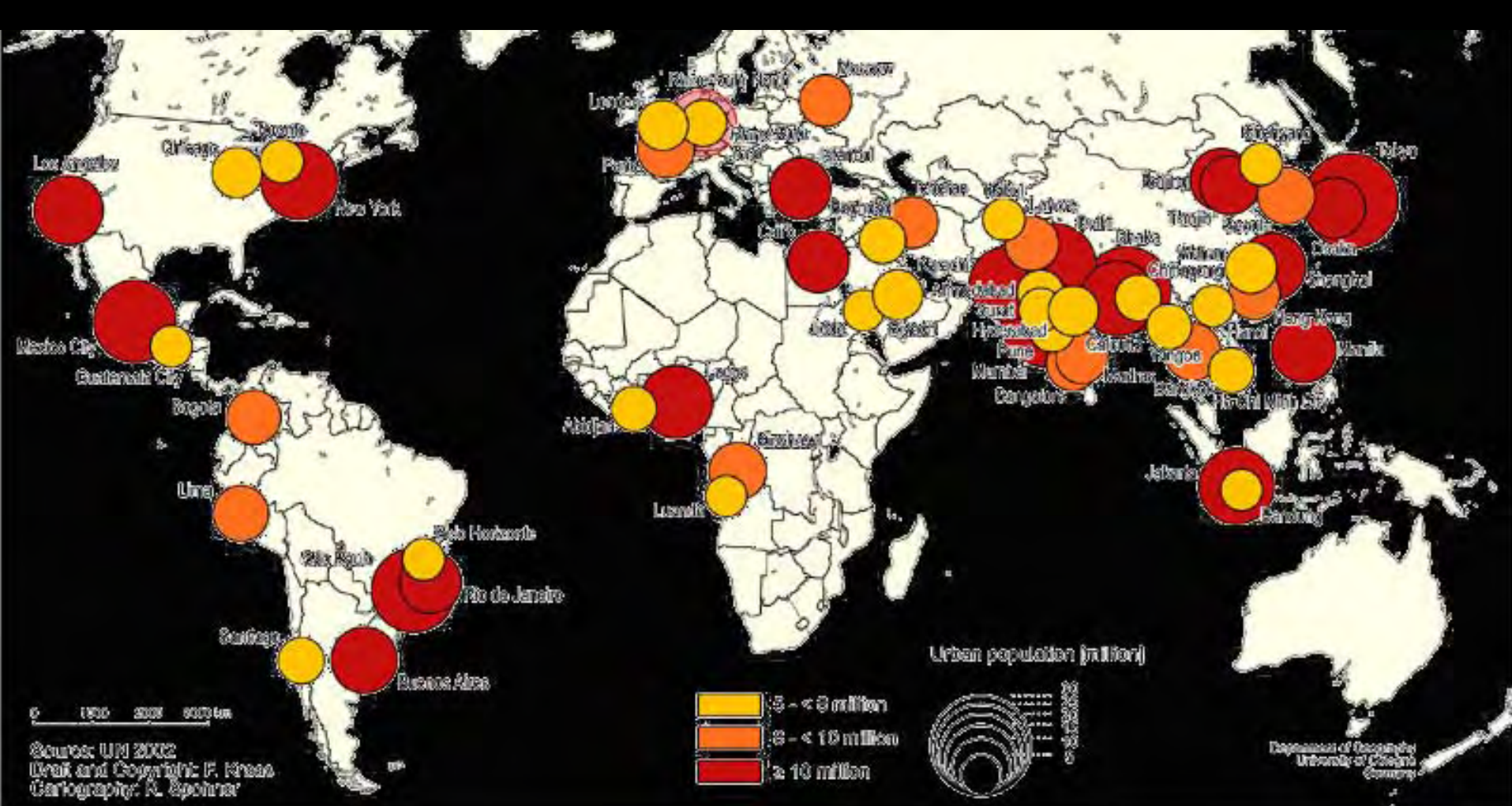


Vision Gartenstadt

*Modelo de un complejo urbano disperso*

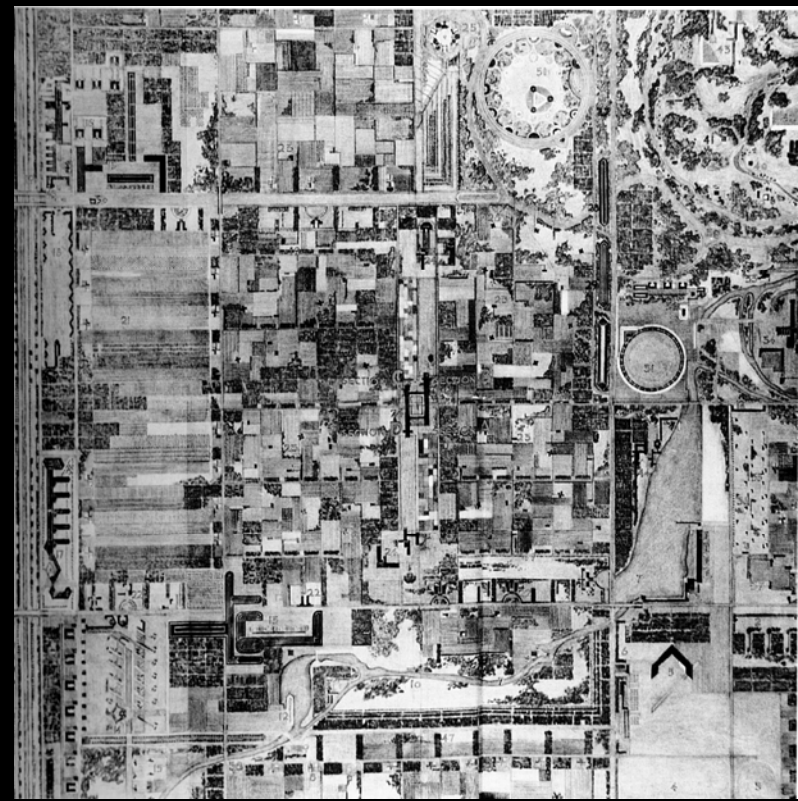
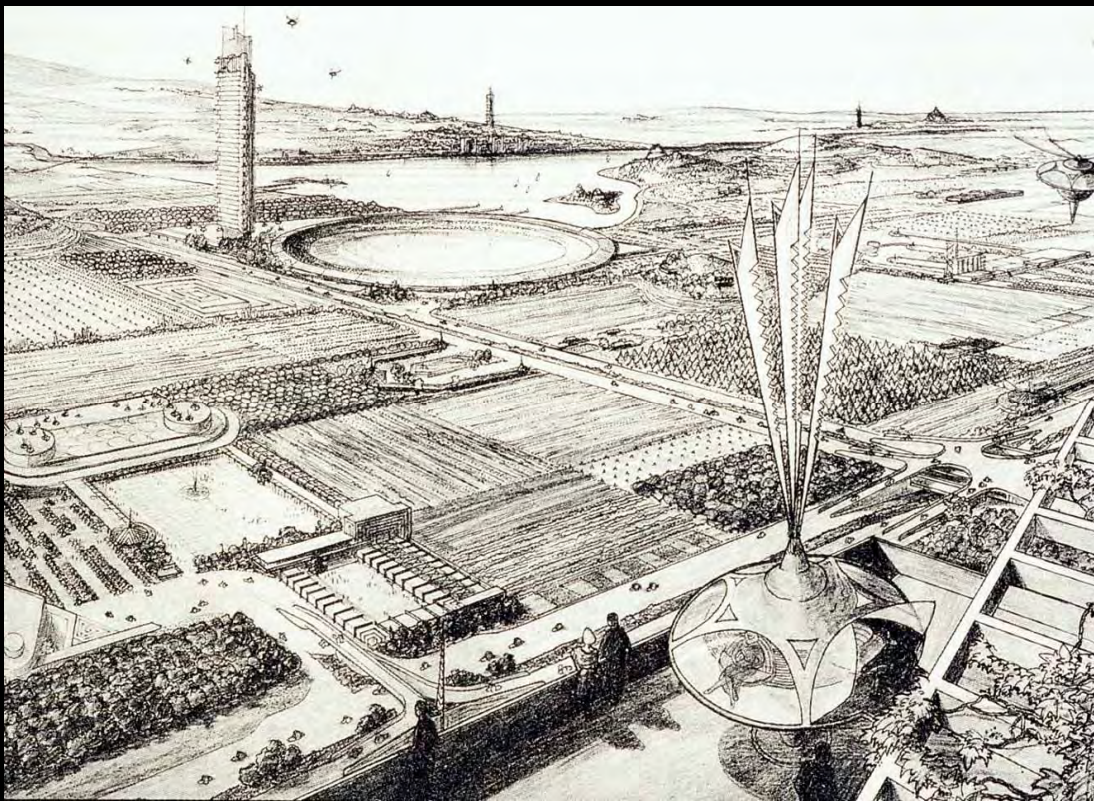


# Megacities 2000

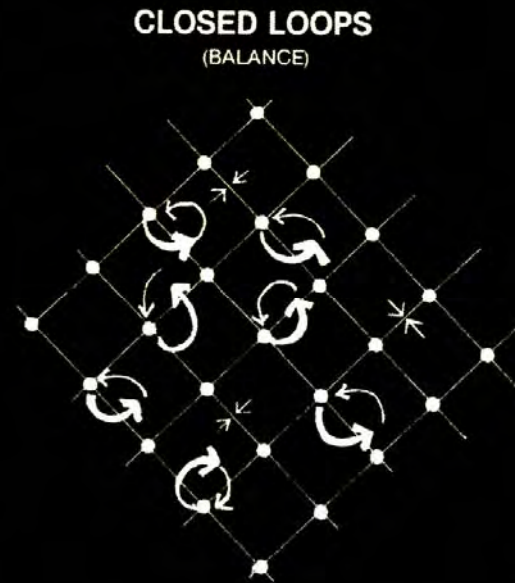
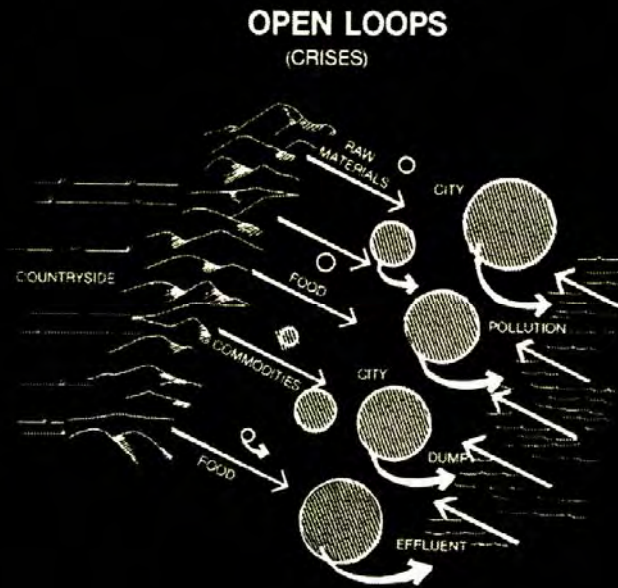


# Megacities 2015





Frank Lloyd Wright „Broadacre City“, 1929-58



United Nations Development Programme, 1996

Developing countries	Developed countries
Food supply	food security, confidence in food quality
Waste recycling	
Employment for disadvantaged urbanites	
Social linkages despite cultural diversity	reducing social gaps, rebuilding of social solidarity
Maintaining fertile land for future green spaces	managing the urban green breaks and belts
	Education in agricultural and political background

Fleury & Moustier, « L'agriculture périurbaine, infrastructure de la ville durable » 1999





Urban Agriculture, Caracas



Urban Agriculture, Tokyo

Kreislaufmodelle

*Ciclos – agua, energia, material*





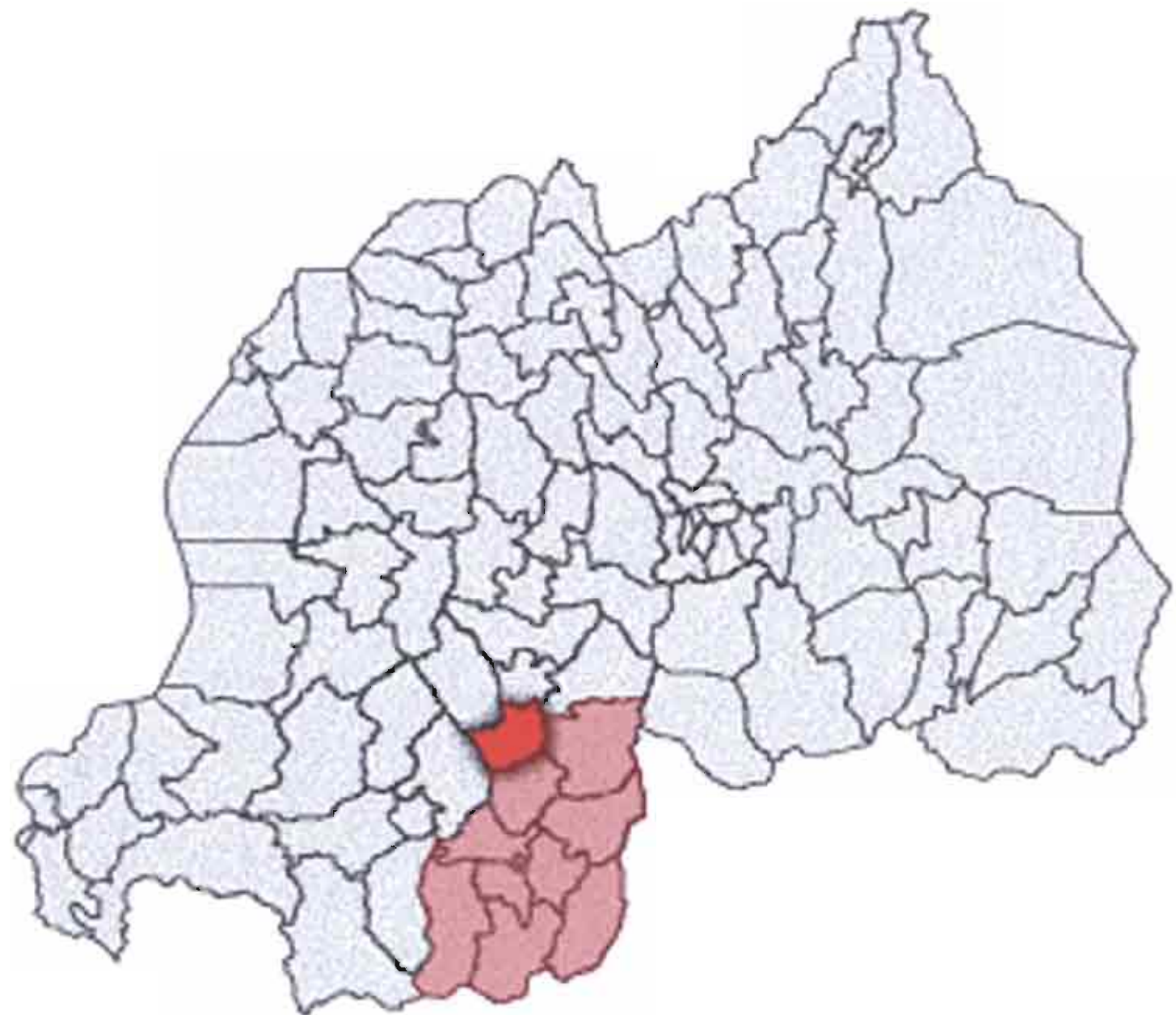


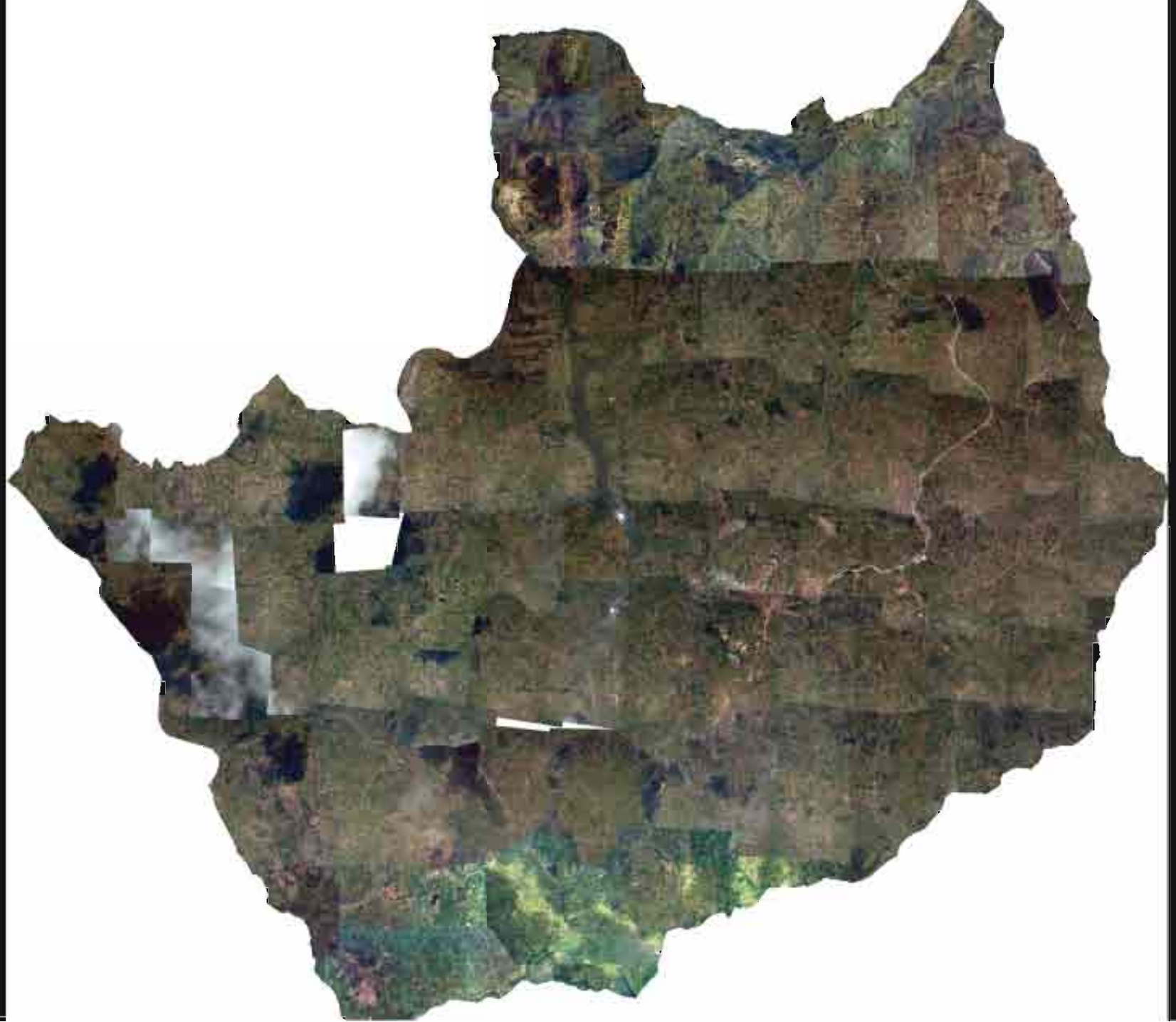


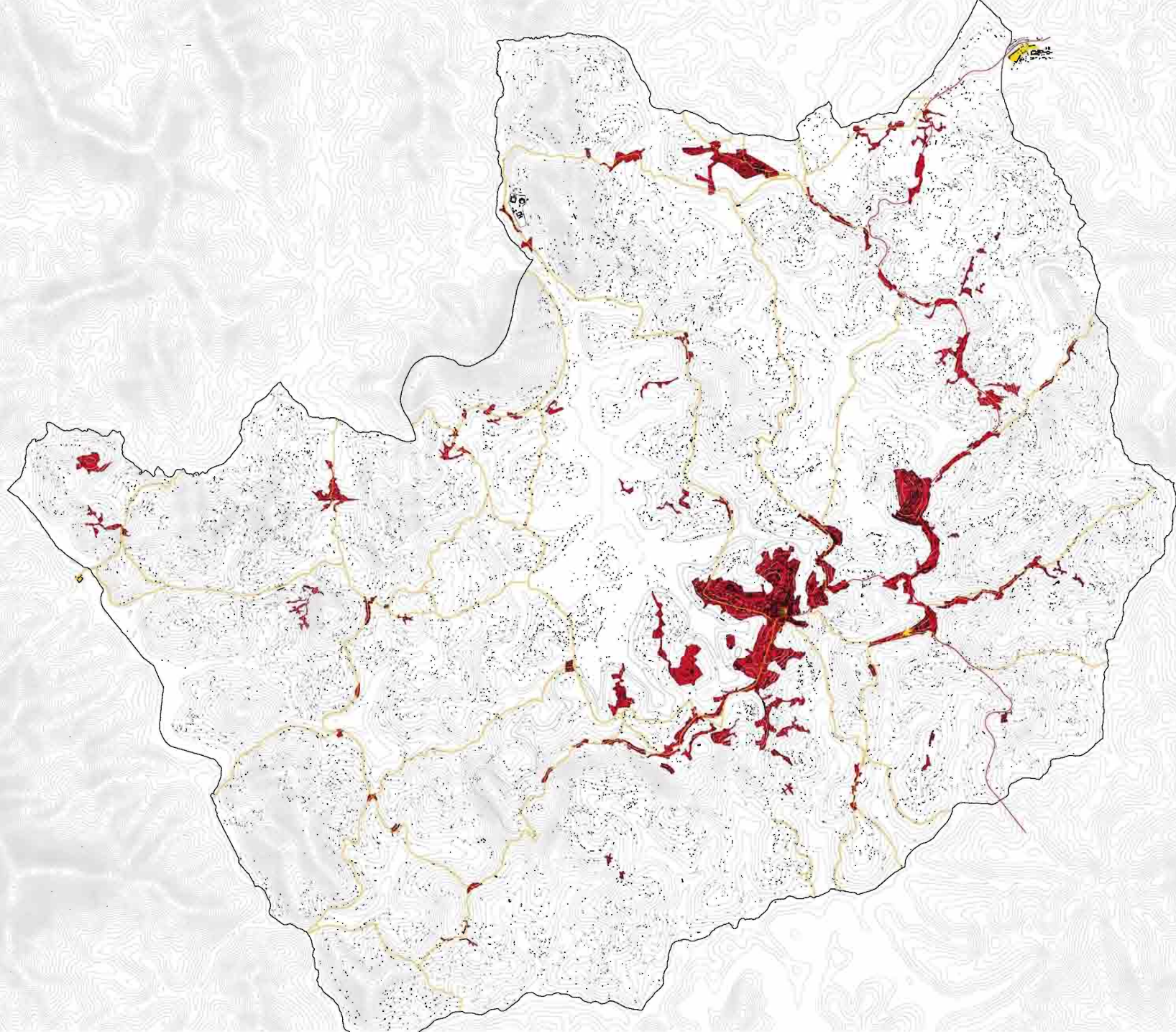
Strukturuntersuchung Distrikt Nyanza

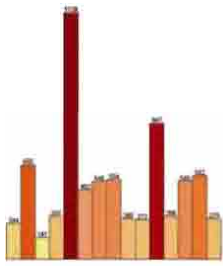
*El análisis estructural de Nyanza*



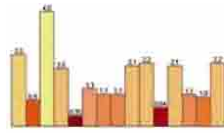




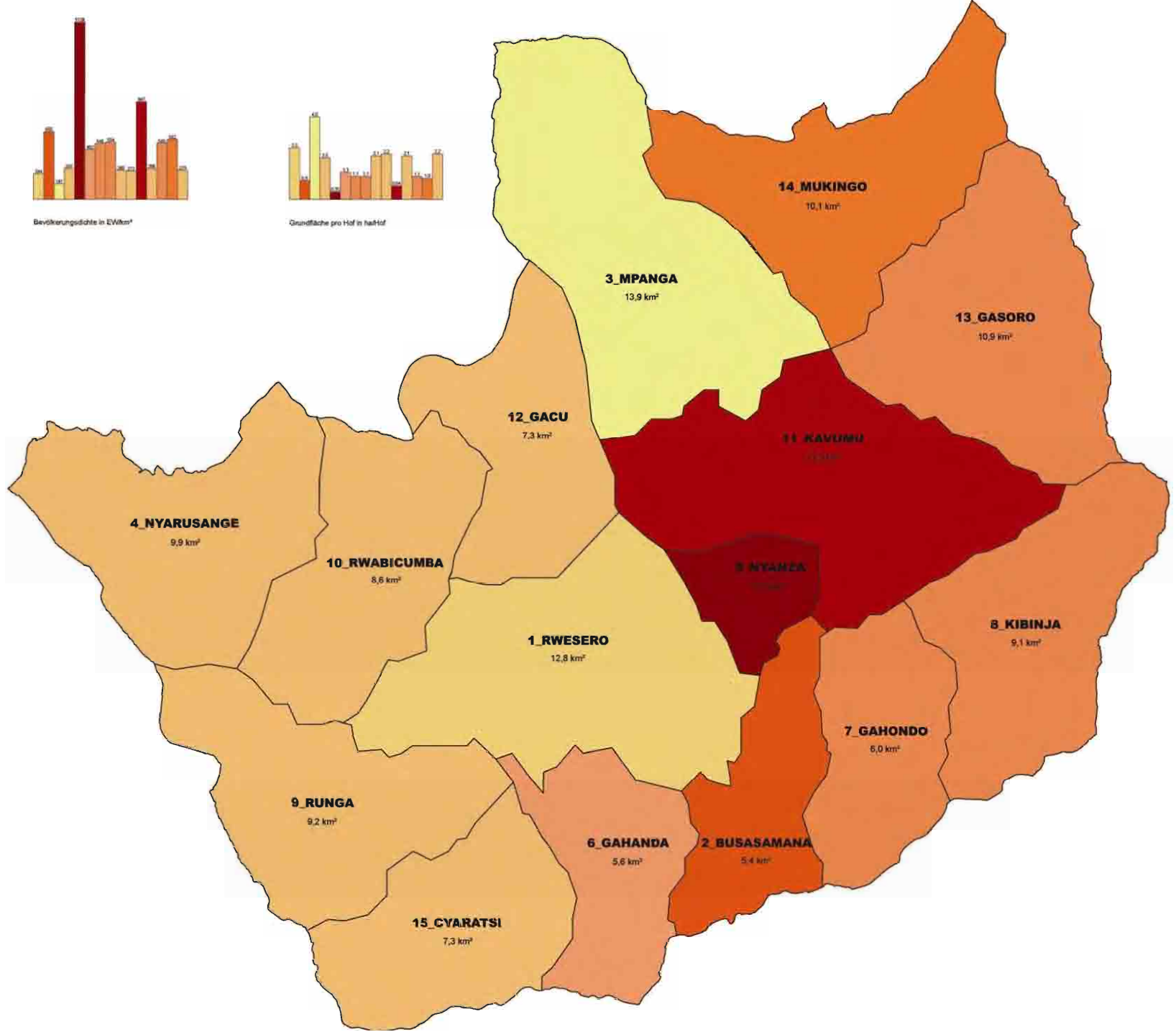


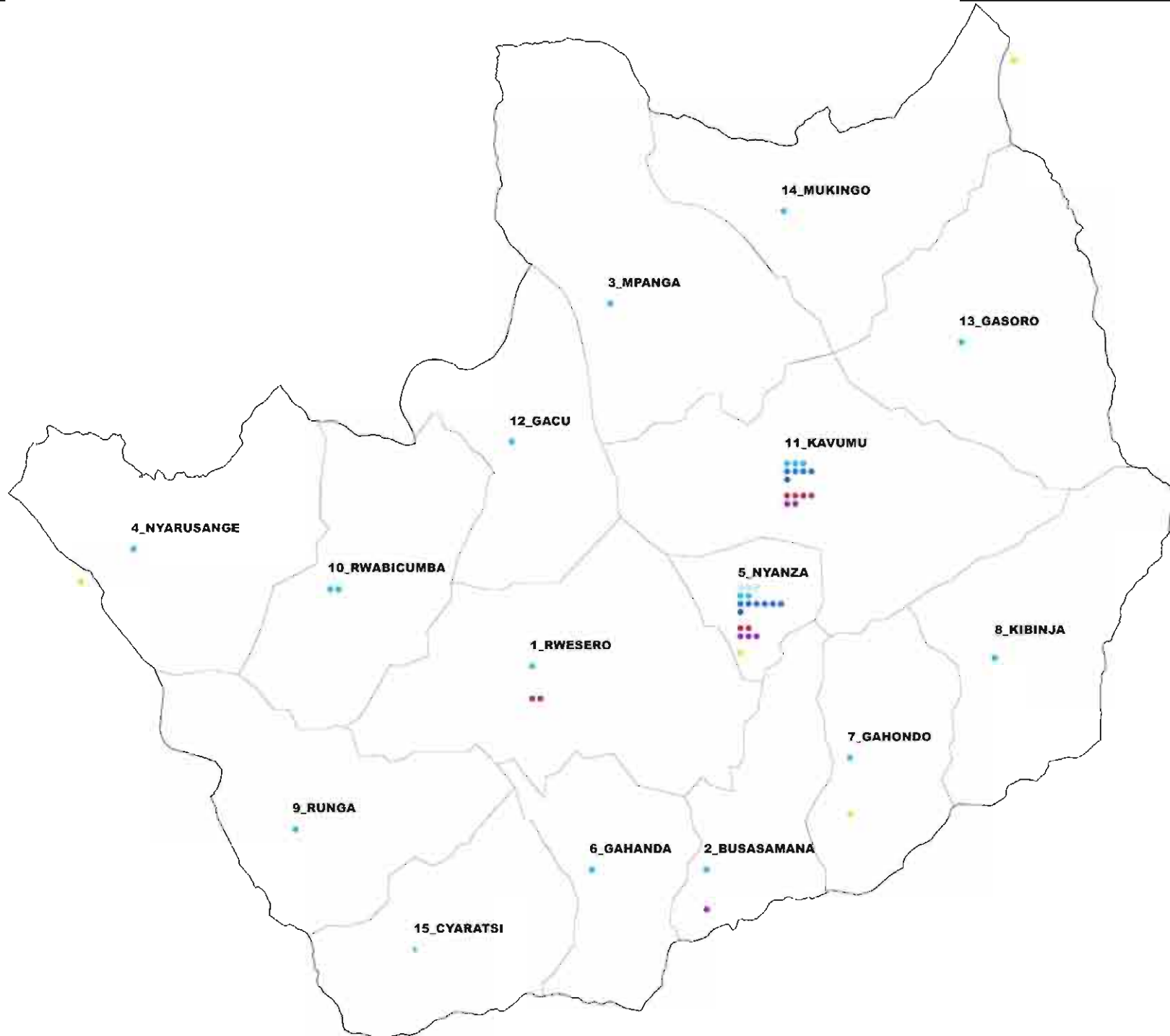


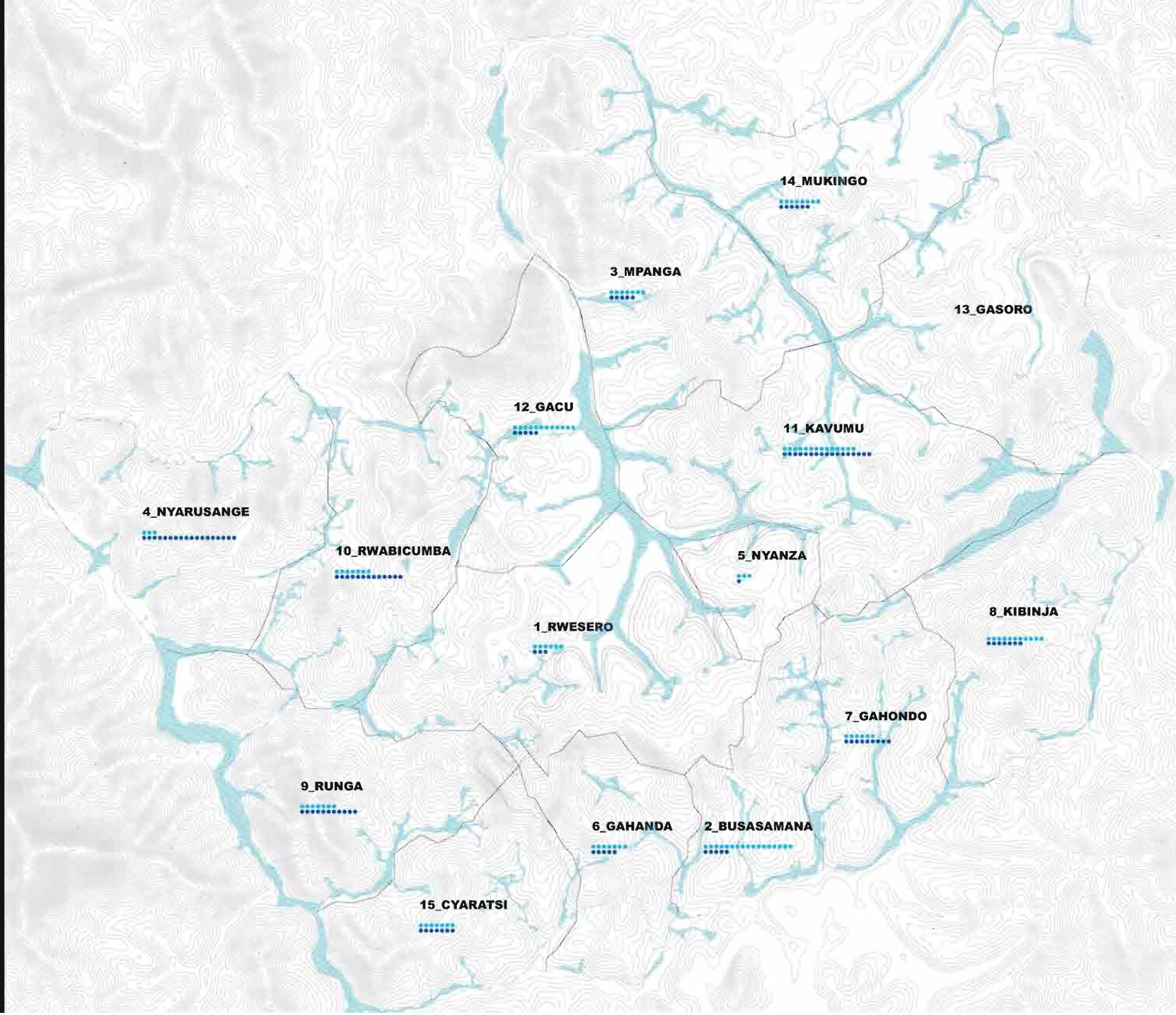
Bevölkerungsdichte in EW/km²



Grundfläche pro Hof in ha







4\_NYARUSANGE



10\_RWABICUMBA



12\_GACU



3\_MPANGA



14\_MUKINGO



13\_GASORO

11\_KAVUMU



5\_NYANZA



8\_KIBINJA



1\_RWESERO



7\_GAHONDO



9\_RUNGA



6\_GAHANDA

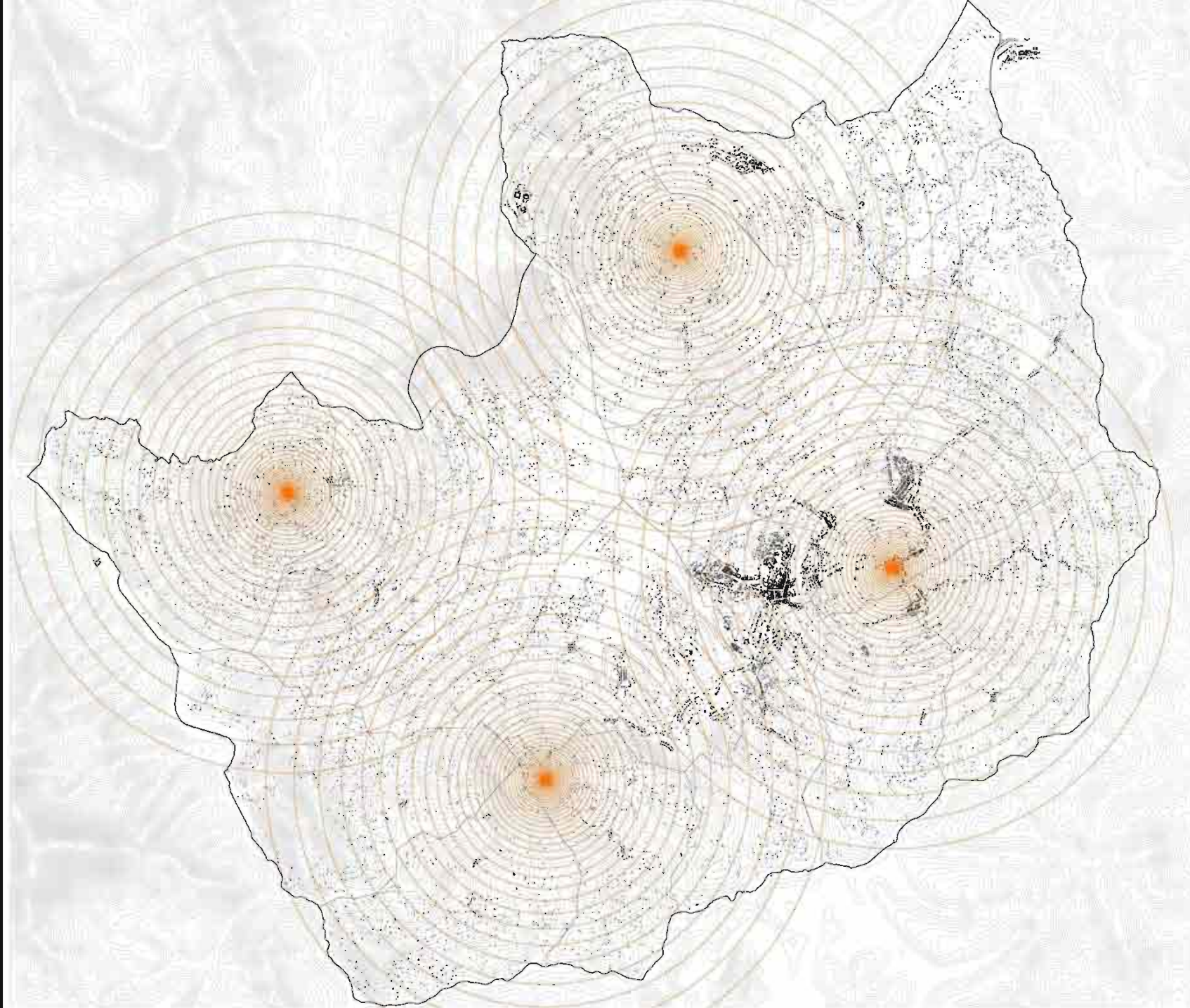


2\_BUSASAMANA



15\_CYARATSI







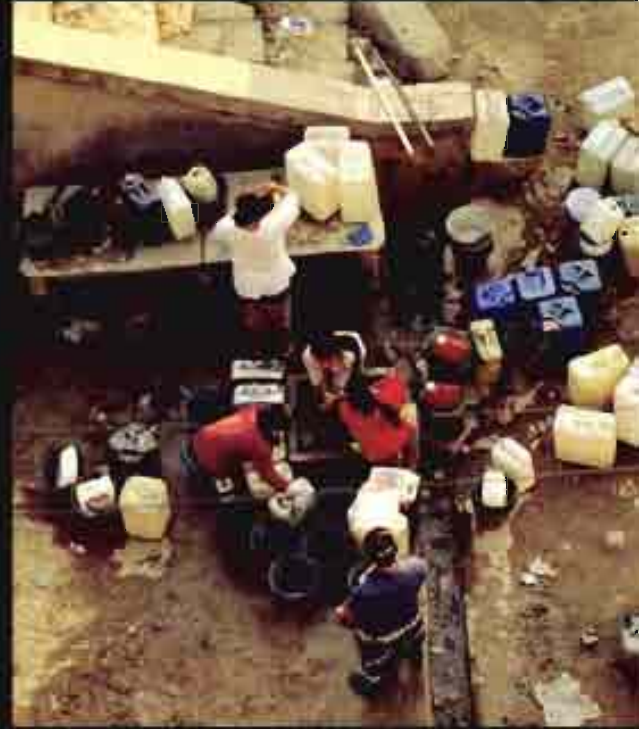


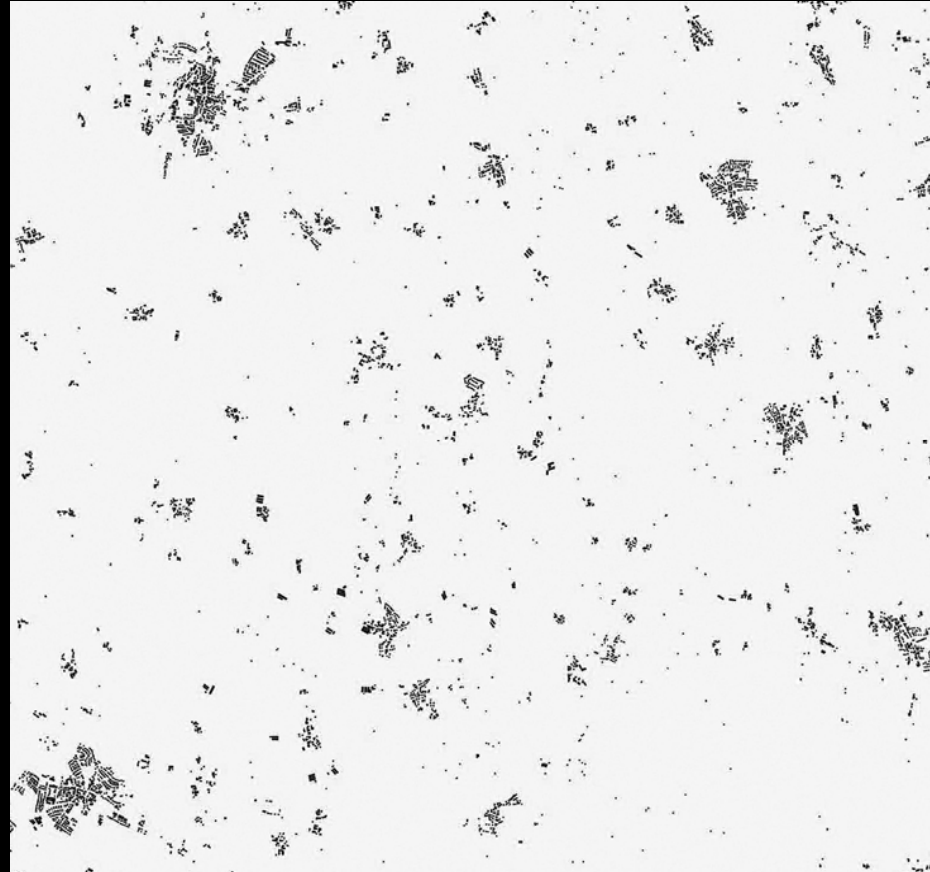
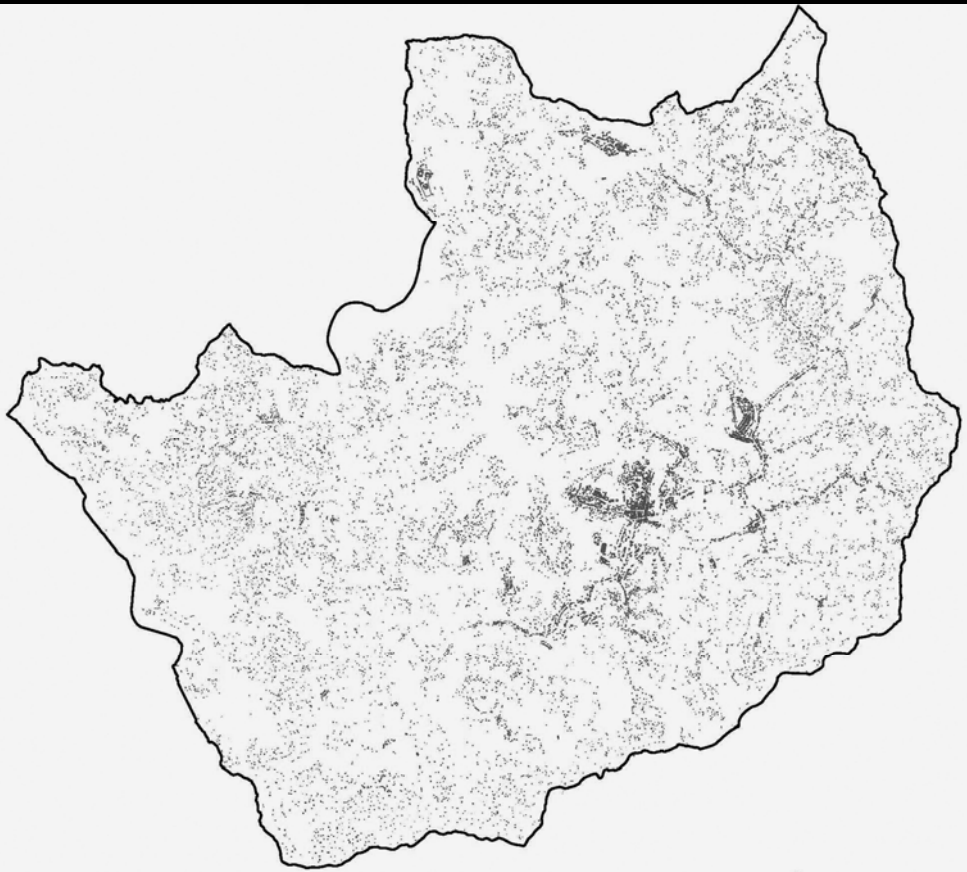




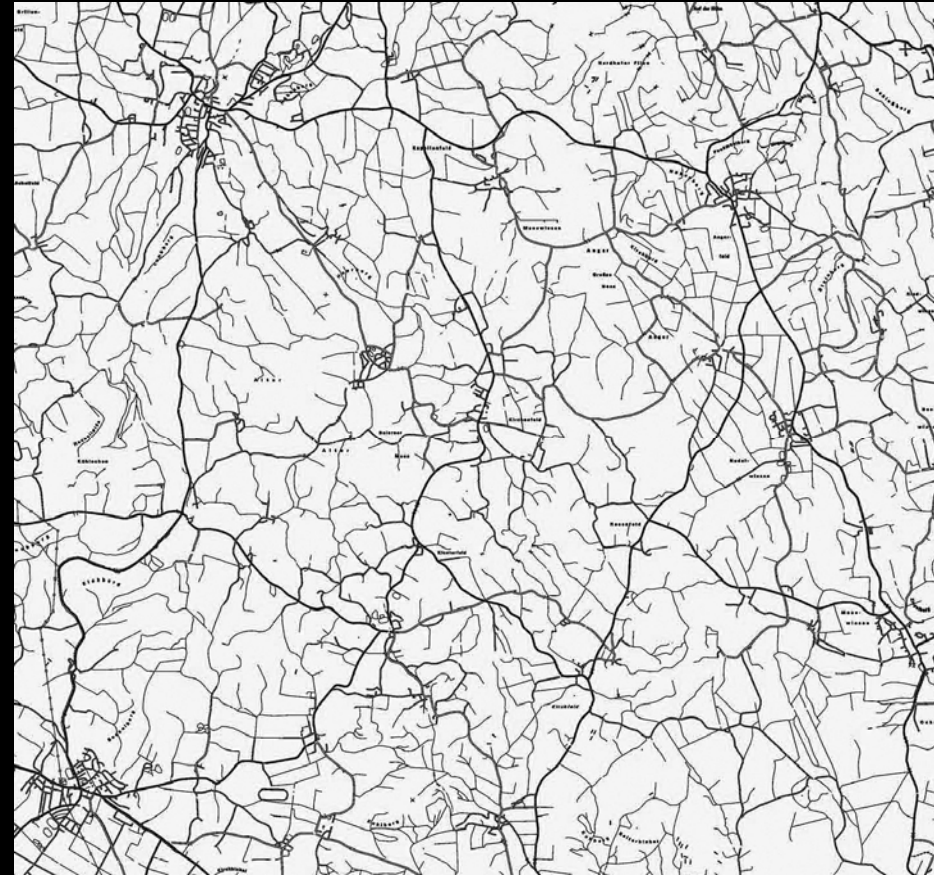
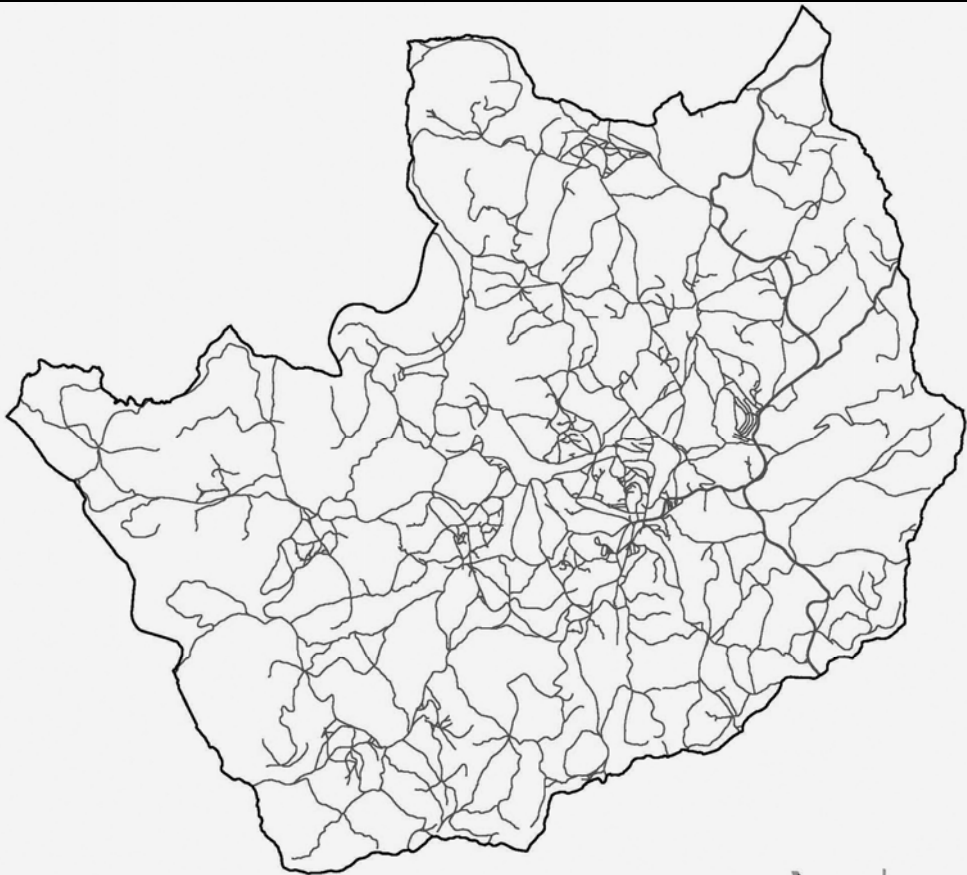




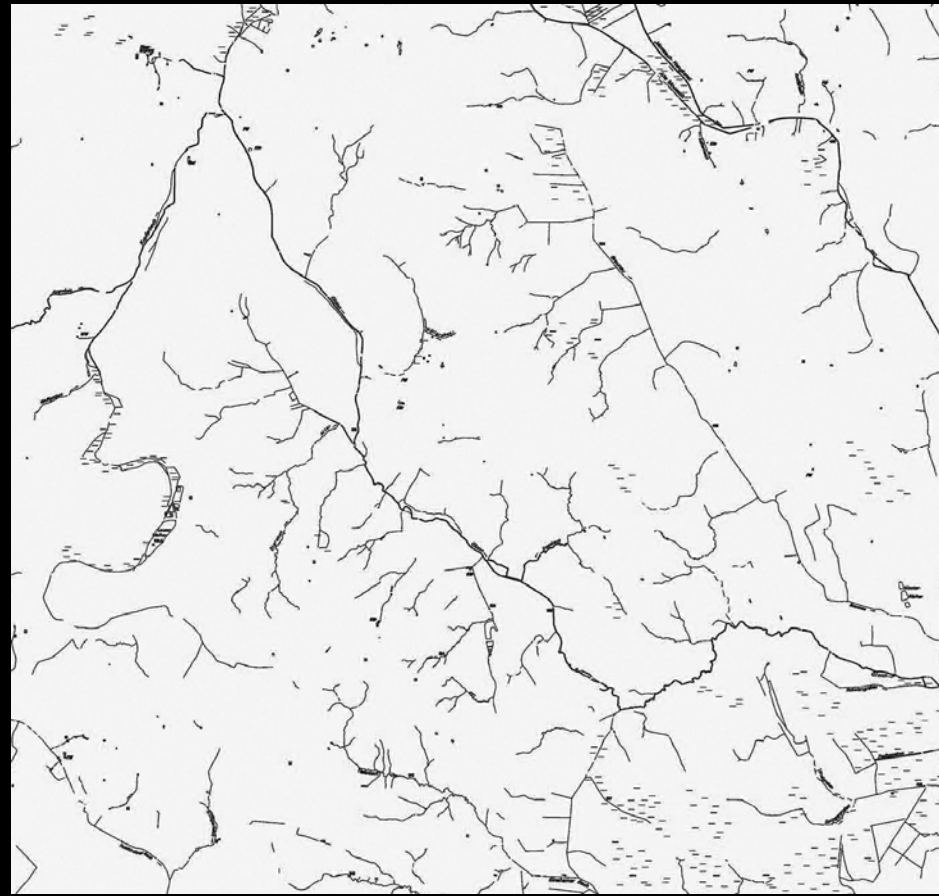
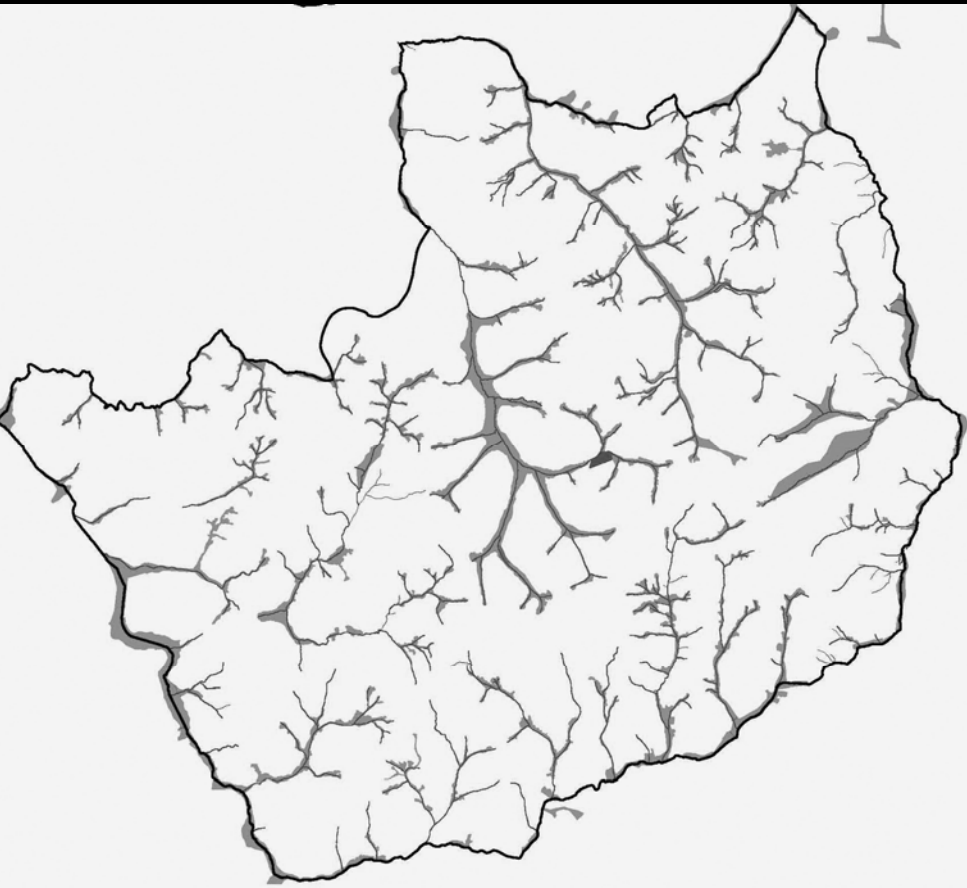




Siedlungstruktur Nyanza – Oberbayern

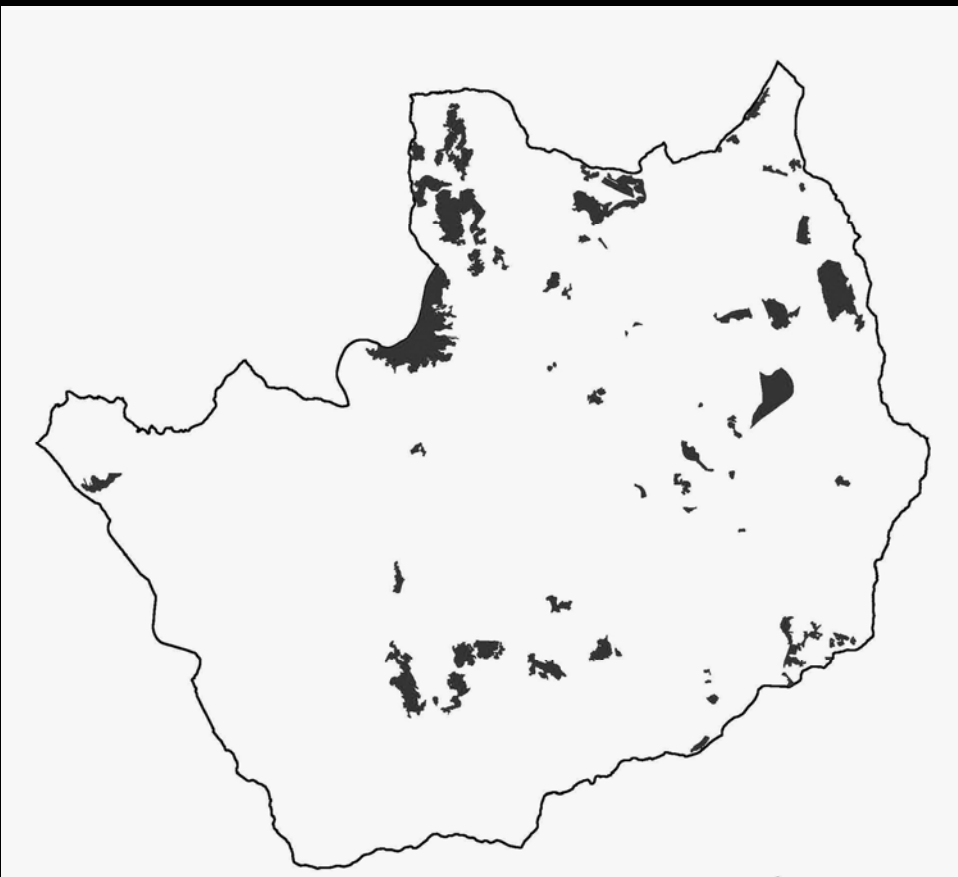


Verkehrsnetz Nyanza – Oberbayern



Wasserläufe Nyanza – Oberbayern



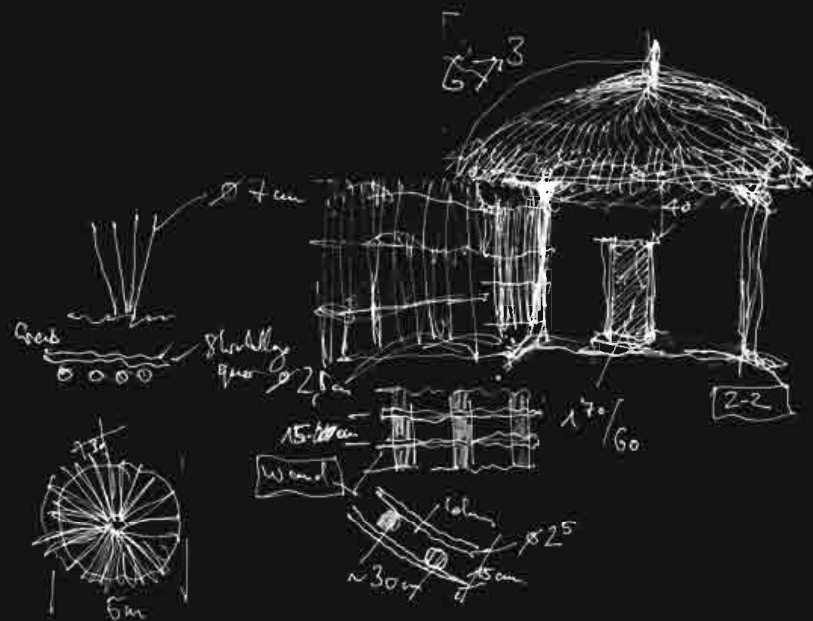
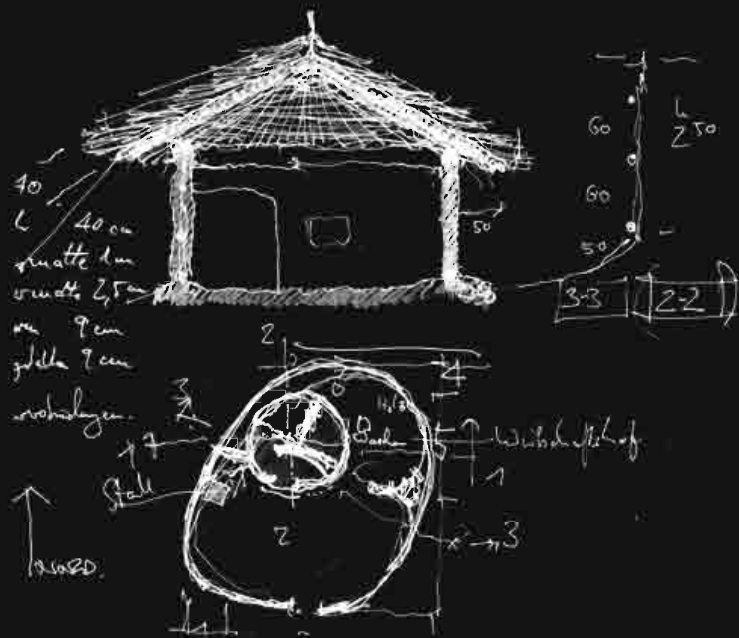


Waldflächen Nyanza – Oberbayern

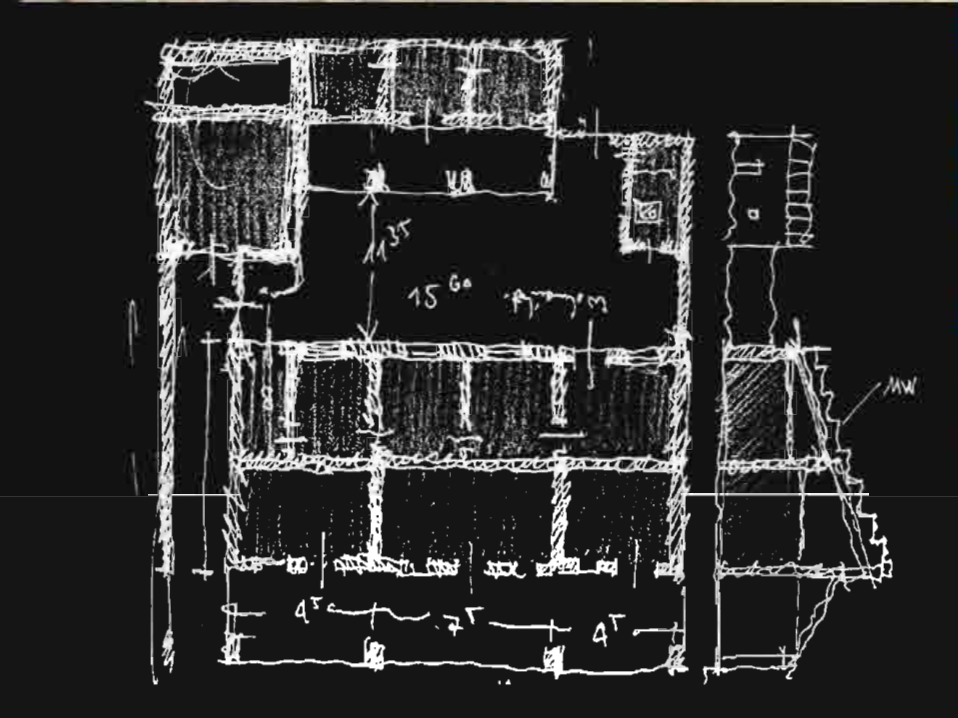
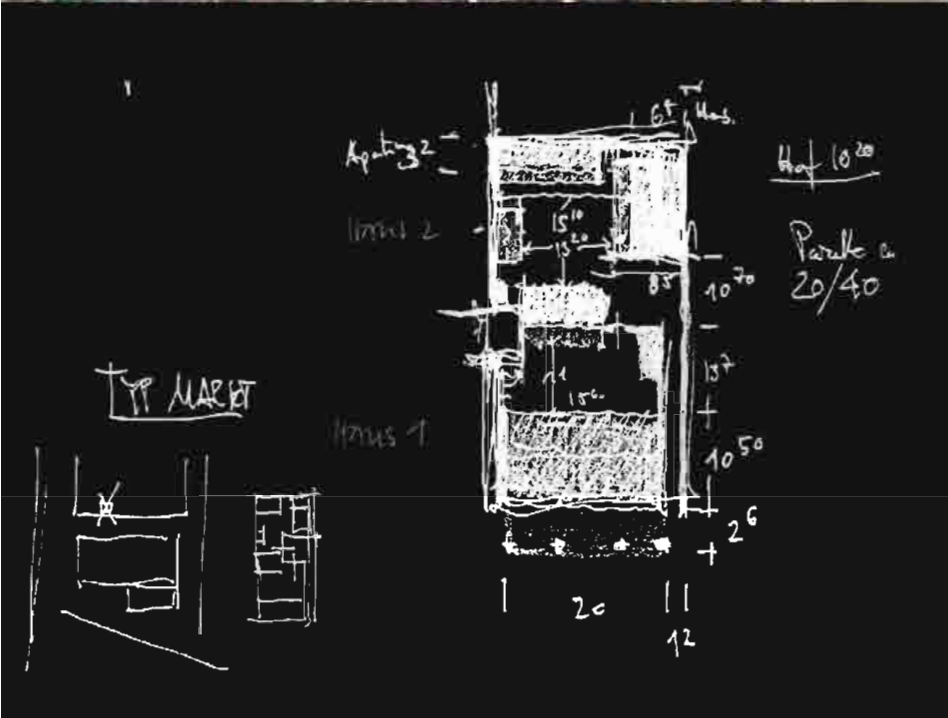








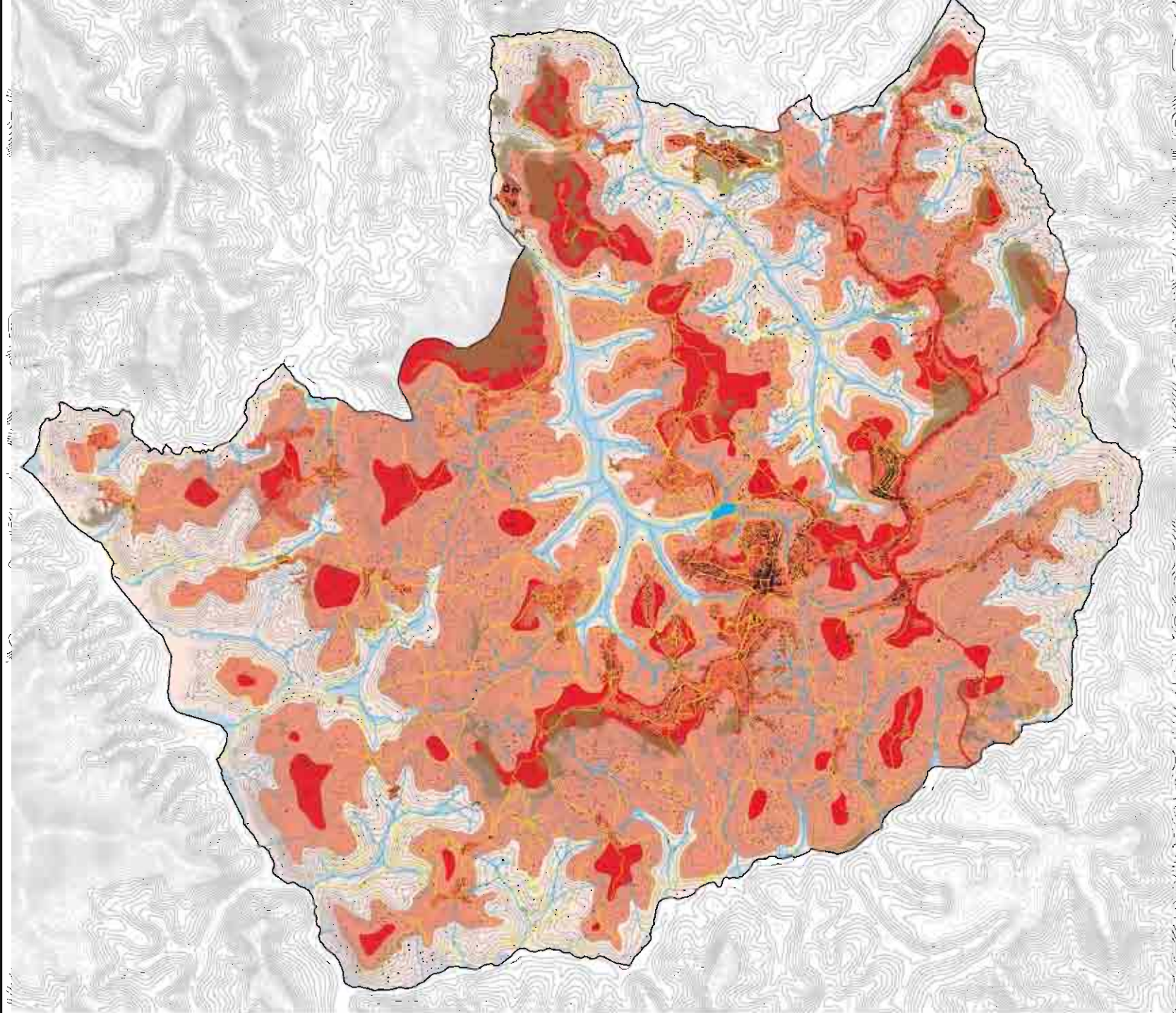




Planungsansätze

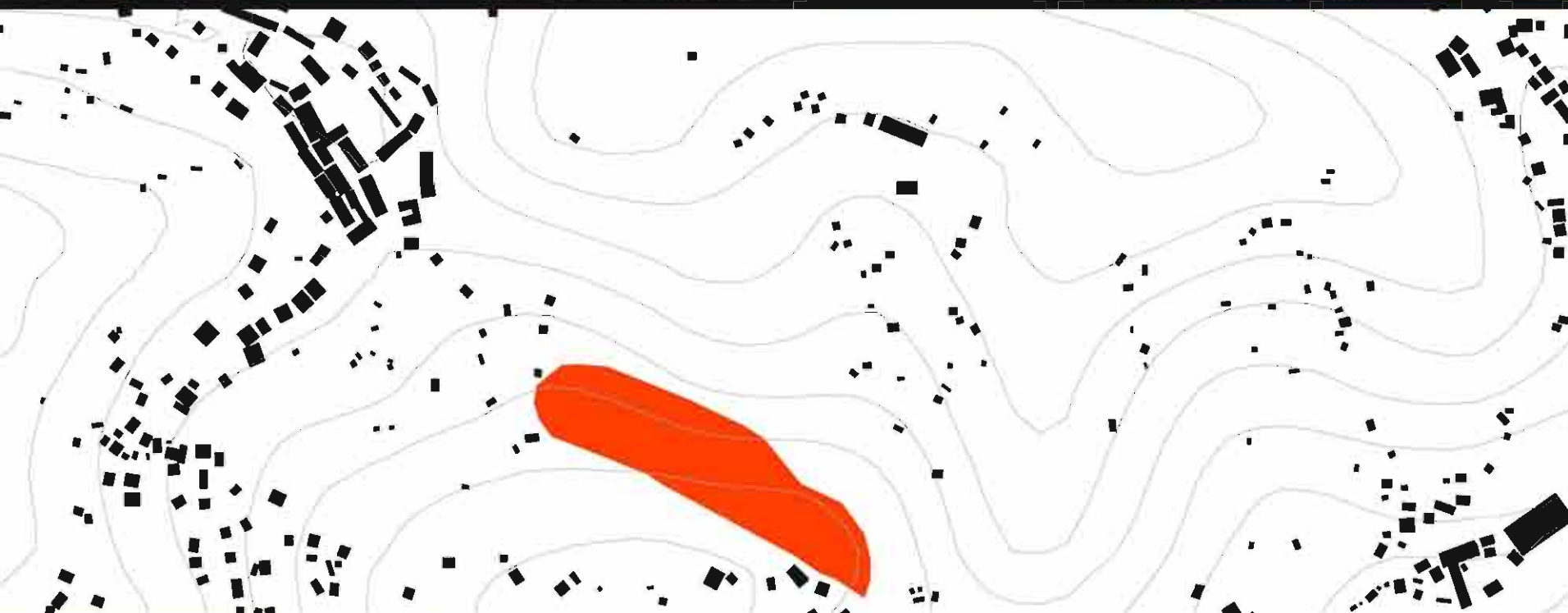
*Sugerencias de Planificación*

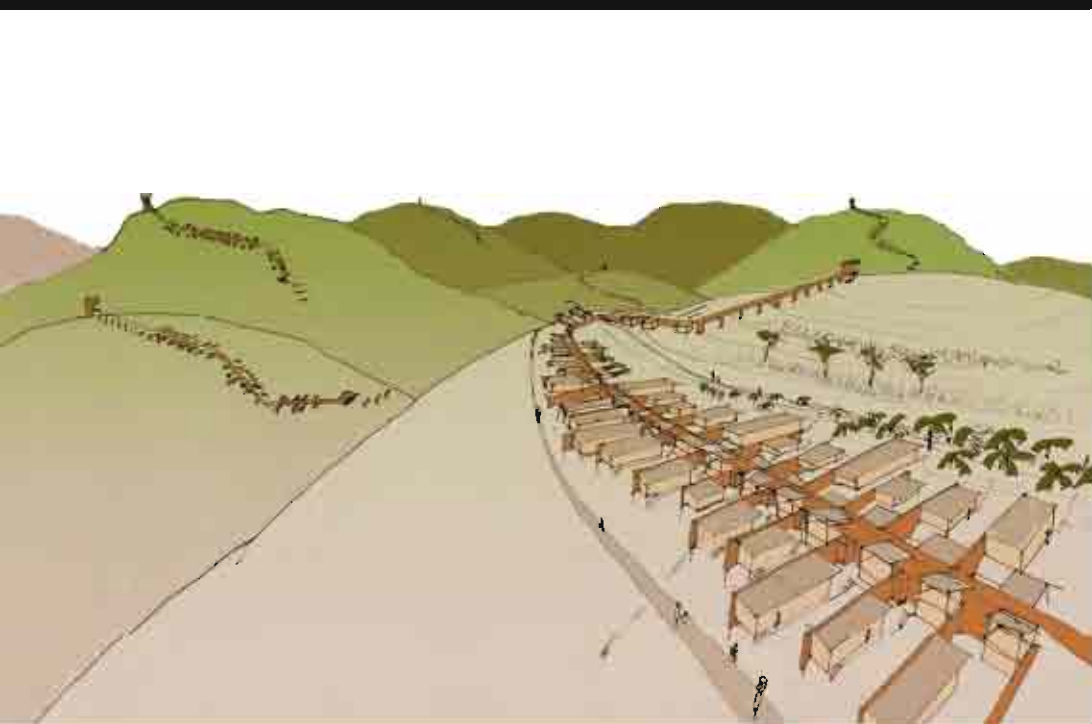
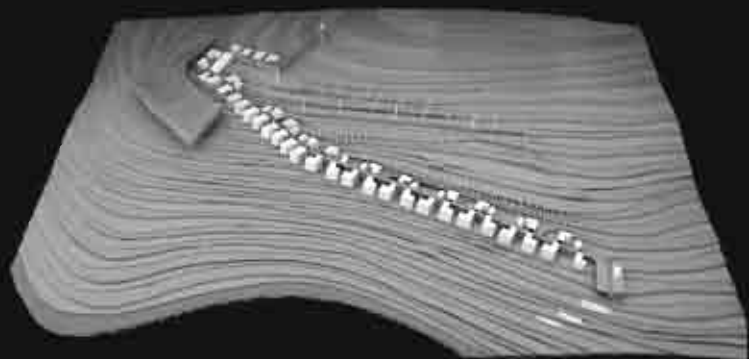
















schnitt III | 1:200

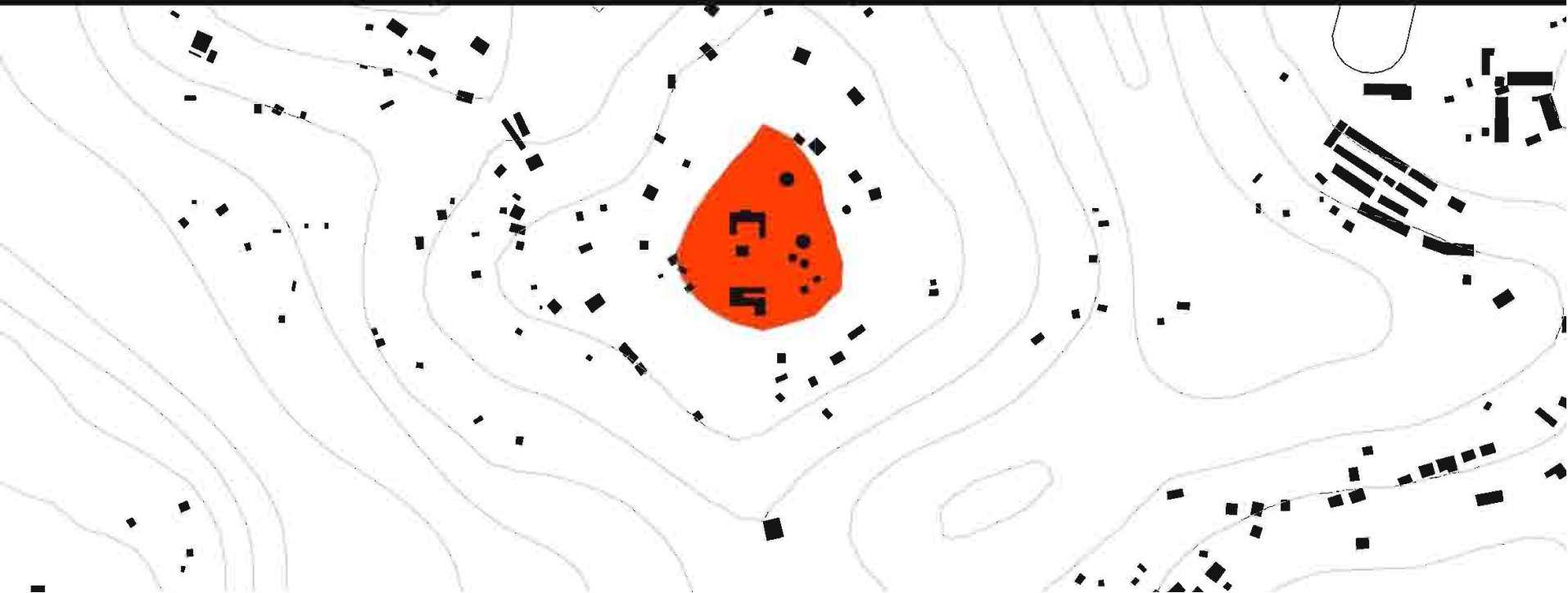


die lamellen

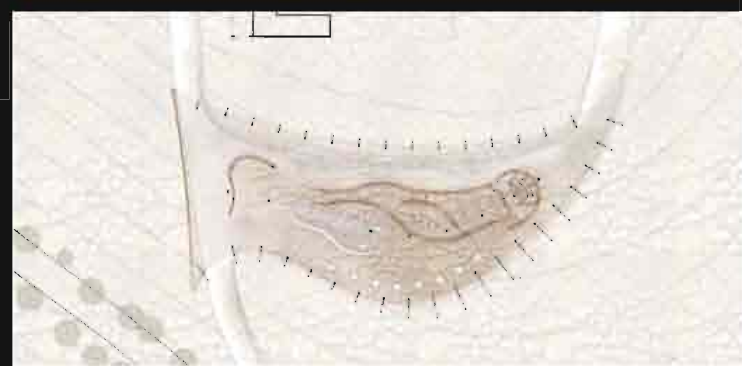
mit einer geschlossenen dachfläche öffnen die aufgefächerten lamellen das dach. je nach perspektive auf ein dachschneidfeld blicken sich dem betrachter blick zum himmel oder wie geschlossene fläche.  
die einzelnen lamellen sind so gefertigt, dass die regengüsse abfließen und evtl. als sommerregen genau reflektieren.



ansicht I | 1:300







## Schlussfolgerungen:

- Siedlungsmodell der Gartenstadt soll als Potential weiterhin gestärkt werden
- Transformation der lokalen Baukultur in eine intelligente Kombination aus trad. Typologie und innovativen Bauteilen zur Wasser- und Energieerzeugung