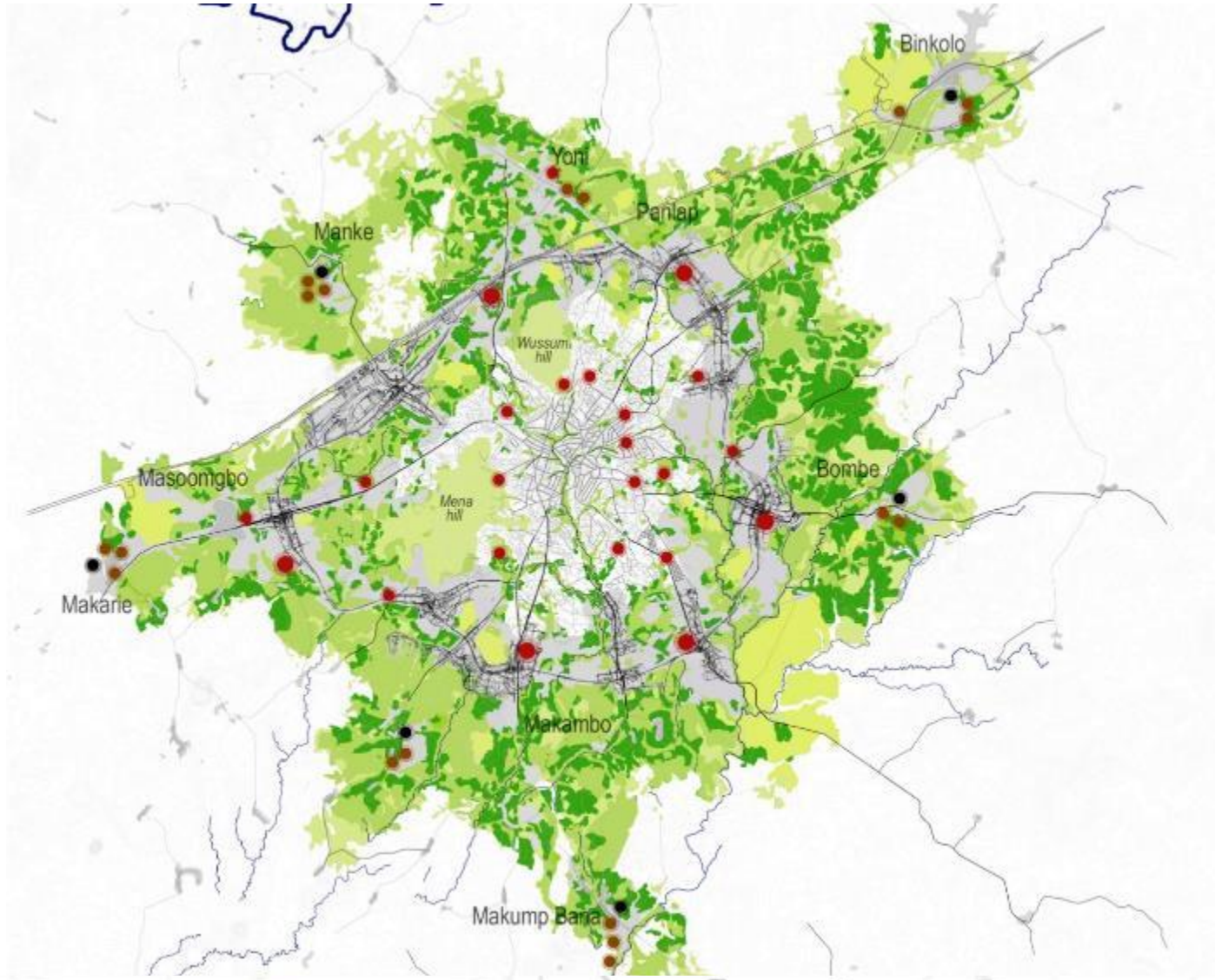


TOWARDS A STRATEGIC URBAN PLAN FOR MAKENI

PROPOSALS FOR DISCUSSION. JANUARY 2016



Coordination:

Makeni City Council

Unimak



CEU
Universidad
San Pablo



Associates:



DUYOT



The work presented here is the continuation of the process initiated by San Pablo CEU University, Unimak and the MCC. This process includes two participatory workshops in the city of Makeni (JULY 2013 and JANUARY 2014).

It is presented now the last step, containing the main proposals for the future discussion that tries to help in the decision making. These proposals and materials were reviewed with the main Makeni stakeholders in the **2016 January workshop**.

The following documentation is focussed on the main urban area and the closest surroundings. From a coordination with the main needs of the city, the Makeni Development Plan 2013-15 and other local documents, is proposed a **global framework for the future growth of Makeni**. It is considered important to anticipate some coming challenges with a medium/long term vision of the city **(10-20 years)**. Linked with this global framework, is also needed to implement **short term actions** as new planned expansions, upgrading of existing urban areas or another key projects that should be detected during the workshop.

1. INFORMAL CITIES IN DEVELOPING COUNTRIES. MAIN RISKS AND NEW URBAN PLANNING APPROACHES

2. MAKENI. CURRENT URBAN CONTEXT

3. TOWARDS A SUSTAINABLE MAKENI. PREVIOUS STEPS

4. NEW PROPOSALS FOR MAKENI CITY

5. PROPOSED NEXT STEPS

1.1. HABITABILITY LARGE DEFICITS AT GLOBAL LEVEL

Housing deficits

- **881 million people live in slums** (12,1% of the world total). 669 millions in 1990 and 792 in 2000. (*"Millenium Development Goals. 2015". UNDP*).
- **900 million people live in por habitability conditions in the rural areas** (*Own estimations with UNDP data*)
- **100 homeless million people** (*UN estimation, 2005*)
- **51 million people refugees** (*ACNUR, 2013*)
- **1.900 million people with housing déficits** (more than one 1/4 of the total population)

Maputo. Mozambique



Freetown. Sierra Leone



Infrastructure deficits

- **663 million** people lack access to safe water (*"Millennium Development Goals. 2015". UNDP*).
 - **2.400 million** people lack access to improved sanitation, 70% in rural areas (*"Millennium Development Goals. 2015". UNDP*). (1/3 of the world population)
 - **3.000 million** people lack access to safe energy (no Wood or charcoal) (*itd. UPM*)
- "...with safe drinking water and improved sanitation, 2,2 million children under 5 years, would be saved in the world each year". (*WHO*)



Well. Makeni. Sierra Leone



Kitchen. Makeni. Sierra Leone



Latrine. Makeni. Sierra Leone

1.2. URBAN GROWTH AS THE MAIN HABITABILITY CHALLENGE

- World population 2014: **7.244** million people
- World urban population 2014: **3.880** million people (current 53,6%, to 70% in 2050)
- 2014-2050, the urban population will grow in **2.460** million people
- **93%** of this urban growth will be in the developing regions.

("World Urbanization Prospects. 2014 Revision". United Nations)

- **762,5** million new urban people projected by 2050, in Sub-Saharan Africa *("World Urbanization Prospects. 2014 Revision". United Nations)*

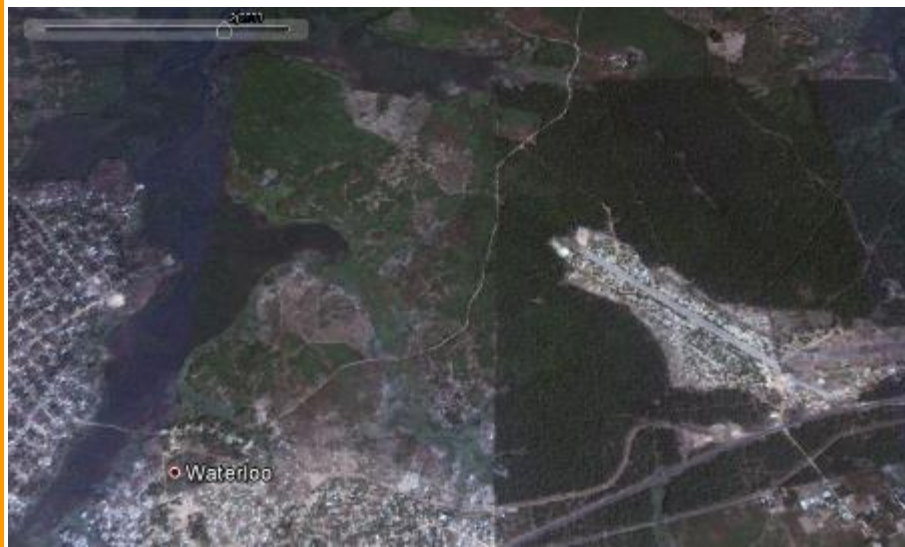
- The urban land área of the developing regions **will triple** between 2000 and 2030 *(UN-Hábitat. "Urban Planning for City Leaders")*

MAIN RISKS OF INFORMAL DISPERSED GROWTH (SPRAWL)

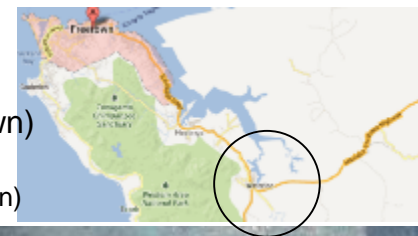
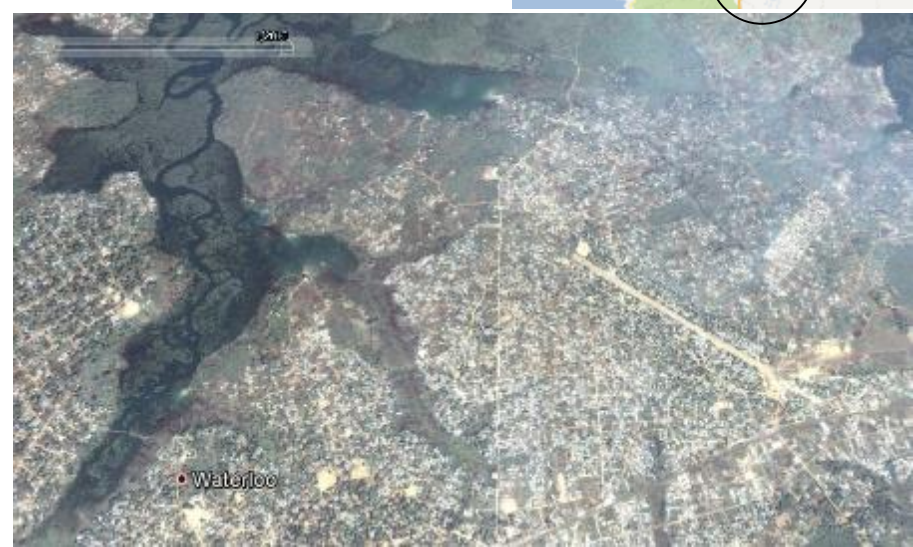
1. **Occupation of vulnerable areas** (floods, landslides, ...)
2. **Growth without provision of employment, infrastructures and facilities** (water, sanitation, health, education,...)
3. **Impact on the environment** and alteration of ecosystems (deforestation, erosion, natural lands,...)
4. **Social segregation** (formal city-informal city)
5. **Difficulties in the future structuring the metropolitan area** (joint of cities)
6. **Future costs in upgrading** (upgrading will be 2.6 times more expensive than land urbanization)

Dispersed growth deforesting natural areas and occupying vulnerable lands in Waterloo area (Freetown)

Aerial view (2003). Waterloo (Freetown)



Aerial view (2013). Waterloo (Freetown)



NEW APPROACHES FOR WORKING IN INFORMAL CITIES

- 1 Planning to prepare cities for urban growth
- 2 Strategic spatial planning
- 3 New urbanism
- 4 Private-public partnerships, global programmes and resources coordination
- 5 Public participation involving the main stakeholders
- 6 The importance of process
- 7 Integrated approach
- 8 Training in Urban Planning
- 9 Regularization of informality
- 10 Brinding the green and brown agendas
- 11 National Policy and Decentralization

"Planificación de Ciudades sostenibles: Informe Mundial sobre los Asentamientos Humanos, 2009". UN HABITAT

"State of African Cities". 2010-14. UN HABITAT

"Affordable Land and Housing in Africa". 2010. UN HABITAT

"Urban Planning for City Leaders". 2012. UN HABITAT

ICHAB

1. INFORMAL CITIES IN DEVELOPING COUNTRIES. MAIN RISKS AND NEW URBAN PLANNING APPROACHES

2. MAKENI. CURRENT URBAN CONTEXT

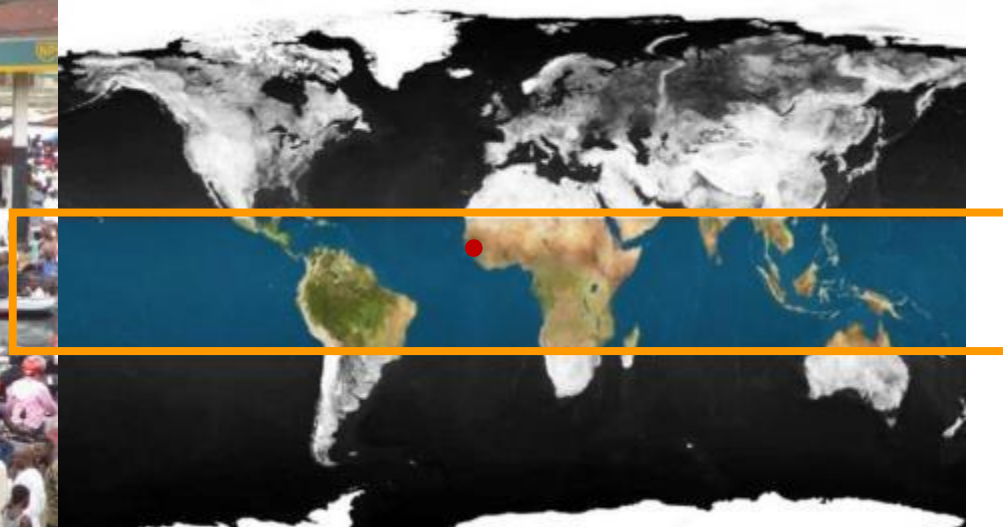
2.1. Global Framework

2.2. Urban Key Issues

3. TOWARDS A SUSTAINABLE MAKENI. PREVIOUS STEPS

4. NEW PROPOSALS FOR MAKENI CITY

5. PROPOSED NEXT STEPS



SIERRA LEONE

Sup: 71.740 km²

Population: 6.270.000 people

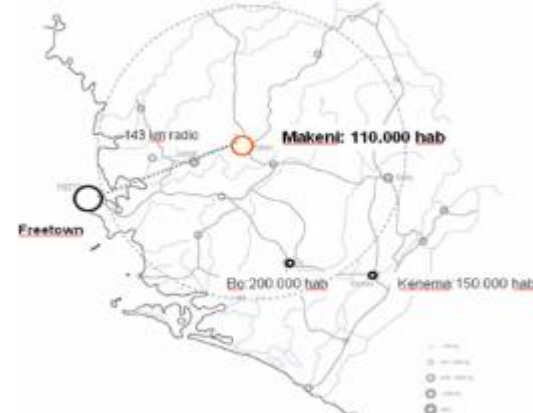
83 people/km²

Urban population: 39,50 %

Estimated population for 2050: 15.667.452 hab

Population under poverty level (2011): 59,20%

Life expectancy at birth: 45 years



Makeni, City Centre. July 2013



Infrastructures and main economic activities in Sierra Leone

URBAN GROWTH IN MAKENI

2 : POPULATION GROWTH

Table 4 : Changes In Population Size 1963 To 2004: Sierra Leone, Northern Region, Bombali District , Makeni Town 1963 To 2004

Census Year	Sierra Leone	Northern Region	Bombali District	Makeni Town
1963	2,180,355	897,566	198,776	12,304
1974	2,735,159	1,046,158	233,626	26,781
1985	3,515,812	1,259,641	317,729	40,038
2004	4,976,871	1,745,553	408,390	82,840

Annual Statistical Digest 2005/2006.

Population Profile of Bombali District and Makeni Town. 2004



TABLE 2: MAKENI MUNICIPAL POPULATION ESTIMATES AND PROJECTIONS UP TO THE YEAR 2020			
Year	Population Rates		
	Growth rate 2.20%	Growth rate 3.20%	Growth rate 5.62 %
2004	82,840	82,840	82,840
2005	84,662	85,491	87,496
2006	86,525	88,227	92,413
2007	88,429	91,050	97,606
2008	90,374	93,963	103,092
2009	92,362	96,970	108,886
2010	94,394	100,073	115,005
2011	96,471	103,276	121,468
2012	98,593	106,580	128,295
2013	100,762	109,991	135,505
2014	102,979	113,511	143,120
2015	105,245	117,143	151,164
2016	107,560	120,892	159,659
2017	109,926	124,760	168,632
2018	112,345	128,753	178,109
2019	114,816	132,873	188,119
2020	117,342	137,125	198,691

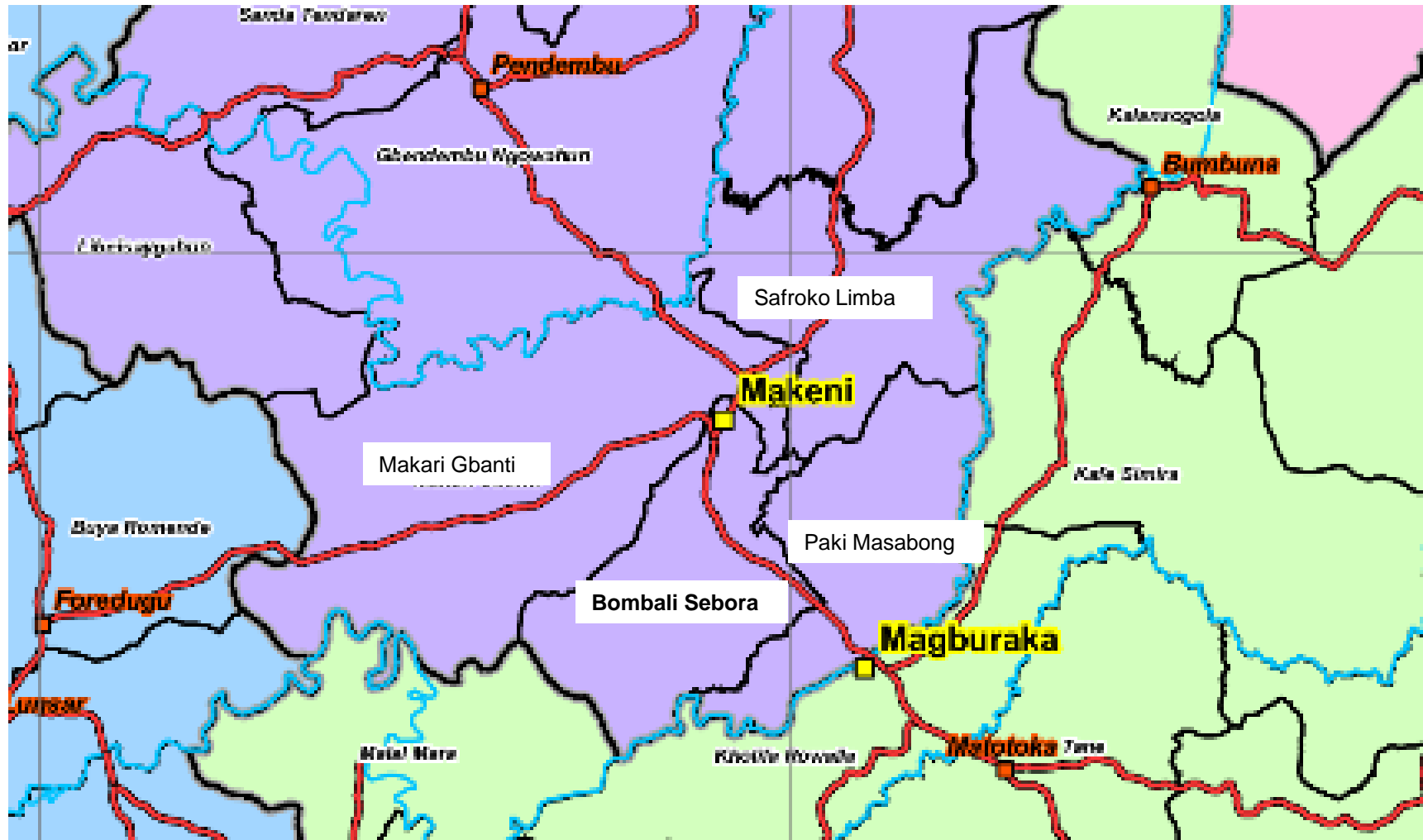
Population of Makeni. Projections according different rates (CEU University)

Very important population growth in Makeni

With a growth rate of 3,2%, Makeni would have in 2014 around **113.511 people**. And will have 25.000 more inhabitants in 2020. If the growth was at the rate of 5,6%, in 2020 Makeni will have around 198.700 people (50.000 more than now). The data are just considering Makeni Town, not including the villages around. The Makeni Development Plan (2013-2015) estimates that the population in 2013 was around **115.000 people**.

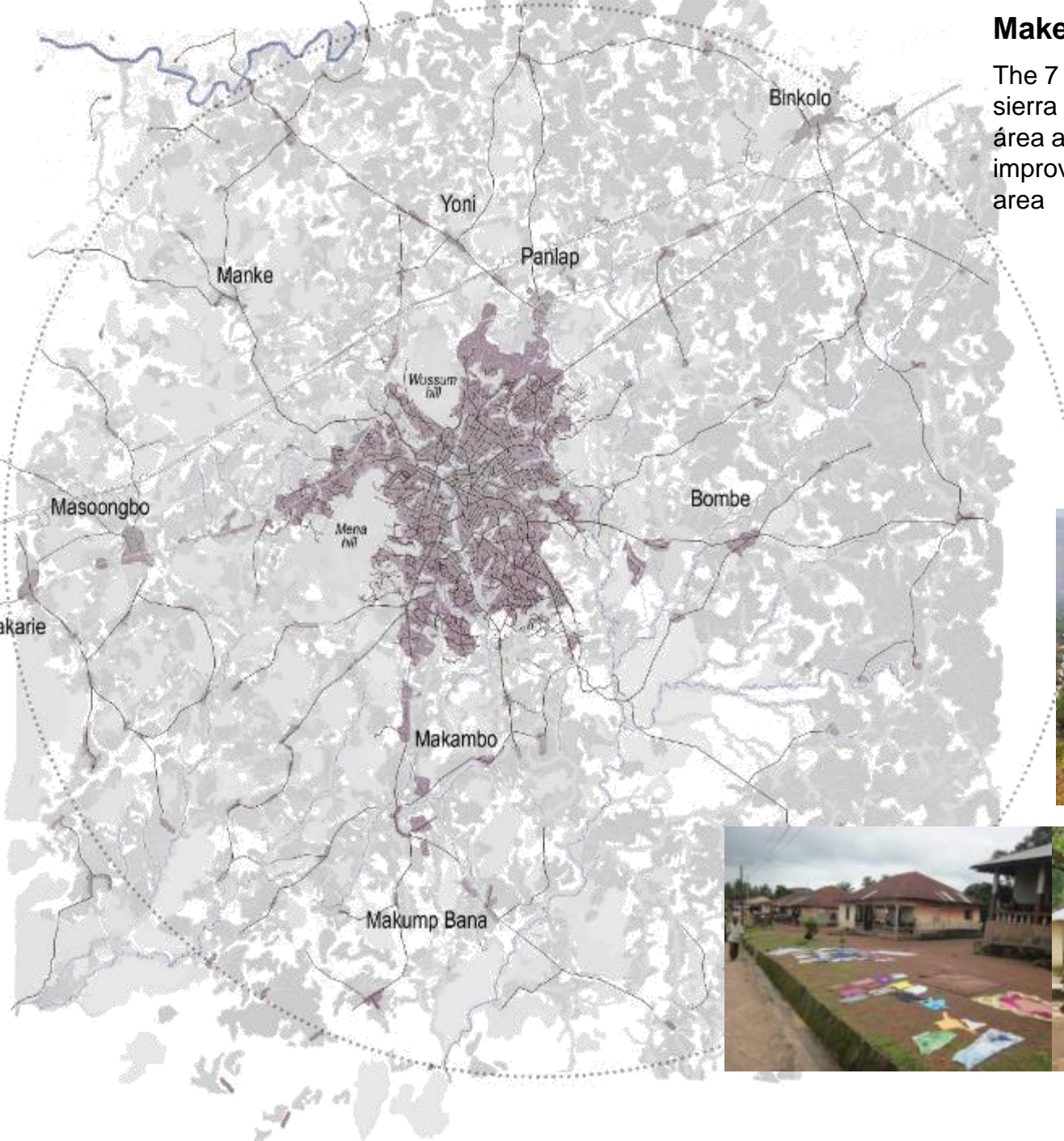
A dispersed growth with no planning

The city is growing with no urban planning. In the next years, the city will face important challenges that will need to be anticipated. One of the risks is related to the dispersed growth of the city. Also, the villages around Makeni are playing an increasing role in the area.



Chiefdom context

Makeni is in **Bombali Sebora** chiefdom, very close to the limits of **Makari Gbanti** chiefdom, where an important part of the area of influence is included. The chiefdoms of Safroko Limba and Paki Masabong are also part of the Makeni hinterland



Makeni and the 7 miles radius

The 7 miles radius allows the main sierra leonean towns to organize the área around the central city for improving the coordination in the global area



2.1. GLOBAL FRAMEWORK

In this chapter, are highlighted some points and key issues related to the main global framework at the International, National and Local level.

2.1.1. SUSTAINABLE DEVELOPMENT GOALS

New international 2030 Agenda

Goal 1. End poverty in all its forms everywhere

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3. Ensure healthy lives and promote well-being for all at all ages

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5. Achieve gender equality and empower all women and girls

Goal 6. Ensure availability and sustainable management of water and sanitation for all

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10. Reduce inequality within and among countries

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12. Ensure sustainable consumption and production patterns

Goal 13. Take urgent action to combat climate change and its impacts*

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

(In bold the goals more linked with urban issues, with targets explained in the next pages)

Goal 6. Ensure availability and sustainable management of water and sanitation for all

TARGETS

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.b Support and strengthen the participation of local communities in improving water and sanitation management

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

TARGETS

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

7.3 By 2030, double the global rate of improvement in energy efficiency

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

TARGETS

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

TARGETS

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

11.a Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning

11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

TARGETS

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed

15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products

15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

2.1.2. AGENDA FOR PROSPERITY (2013-18)

Road to middle income status for Sierra Leone

Pillar 1 – Diversified Economic Growth

Pillar 2 – Managing Natural Resource

Pillar 3 – Accelerating Human Development

Pillar 4 – International Competitiveness

Pillar 5 – Labour and Employment

Pillar 6 – Social Protection

Pillar 7 – Governance and Public Sector Reform

Pillar 8 – Gender and Women's Empowerment

2.1.3. NATIONAL URBAN PLANNING FRAMEWORK IN SIERRA LEONE

A. NATIONAL LAND POLICY REFORM. MINISTRY OF LANDS, COUNTRY PLANNING AND THE ENVIRONMENT

Types of Land in Sierra Leone according to the Legal Regimes:

1. General Law (Mainly in Western Area)
 - Freehold
 - Leasehold
2. Customary Law (Mainly in the Provinces)
 - Communal Tenure
 - Family Tenure
 - Statutory Leases
 - Customary Tenancies

Main problems detected:

- Inequitable access to land;
- Shortage of accessible land in the Western Area;
- “Squatting” on State and private lands in the Western Area due to rapid urbanisation;
- Insecure tenure forms and rights due to the absence of a system of registration of titles; lack of proper cadastral mapping and land information; unclear and diverging tenure forms under customary law; overlapping jurisdictions for statutory and customary law;
- Weak land administration and management, i.e. inadequate capacity within the Ministry of Lands, Country Planning and the Environment to carry out its scope of responsibility and meet set objectives;
- Lack of a proper cadastral and land use information database for State, private, and customary lands; and
- Inadequate concession practices and protective mechanisms inserted to prevent “land-grabbing” in the commercial land use sector.
- International boundary disputes, such as that of Yenga.

Some key issues related to Urban Planning (extrated to the Final Draft of the Land Policy Reform):

- One objective is “To build capacity for and **promote land use and country planning strategies for sustainable development** in both urban and rural areas”
- *“The Government or a local government may, subject to Article 26 of this Constitution, acquire land in the public interest; and the conditions governing such acquisition shall be prescribed by Parliament”*
(section 237 of the Constitution of Uganda)
- **“Local Councils/ Traditional Leaders:** The functions of land use planning and enforcement of approved development plans/controls will continue to be carried out by local councils in line with the Local Government Act, 2004, and the Town and Country Planning Act, Cap 81 as amended, which statutes will be amended to conform to changes introduced by this land policy. Also relevant to this function will be the harmonization with the relevant agriculture, forestry, mines and minerals, tourism and culture and environment legislations;”
- **“National and regional land use planning system**
A comprehensive national land use planning and mapping systems, based on agro-ecological and economic potentials, and social requirements, shall be pursued by the MLCPE in line with the provisions of Town and County Planning Act, Cap 81, as amended”
- “Secure/preserve wetlands (lowlands, inland valley swamps, mangroves swamps) exclusively for urban agricultural development and converservation of biodiversity (not for construction of dwelling houses and playing fields or otherwise); “
- “All local authorities shall be required to design plans for the use and allocation of peri-urban lands taking into account the need to preserve prime farming lands and social housing programmes. Development of land in urban and peri-urban areas has been inhibited by poor planning, rapid growth of human settlements and activities, urban sprawl and inadequate provision of infrastructure. Proper planning shall provide for well coordinated development of urban and peri-urban areas in terms of housing, commercial, industrial and infrastructure development to accommodate changes in lifestyle and economic activities. “
- **“Planning for informal sector and informal settlement activities**
Informal sector activities are a key feature in many parts of Sierra Leone both in areas designated for specific uses and in other restricted areas, and they form a crucial part of the economy as a source of livelihood. Informal sector activities have not been adequately accommodated in formal urban and rural plans. Informal sector activities have arisen spontaneously as a result of rural-urban migration without corresponding availability of formal employment opportunities and other income generating activities. “

B. LOCAL GOVERNMENT ACT, 2004

- “A local council shall consist of the number of persons prescribed under paragraph (d) of subsection (2) of section 2, made up of—
 - (a) the Chairperson;
 - (b) such number of elected Councillors from the locality, elected by universal adult suffrage in accordance with the Electoral Laws Act, 2002; and
 - (c) the number of Paramount Chiefs in a locality as specified in Part II of the First Schedule selected by the Paramount Chiefs in the locality to represent their interests.”

- “The Minister, the Minister responsible for finance, and the National Electoral Commission shall, in making any recommendation, consider—

- (a) the population and population density;
 - (b) the geographical contiguity;
 - (c) the topography;
 - (d) future growth or expansion,”

- “FUNCTIONS OF LOCAL COUNCILS AND COUNCILLORS

20. (1) A local council shall be the highest political authority in the locality and shall have legislative and executive powers to be exercised in accordance with this Act or any other enactment, and shall be responsible, generally for promoting the development of the locality and the welfare of the people in the locality with the resources at its disposal and with such resources and capacity as it can mobilise from the central government and its agencies, national and international organisations, and the private sector.”

- “A local council shall cause to be prepared a development plan which shall guide the development of the locality.

- “For the purposes of subsection (1) of section 85, a local council shall appoint a Local Technical Planning Committee which shall consist of—

- (a) the Local Council Chief Administrator who shall chair the Committee;
 - (b) Heads of relevant Departments of the local council; and
 - (c) any technical person co-opted by the Local Council Chief Administrator.”

- Devolved functions to Local Councils from the Ministry of Lands, Country Planning and the Environment: “Land Surveying Land Registration and Control of illegal sale of land Leasing Government land Strategic local plans Issuance of building permits Sand dues Preparation of land use plans Education and sensitisation on environmental issues “

2.1.4. DEVELOPMENT PLAN OF MAKENI 2013-15

The Plan of the MCC was supervised in detail. It has a very complete description of the activities needed, linked with the costs. It has a lack of graphic information.

The main actions (those that have more spatial implications) are:

Health

- Construction of PHU in Fullah Town
- Construction of Health Center at Pate Bana Marank (Long Term)

Solid Waste Management

- Development of final dump site (Makup roron)

Youth and Sports

- Construction of a mini stadium (long Term). In the participatory workshops organized, a stadium between Panlap and Binkolo were proposed
- Construction of Multi – Purpose Youth Centre (Medium Term)

Roads and Bridges

- Construction of bridge at Gadda community linking Ropolon

Other Social Infrastructure

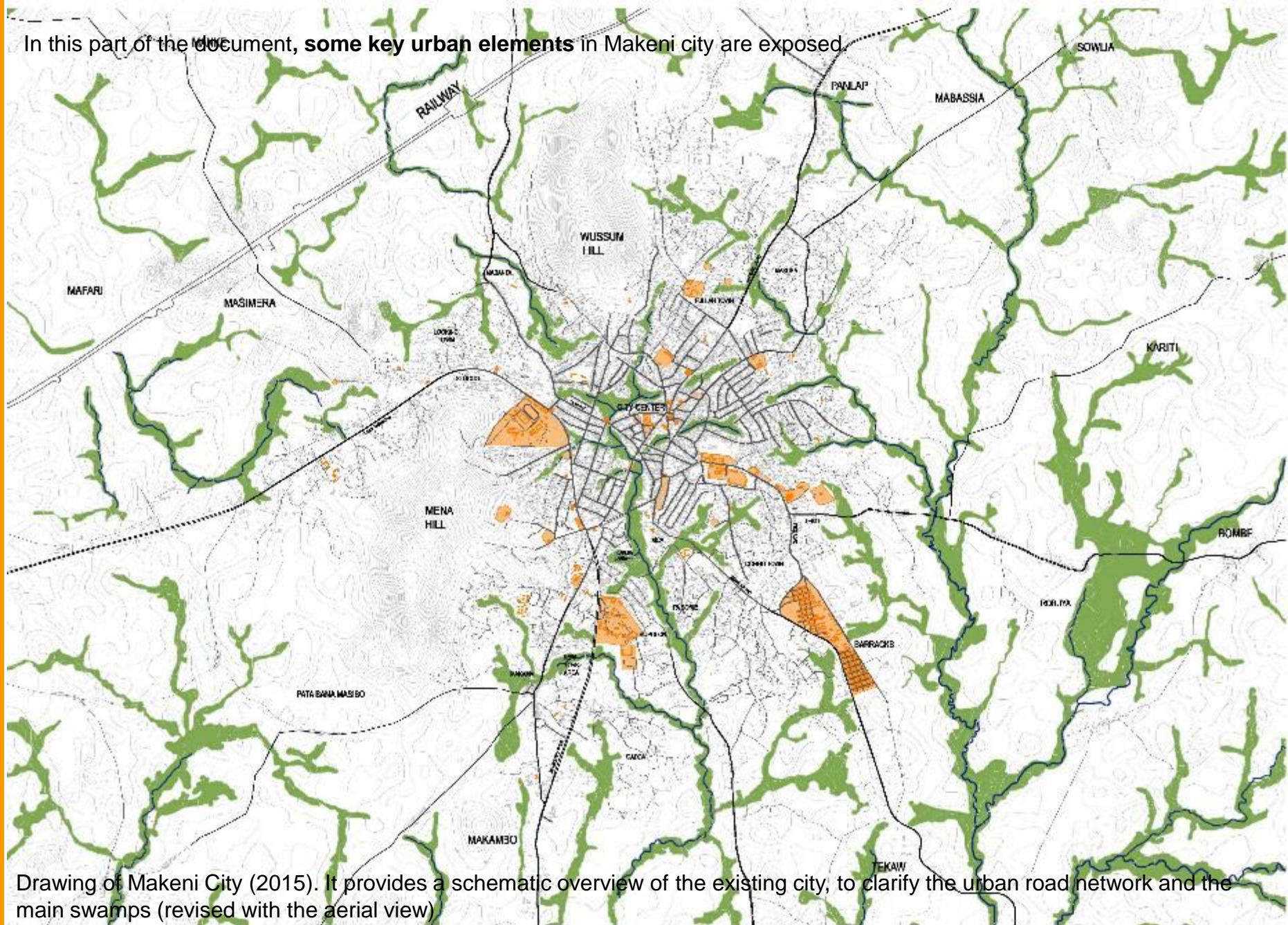
- Establishment of a New Cemetery (Short Term)
- Acquisition of Land for future development (On-going)
- Construction of Market at Makama& Looking Town

Agriculture

- Drainage construction
- Canalization of selected areas within the city

2.2. MAKENI URBAN KEY ISSUES

In this part of the document, **some key urban elements** in Makeni city are exposed.



Drawing of Makeni City (2015). It provides a schematic overview of the existing city, to clarify the urban road network and the main swamps (revised with the aerial view)

MAIN PROBLEMS AND OPPORTUNITIES

Main problems detected:

Global framework

- Lack of planning normative framework
- The difficulties for linking customary law with the real implementation of planning
- Land tenure problems
- Economic difficulties

Urban planning and spatial information

- No spatial cadastre
- Lack of spatial urban proposal for the future
- Is needed to identify vulnerable lands (floods and landslides)

Spatial issues

- Floods near swamps
- Dispersed growth (sprawl) in the new urban areas
- Disconnected urban road network
- Is not possible to by-pass the city
- Concentration of activity in the centre
- Infrastructure deficits. Sanitation as the main problem, linked with health issues

Main opportunities detected:

Global framework

- Close relationship among stakeholders (Paramount Chief, land owners, MCC, ward committees,...)
- A growing and vibrant city
- Young and enterprising workforce
- Employment opportunities for the future

Urban planning and spatial information

- Still at time for planning
- Previous steps in planning process

Spatial issues

- Very good location at national level
- Size of the city
- Impressive landscape around
- Enough land around for urban growth

DISPERSED GROWTH (SPRAWL)

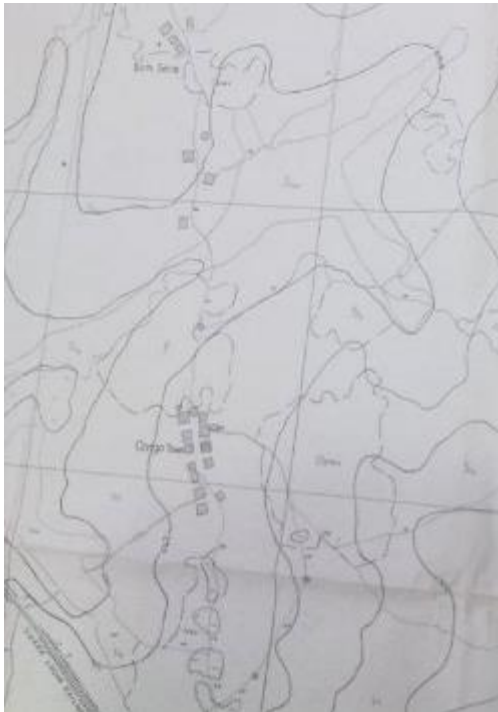
Dispersed urban growth (sprawl) is currently the pattern in Makeni

With no urban plan, the city and surroundings is growing with a growth model that threatens the future operation of the territory. Land is occupied "house to house" with a strong growth rate, without setting urban life and without optimizing land use.

From the "street" to the sprawl pattern of growth

Traditionally, Makeni and the villages in surroundings grew around roads that become streets. Looking at the pictures below, is evident how the buildings grew along the streets, as in Congo Town, to be later absorbed by the city.

Map of Makeni (1966). Congo Town area



Aerial view of Makeni (2012). Congo Town area



South area of Makeni Town.
The street as the way of
growth.

We can consider this a good
pattern of growth, that
promote the public life, retail,
activity, ...



Recently, we can observe in Makeni another pattern of growth. An intensive sprawl with no clear directions. The final articulation of the city will be hindered with this model of urban growth. New constructions appear separated among themselves, without the required facilities, without structure, this will cause an increase of problems in the future (roads to be paved, energy and water supply, increase in displacements, increase costs,...)



Aerial view (2009). North of Makeni

Aerial view (2012). North of Makeni

Need of higher densities and compact patterns

- Better accessibility
- Lower infrastructure cost
- Preserve land resources
- Lower cost of economic transactions
- Social integration

Energy consumed for transport needs in an urban area with less than **25 p/ha** may be an annual average of 55,000 mega joules per person, but in an area with **100 p/ha** this figure **would be about 300 per cent less**

Good densities: 35-70 dwellings / Ha

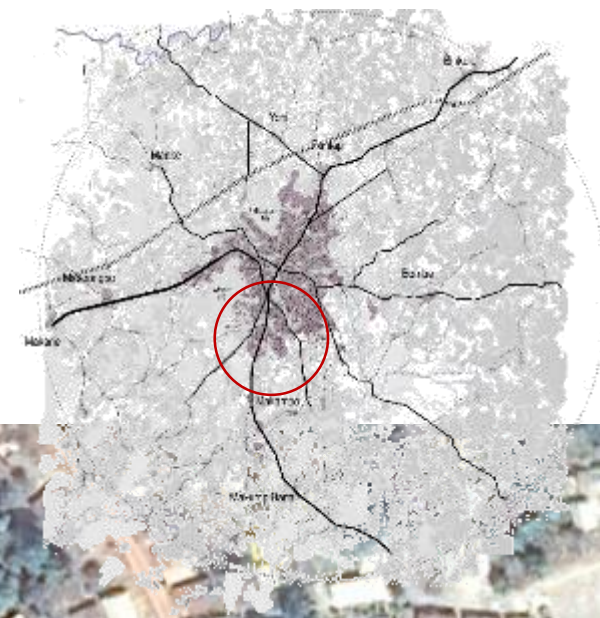
"Urban Planning for city leaders". UN-Habitat. 2012

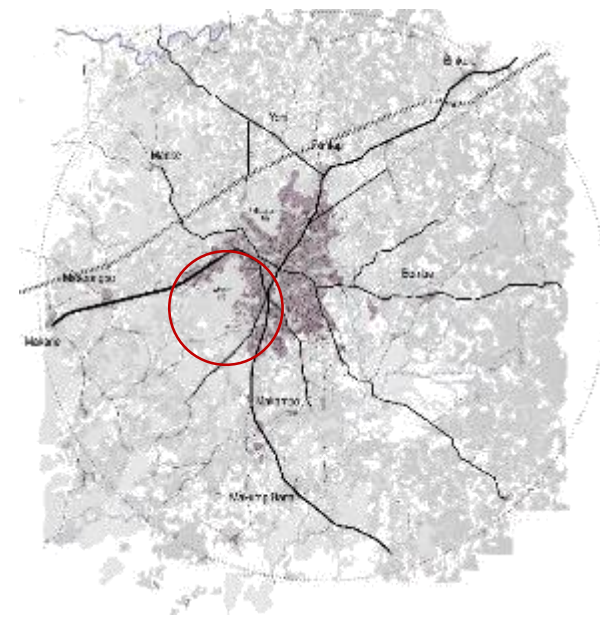


Aerial view (2012). North of Makeni (detail of dispersed growth)

OCCUPATION OF VULNERABLE AND HAZARD LANDS

Buildings in swamp areas in Makeni





Hazard áreas for landslides and erosion in Mena Hill, Makeni



Dwellings in landslides hazard areas in Mena Hill, Makeni



Erosion effects down Mena Hill, Makeni

Deforestation in south Makeni



2014

LACK OF ENOUGH PUBLIC SPACE, STREETS AND LOW DENSITIES

Central Makeni

- Gross density: 13 Dwellings/Ha
- Private land: 77%
- Swamps: 13%
- Streets: 10%
- Public Space: 10%



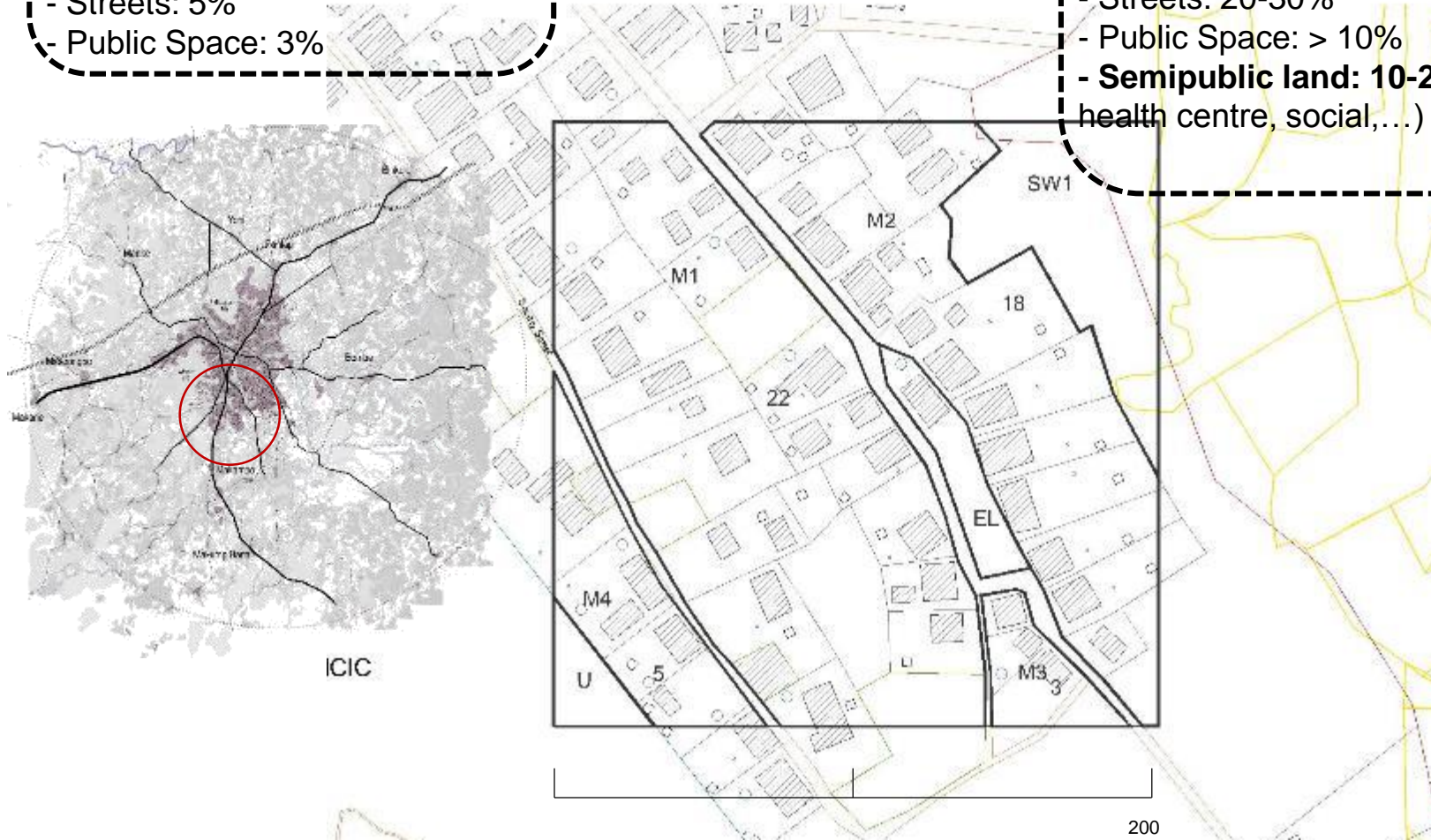
LACK OF SUFFICIENT AREA FOR PUBLIC SPACE AND STREETS

Ropolon (current dimensions)

- Gross density: 12 Dwellings/Ha
72 people/Ha (6 people per dw)
- Private land: 80% (Housing)
- Swamps: 10%
- University: 2%
- Streets: 5%
- Public Space: 3%

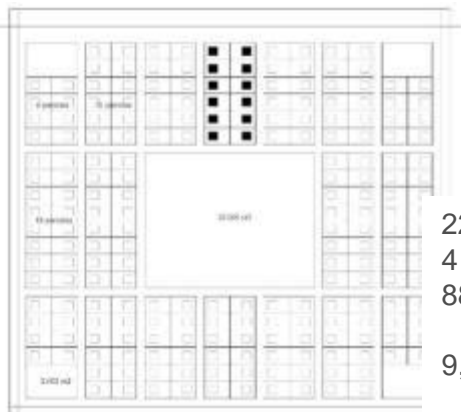
Good dimensions for new expansions

- Gross density: >25 Dwellings/Ha
150 people/Ha (6 people per dw)
- **Private land: 45-60%** (Housing, commercial, offices, industrial)
- **Public land: 25%-45%**
- Streets: 20-30%
- Public Space: > 10%
- **Semipublic land: 10-20%** (Schools, health centre, social,...)



Example of saving urban land with more compact models

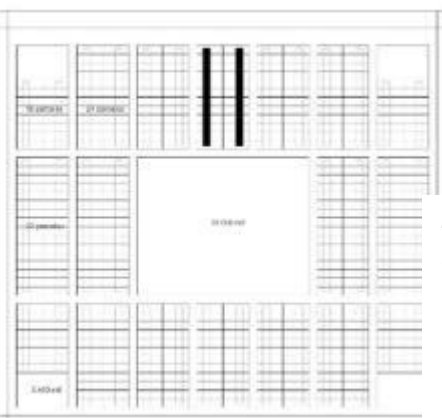
Settlement: 500x450 m (22,5Has)



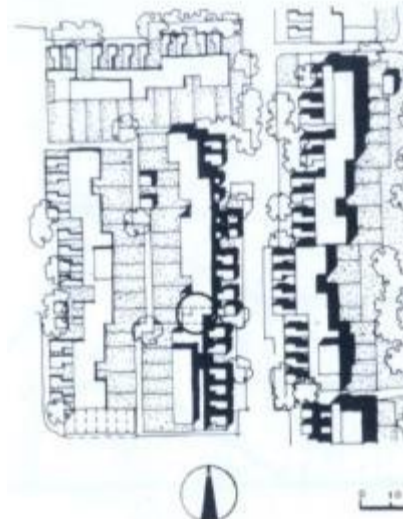
220 dwellings
4 Per/dw
880 people
9,7 dw/Ha



1. Makeni single family house



440 dwellings
3,5 Per/dw
1.540 people
19,5 vdw/Ha



2. Row houses

From single family house to row houses

Land area saved 10 years: **822 Has** (1907 to 1084 Has)



872 dwellings
3 Per/dw
2.616 people
38,75 dw/Ha



3. Collective 2 levels houses with common area

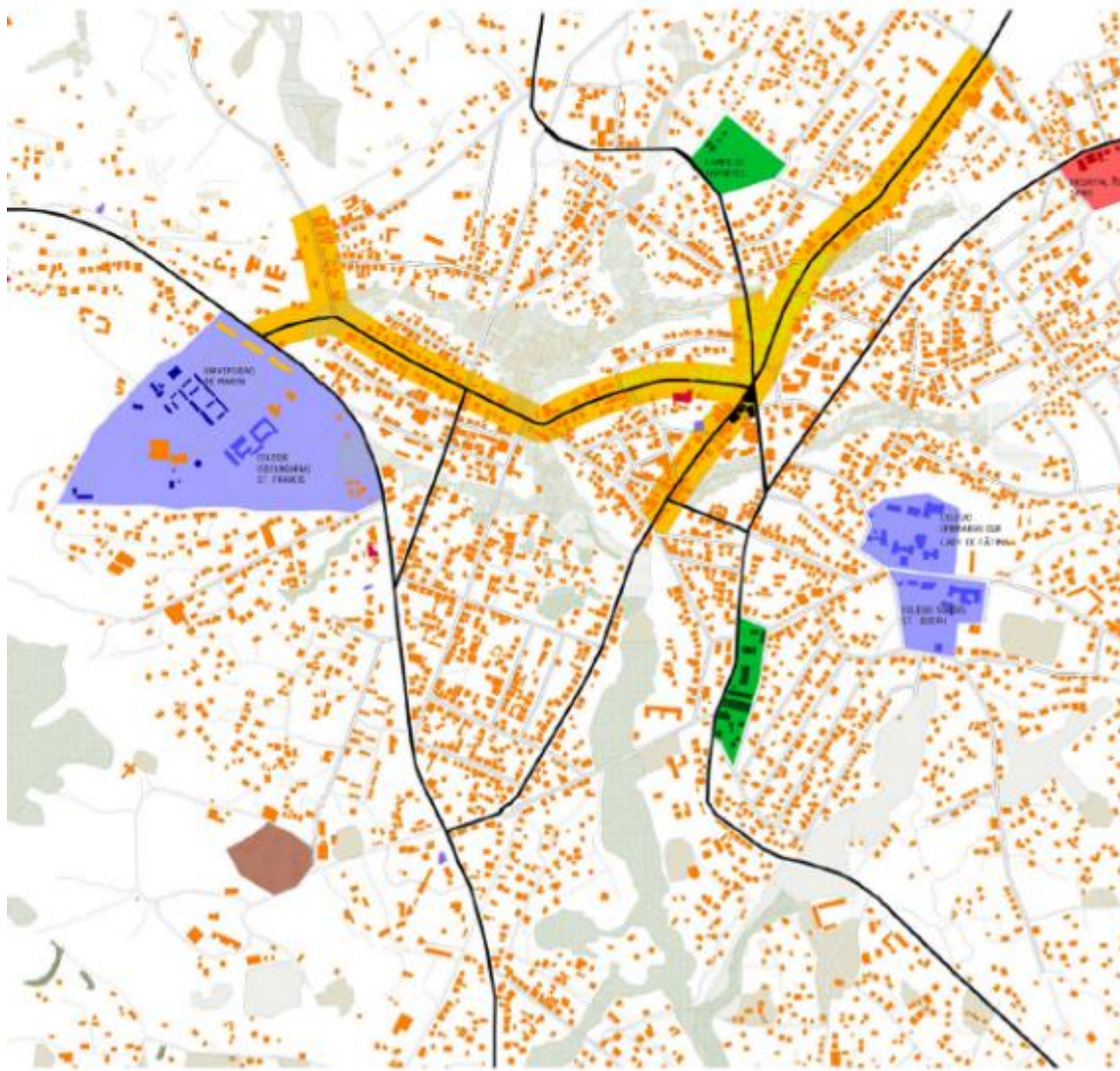
From single family house to collective 2 level houses

Land area saved in 10 years: **958 Has**

half land occupation!!



ACTIVITIES IN CENTRAL BUSSINES DISTRICT



CEU Group map



Central Market

1. INFORMAL CITIES IN DEVELOPING COUNTRIES. MAIN RISKS AND NEW URBAN PLANNING APPROACHES

2. MAKENI. CURRENT URBAN CONTEXT

2.1. Global Framework

2.2. Urban Key Issues

3. TOWARDS A SUSTAINABLE MAKENI. PREVIOUS STEPS

4. NEW PROPOSALS FOR MAKENI CITY

5. PROPOSED NEXT STEPS

THE PLANNING PROCESS IN MAKENI

1. FIRST WORKSHOP. DETECTING PRIORITIES. JULY 2013

The organization, in July of 2013, of a workshop to reflect on the city and the territory of Makeni, marked the beginning of the process. The main city stakeholders were called and organized into five groups according to 5 thematic areas, the priority elements for Makeni were defined. The organization was carried out jointly between the CEU, Unimak and the city of Makeni.



July 2013. Poster and pictures of the workshop

MAIN ISSUES AND CONCLUSIONS OBTAINED FROM THE JULY 2013 WORKSHOP

Here we summarize the essential elements obtained during the workshop, as well as some first action lines, possible for debate.

Program of the Workshop

Program

Friday July 12, 2013

Opening Prayers (Muslim and Christian).

Introduction of guests and coordinator:

Emmanuel A. B. Turay.

Opening remarks from the organizer.

Welcome by the Mayor.

Speeches: Vice President, Unimak.

The Paramount Chief, Bobali Sebor.

The Chairman, Bombali District Council.

Key Note Address: Resident Minister, North.

Acknowledgements.

Workshop

Friday July 12, 2013

Lecture "Planning Sustainable Cities. Key Issues".

Luis Perea, CEU San Pablo University.

Working session. Questions, answers, explanations and comments.

Working Groups. Dreaming a sustainable Makeni.

Conclusions (Report of the working groups).

Saturday July 13, 2013

Summary of the previous session.

Working Groups. Challenges and opportunities.

Mapping Makeni.

Discussion over the short, medium and long term.

Conclusions. Evaluation of the workshop.



1 Governance and Public Participation

Discussion session about priorities:

- Understand the competences of the level units of administration involved on the development of Makeni.
 - President of Sierra Leone State.
 - Minister of the Northern Province.
 - Chairman of Bombali District Council.
 - Paramount Chief of Bombali Shebora Chiefdom.
 - Mayor of Makeni City.
- Deal with rapid popularization.
- Make local authorities easy accessible for people.
- Move forward supported by the system.
- Get funds from the Central Government and donors.
- Involve Development Committees in the process.
- Rethink the relation with the land (preserve land for future development).

Map out the way to a sustainable Makeni:

- Paramount Chief of Bombali Shebora Chiefdom.
 - Play a leading role on consultation about the land uses in the city.
 - Assist the Local Government on land decisions.
- Chairman of Bombali District Council.
 - Take decisions about the land use (with the assistance of the Paramount Chief).
 - Train the metropolitan civil servers on land issues.
- Minister of the Northern Province.
 - Provide support in technical issues (the process should be led by the citizens).
 - Stability should be a premise on the process (strikes action could be considered).

Conclusions of group 1 "Governance and Public Participation"



2 Environment and Biodiversity

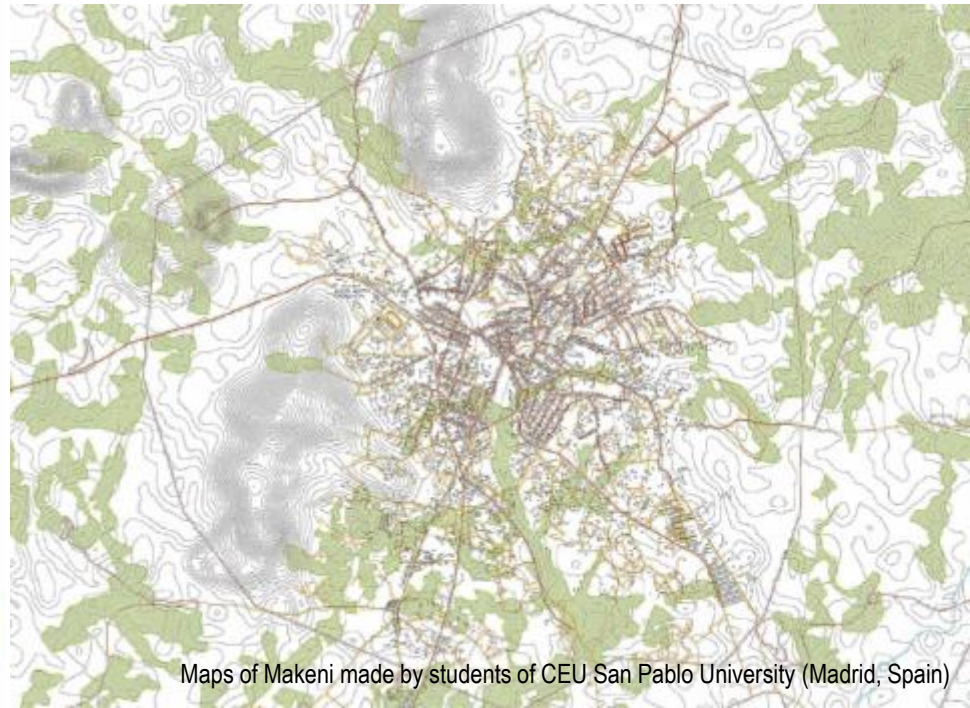
Discussion session about priorities:

- Indiscriminate deforestation in the surroundings:
 - Wood is used or sold as fuel.
 - Mining is a cause of clearance.
 - Cleared land is used as pasture and new plantations and settlements requires open areas.
- Location of flood areas in the city.
- Preservation of urban spaces for:
 - Natural areas and parks.
 - Urban spaces linked together.
- Education for the community on environmental issues:
 - Reforestation solve the damage to habitat.
 - Biodiversity loss threads.
 - Atmospheric carbon dioxide.
- Regulations for domestic animals (dogs, goats ..).
- Analyze problems caused by climate changes.
- Implement the policies of land.

Map out the way to a sustainable Makeni:

- Provide the city with a drainage system.
- Improve the disposal of waste (recycle and reuse).
- Preserve forests (to be carefull with the abolition of small villages).
- Get funds for the improvements and preservation of the natural areas that surrounds Makeni.
- International support is needed by the Council.
- Review policies concerning mining (to help to prevent deforestation).
- Design green areas inside Makeni linked with natural areas from the outside.

Conclusions of group 2 "Environment and Biodiversity"



Maps of Makeni made by students of CEU San Pablo University (Madrid, Spain)

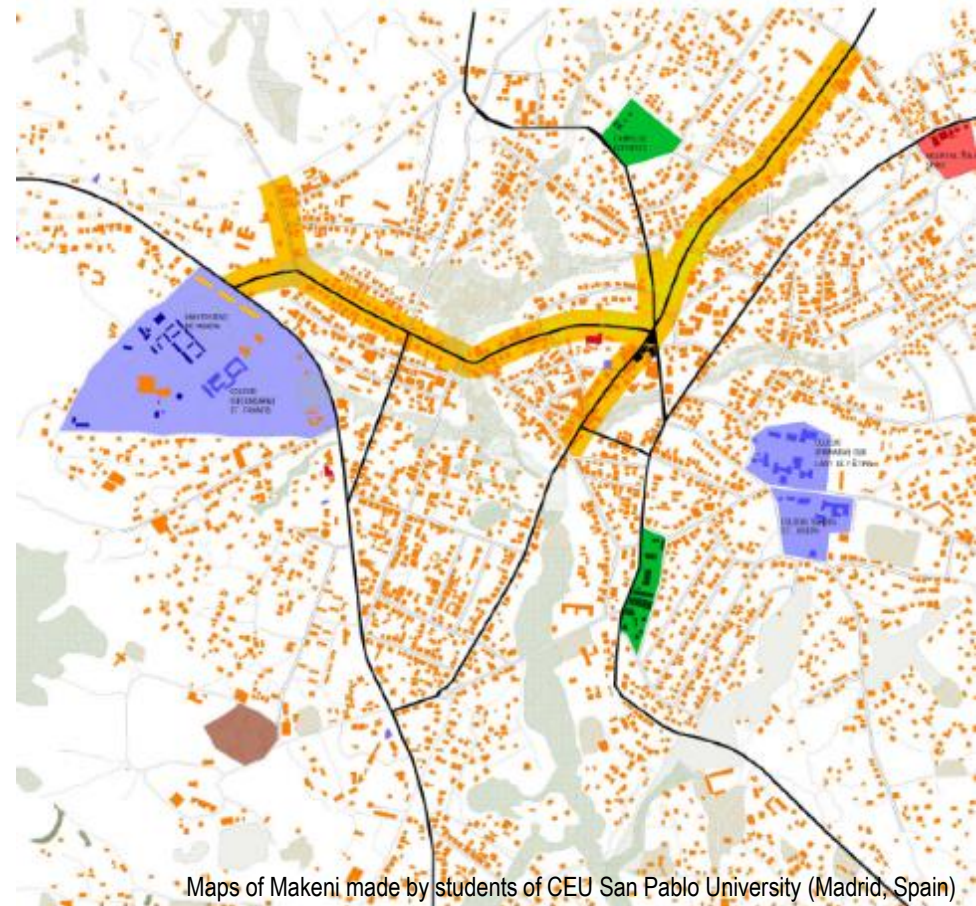
Conclusions of group 3 “Infrastructure and Equipment”

-Energy:

- Electricity and solar energy supply are limited.
- Nepotism in the services to be offered.
- Water and Sanitation:
 - Hand pump wells, borehole wells, rain water, streams
 - Impure drainage system.
 - Latrines, pit latrines and toilets.
- Waste Management:
 - No collection of wasting materials.
- Health and Education:
 - Schools, Universities, Hospitals, Libraries and cultural services are not enough.

-Energy:

- An alternative electricity generator is needed to provide to more areas.
- Different strategies to reduce the prices.
- Water and Sanitation:
 - Create a new drainage system in Makeni.
 - Combine different systems to provide people with water all the year.
 - Education in Sanitation for people.
- Waste Management:
 - Dustbins, refuse collectors and skip containers should increase.
 - Implement a waste management system.
- Health and Education:
 - Implement on-line education.



Maps of Makeni made by students of CEU San Pablo University (Madrid, Spain)

4 Urban Planning, mobility and quality of life

Discussion session about priorities:

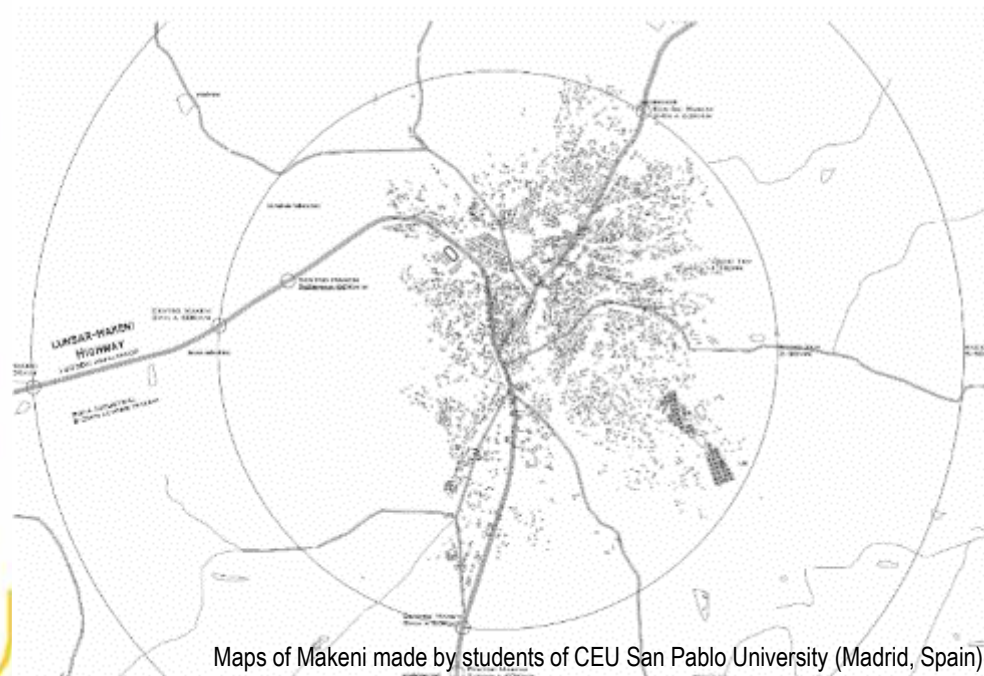
- Makeni is growing as an extended city (think about reshaping to a condensed model).
- Railroads, roads (construction of elevated structures for highways).
- Recreational parks are needed.
- Intersections and buses for town services could improve mobility.
- Enforcement of government policies.

Map out the way to a sustainable Makeni:

- Plans for the city:
 - Lack of political willingness and lack of financial resources to acquire land.
- Public space:
 - Relocation (compensation fees) at city center: no adequate land for facilities.
 - Demolition (compensation fees): locate houses at the proper places.
- Transport:
 - Ineffective public transport system.
 - Road signs, traffic lights and public awareness.
- Action in neighbourhoods:
 - Provide available expertise (human resources) and natural resources.
 - Improve laws and policies concerning the use of land (involve institutions).
 - Regulate the use of land.
 - Inclusion of Urban Planning issues in school programs (learn from other countries).

Conclusions of group 4

"Urban Planning, mobility and quality of life"



Maps of Makeni made by students of CEU San Pablo University (Madrid, Spain)

5 Economic activity, employment and social cohesion

Discussion session about priorities:

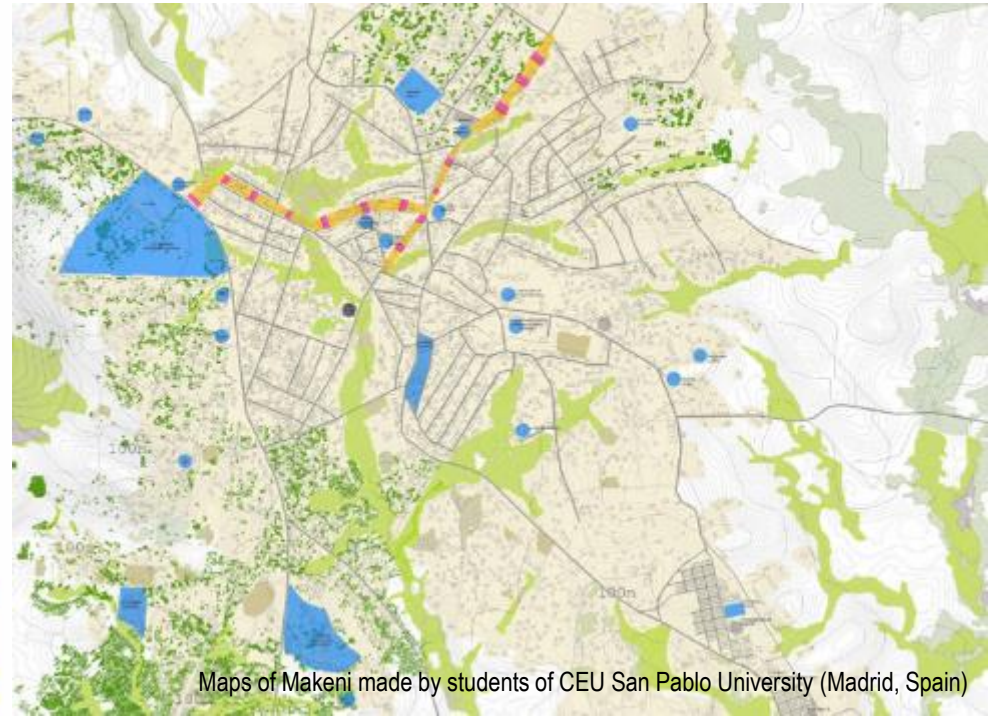
- Analyze economic activities
 - Mining.
 - Agriculture.
 - back yard garden.
 - vegetable patch.
 - Self employment.
 - petty tracking.
 - bike riders.
 - hotels.
 - companies and entertainment.
 - Artisans.
 - wood.
 - metal.
 - cement.
 - tiles.
- Ensure gender equity and avoid racial segregation.

Map out the way to a sustainable Makeni:

- Economic.
 - Evaluate the product imports.
- Employment.
 - Increase the employment rate.
 - Cooperatives should be created for self employees.
 - Regulate child labour.
- Social cohesion.
 - Promote more research in universities.
 - Education for prosperity in schools (skills and training is needed).
 - Create a Training Center for Social Cohesion issues.

Conclusions of group 5

“Economic activity, employment and social cohesion”



Maps of Makeni made by students of CEU San Pablo University (Madrid, Spain)

A Evaluation and Conclusion

Governance and Public Participation:

- Create a Committee of Urban Planning.
- Reinforce laws and encourage people to follow them.
- Continue with the participatory process.
- Implementation of Administrative Offices.

Environment and Biodiversity:

- Delimitation of nature network system.
- Preserve urban swamps areas as potential public spaces.
- Delimitation of vulnerable areas.

Infrastructure and Equipment:

- Ring road linked with the Urban Planning Model.
- Energy, waste, water and sanitation plan.
- Plan drainage system for Makeni city and the swamps.
- Preserve land for schools, hospitals, equipment and social centres, linked with the Urban Planning Model.

Urban Planning, mobility and quality of life:

- Urban Planning Model should be defined.
- Identify villages that could work as satellite towns.
- Identify transport nodes linked to the Urban Model.
- Regeneration plan for the city centre of Makeni.

Economic activity, employment and social cohesion:

- Preserve land to create activity nodes.
- Improvement agriculture processes and equipment.
- Preserve most productive lands for agriculture.
- Preserve lands for future industrial areas.
- Link economic activity and university programmes.

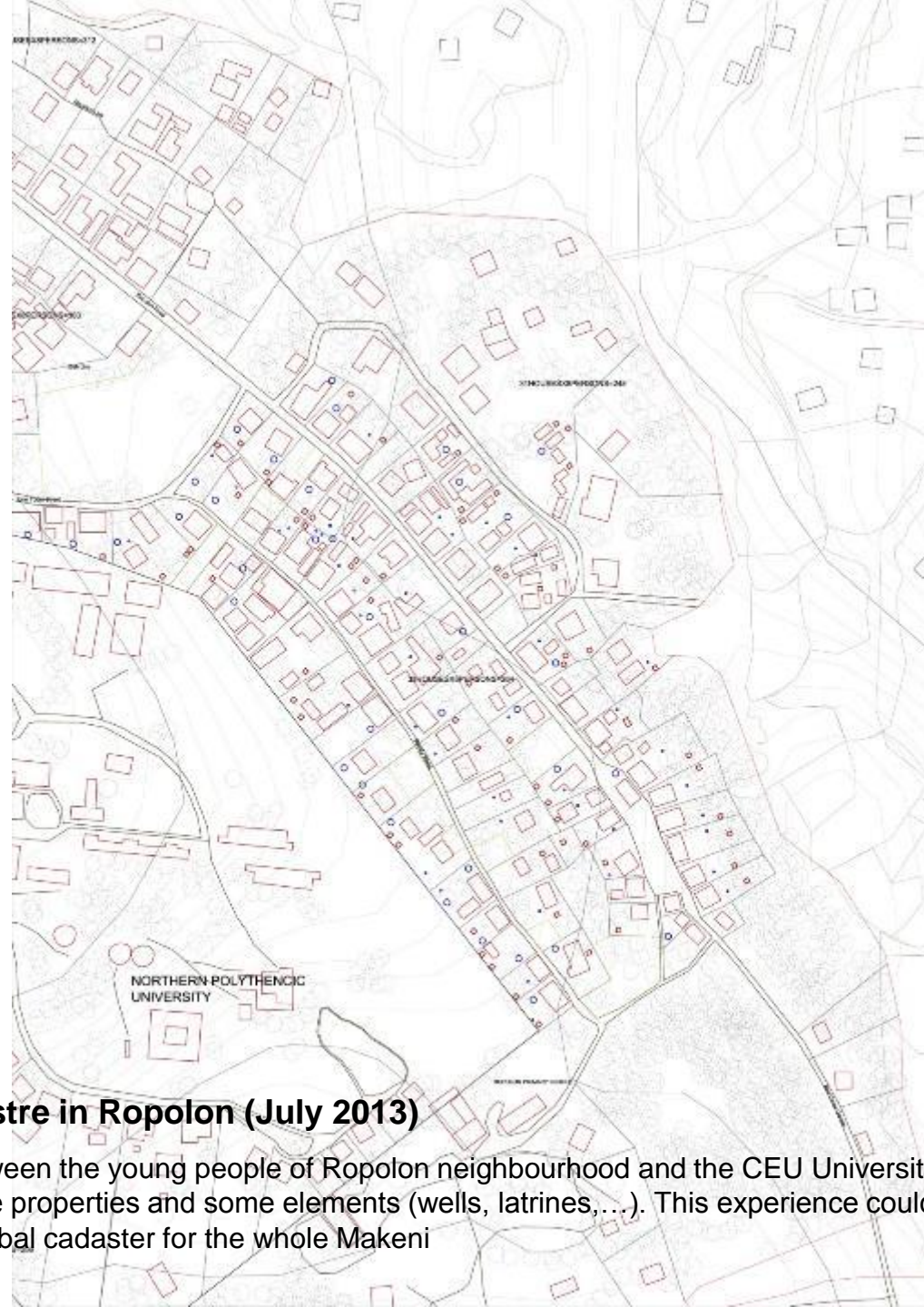
Global Conclusion and evaluation. Summay vision from CEU

From CEU University we would like to give our summary vision of the main issues about the city of Makeni and its future, in the context of the planning process that has started.

The most important question is getting a global framework for the future Makeni. From a multidisciplinary approach, an idea of the city that the citizens of Makeni want, is needed. As the dispersed growth is a risk for the future, and as is the principal way of growth that is going on now, **it should be proposed a city that links the ideas of the new urbanism (compact and polycentric city, high densities, mixed uses, territorial approach,...)**. In this approach, Makeni Town concentrates the main activities of the territory. With the current important rate of growth, the centre of the city could collapse in a few years. The potential pattern is the one that focus the growth in some areas around Makeni (may be in the bigger villages). This alternative of central city with satellite towns could work very well in Makeni optimizing the land uses, the road network system and preserving the environment.

At left side we summarize some of the main issues that should be discussed among the Makeni stakeholders, in order to take the best decisions. Here we highlight just the main issues from a strategic approach, mainly those that could be mapped.





Participatory cadastre in Ropolon (July 2013)

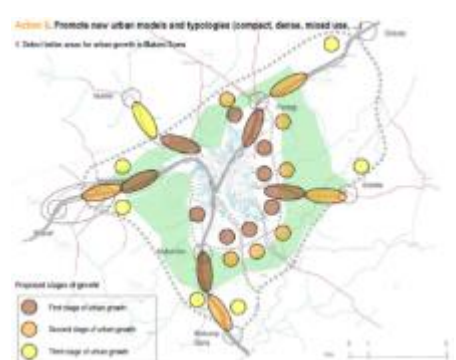
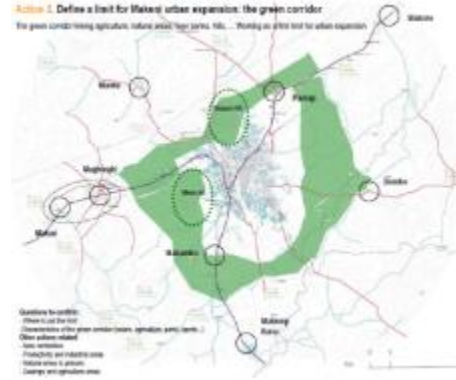
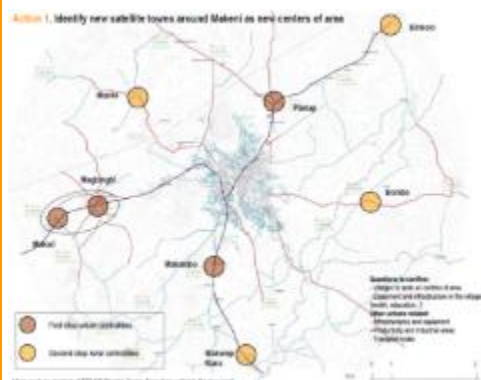
With the joint work between the young people of Ropolon neighbourhood and the CEU University people, the urban area was mapped, identifying the properties and some elements (wells, latrines,...). This experience could be replicated in other parts of the city for getting a global cadaster for the whole Makeni

2. SECOND WORKSHOP. FIRST IDEAS FOR THE DISCUSSION. JANUARY 2014

Presented as first diagrams during the participatory workshop organized in Makeni, **January 2014**. It was **based in the first workshop in Makeni (July 2013)**. A MoU among MCC, Unimak and CEU University was signed to get a strategic plan.



Some pictures of the second workshop in January 2014



Main Actions (January 2014)

Key actions proposed to achieve the territorial overall functional framework for the future. They are conceived as actions to promote the discussion on the future territorial framework for Makeni, with the main stakeholders.

Action 1. Identify new satellite towns around Makeni as new centers of area

Action 2. Define a limit for Makeni urban expansion: the green corridor

Action 3. New communication infrastructures

Action 4. Productive activity axes along main roads

Action 5. Hierarchical network of natural and public spaces

Action 6. Identify areas for new equipments of territorial scale

Action 7. Upgrading and descongestion of central business district

Action 8. Promote new urban models and typologies (compact, dense, mixed use, ...)

3. EVOLUTION OF THE PLANNING PROCESS FROM MADRID. JANUARY 2014-JULY 2014

The collaboration between CEU University, the UPM School of Architecture and the post graduate course ICHAB in Madrid, provided a great context for continuing the urban reflexion. Here are summarized some of the main approaches and elements of the research made by Adela Salas and Natalia García (ICHAB), with the supervision of Luis Perea (CEU):

OBJECTIVES, STRATEGIES AND TERRITORIAL PLANNING TOOLS

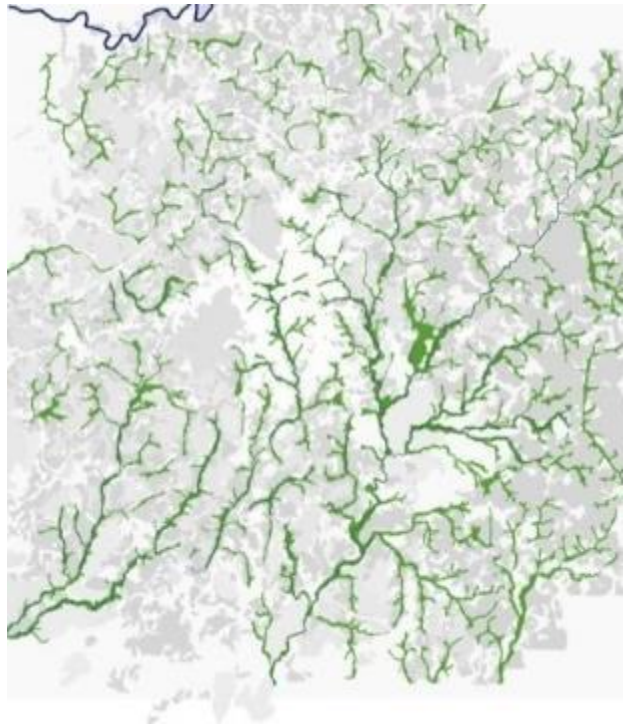
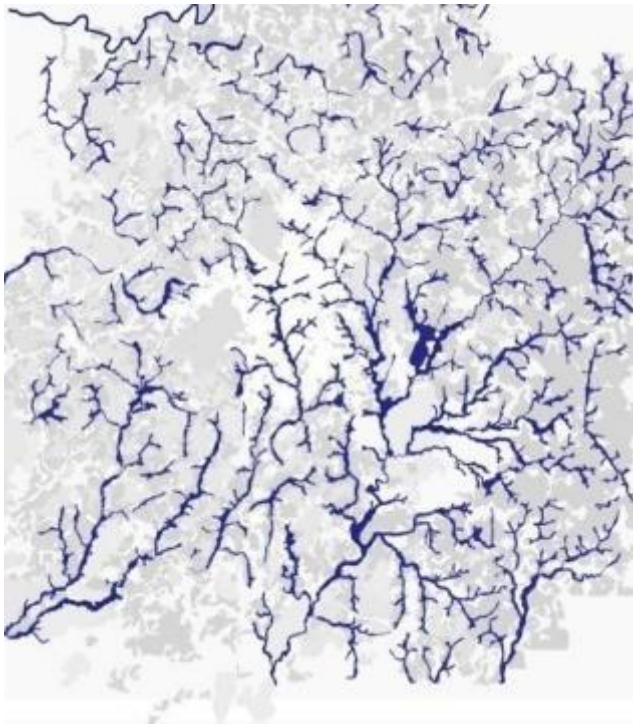
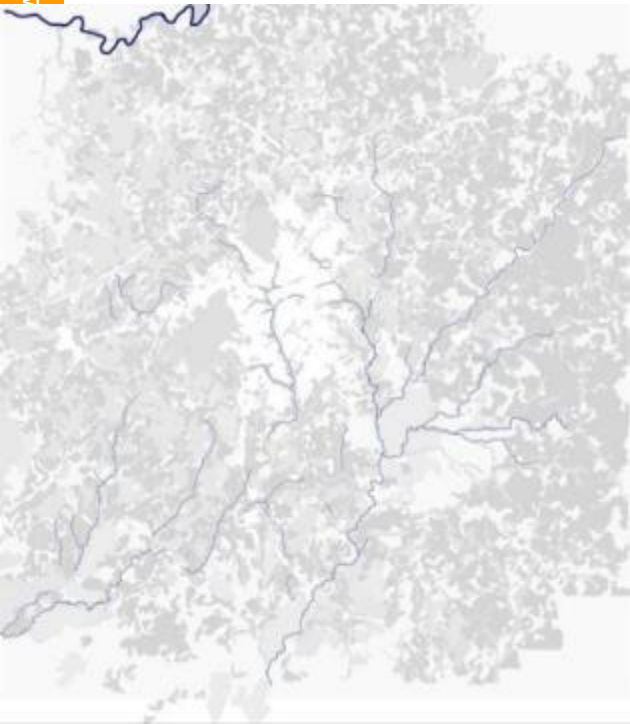
>>Main goal:

Make compatible the protection of the areas of greatest value with a sustainable urban and economic development.





Water system (rivers and streams)>>> Flooding>>> Swamps>>> Estructural network>>>Productive landscapes





STRATEGIES AND PLANNING TOOLS IN MAKENI AND THE 7 MILES RADIUS

>To define the Green Infrastructure in Makeni and the 7 miles radius

- . Mapping as a tool for understand the territory.
- . Identification and characterization of landscape : Land Uses.
- . The productive capacity of a territory. Productive Landscapes.

>Arrange the future urban growth of Makeni and seven miles to the next 35 years

- . Vulnerabilities. Identifying vulnerable soil and unfit for human settlements
- . Remove current trends and future tangible in the territory
- . Phase planning and quantification in space and in time. Future growth projections

>Harmonious integration of the new poles equipment and infrastructure in the territory

- . Organizing and ordering the spaces around infrastructure
- . Gates, edges and nodes. Urban public spaces in connection with the agricultural landscape

>Improve the competitiveness of agricultural activity

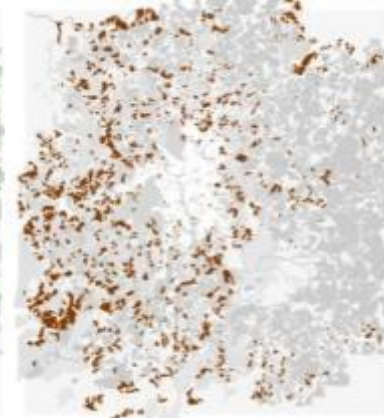
- . Prioritization of agricultural production activities
- . Management cooperative programs



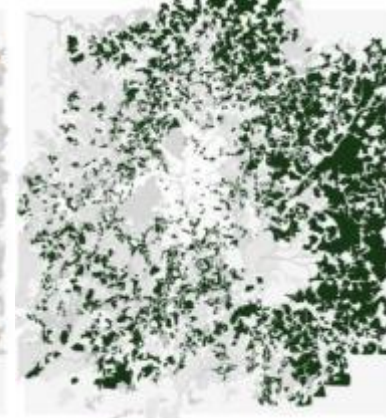
Sistema hídrico permanente



Cultivos de regadío inundables



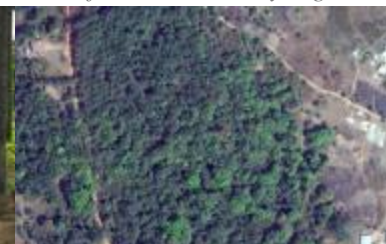
Cultivo de Palma



Masa forestal arbórea y vegetal



Cultivos de secano



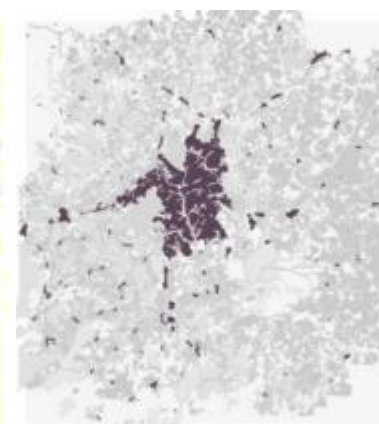
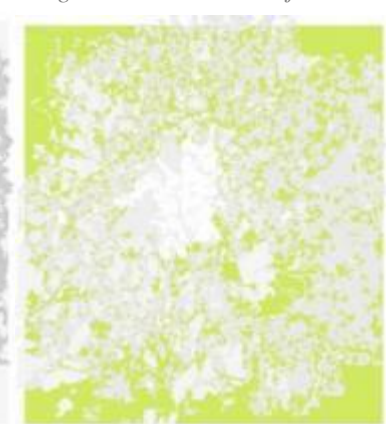
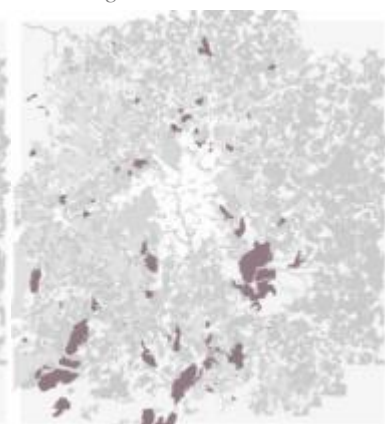
Montañas

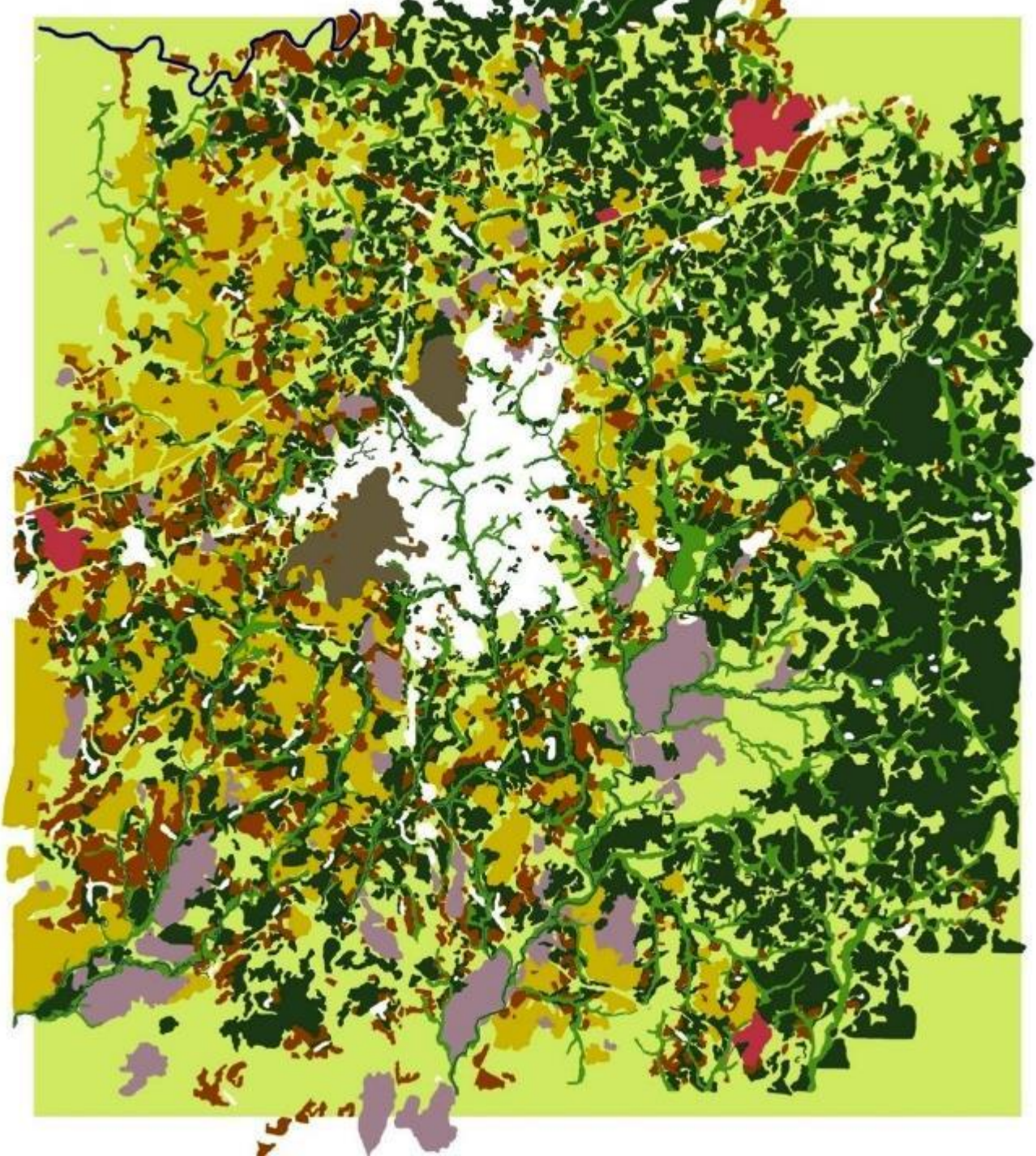
Suelos granates

Actividades extractivas

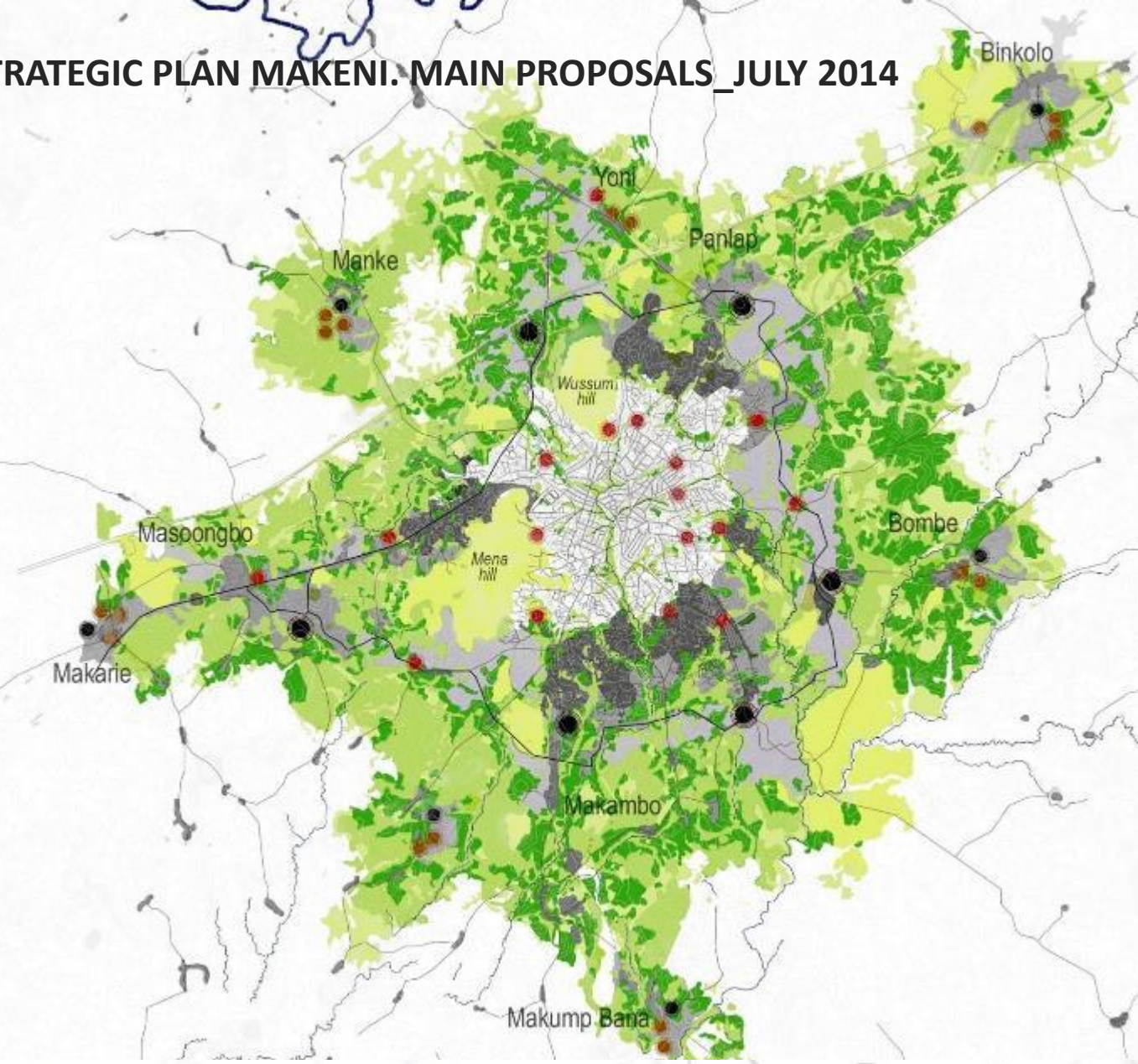
Vegetación de monte bajo

Asentamientos Humanos





STRATEGIC PLAN MAKENI. MAIN PROPOSALS_JULY 2014



The work presented here is the continuation of the process initiated by San Pablo CEU University, the university and the city Unimak. This process includes two participatory forums in the city of Makeni (JULY 2013 and JANUARY 2014).

The model sees **Makeni as a central urban node**, which growth is proposed considering its surrounding territory.

The surrounding urban areas such as Makarie, Masoongbo, Makambo, Panlap, will work in this plan as **satellite cities** with services attached to them which serve the central node.

The priority actions proposed for this model are defined as follows. These actions have to be approved by Makeni's civil population, politicians, technicians... and be subsequently checked with those defined at the **Development Plan of Makeni (2013-2015)**

Coordination:

Makeni City Council

Unimak

CEU
Universidad
San Pablo

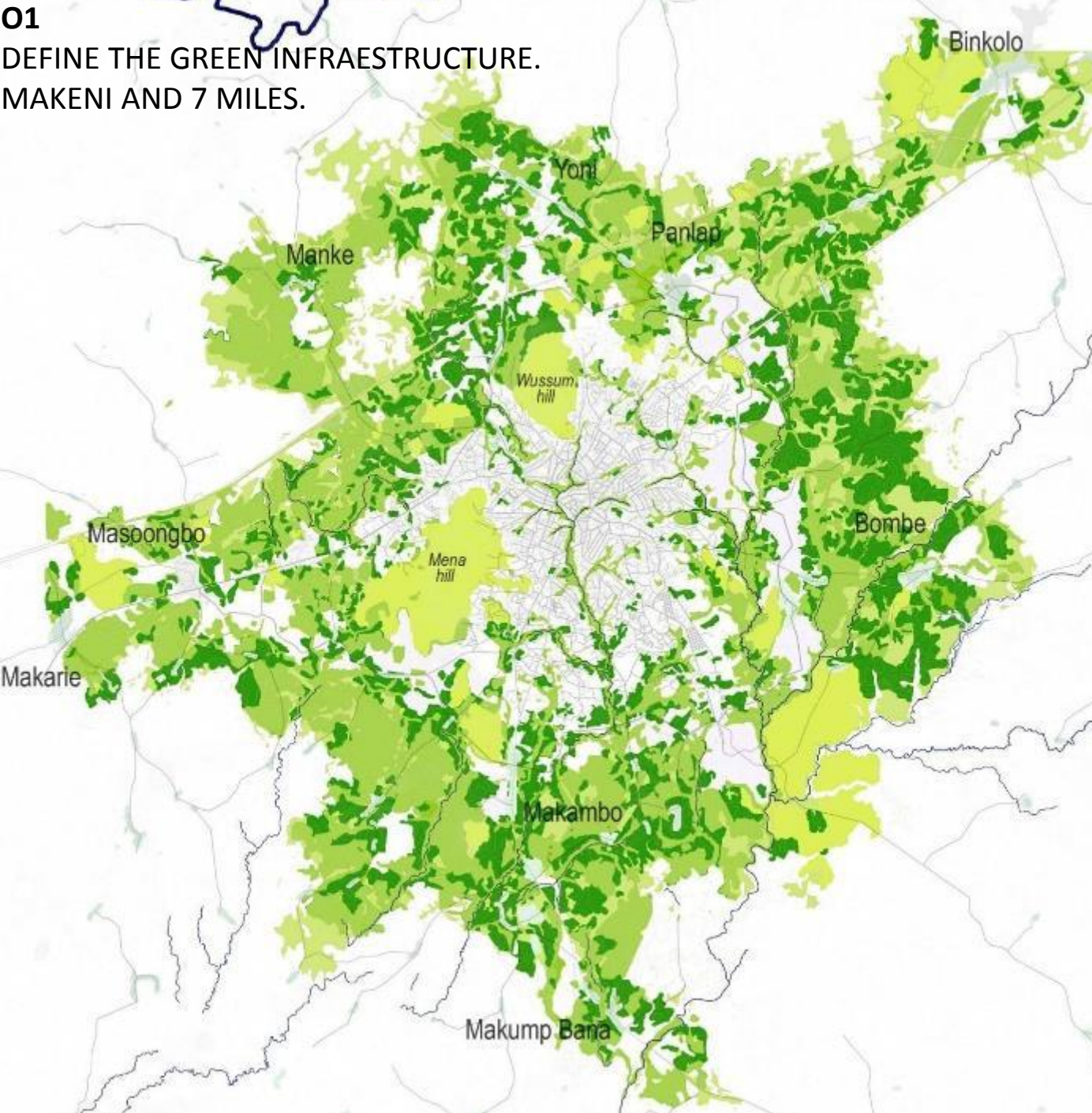
Associates:



DUyOT



01
DEFINE THE GREEN INFRASTRUCTURE.
MAKENI AND 7 MILES.



1. The **GREEN INFRASTRUCTURE** is composed of:
- Productive landscapes
 - Forest
 - Natural Open spaces
 - Innaptitude Landscape

2. The **swamps belong to the natural and public space network** along with the green ring, hills, squares, parks, natural and agricultural spaces, ...

ACTIONS:
SHORT TERM

- 1 Delimit vulnerable areas.
- 2 Define the most productive agricultural areas.
- 3 Define preserve natural areas.
- 4 **Reserve of land for public use**
(Participative approach. Coordination with the city)

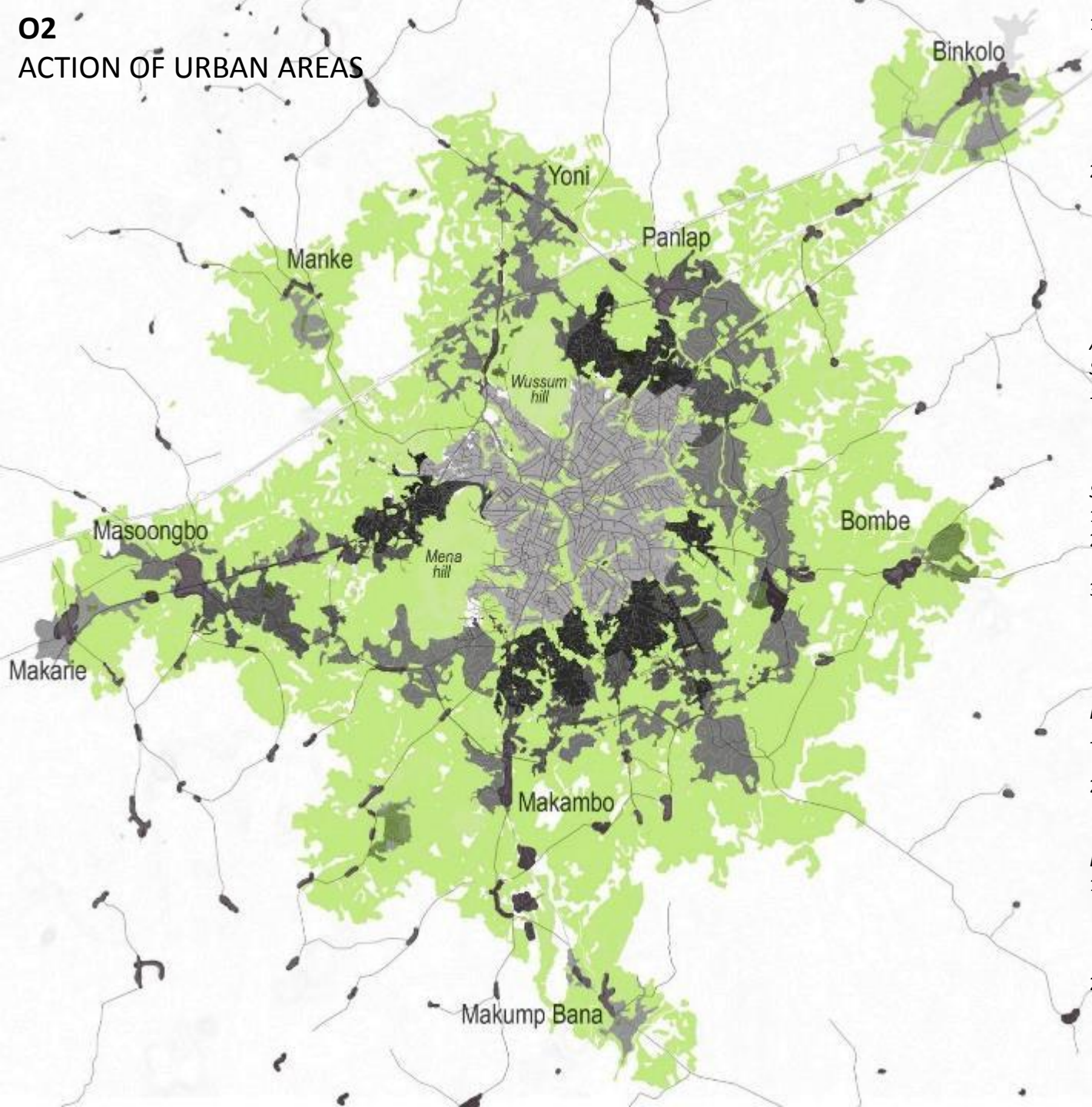
MID TERM

- 1 Identify the continuities and discontinuities between the swamps and Mena Hill and Wussum Hill.
- 2 Identify the **natural and public space network** , squares and sport and recreational spaces.
- 3 Prioritize **agricultural activities** in the productive areas of the Green Belt (agricultural cooperatives, nurseries, farms, roads and routes, reuse existing elements, storage areas.....). **Linked to agricultural and natural areas.**
- 4 **Reserve of land for public use**
(Participative approach. Coordination with the city)

LONG TERM

- 1.Implement **land reserved for public use.**
2. Implement **agricultural activities** in the productive areas of the green belt.

ACTION OF URBAN AREAS



1. The URBAN AREAS are composed of:

- Regenerated urban areas
- Consolidated urban areas
- Urban areas of extension

2. **New growths are organized along a main road network.** The new streets play a major role as generators of activity, commerce, social interaction, connectivity, and not only as a mere traffic way but also as a social one.

ACTIONS:
SHORT/MID TERM

1 **Upgrading Plan** and improvement of **Makeni's urban centre.** (Participative Approach. Coordination with the city)

SHORT TERM

- 1 Consolidate **developing areas**
- 2 Define future developing areas in South and East Makeni.
- 3 Elaborate **Sector Basic Plans** based on a previous sector study (comitee coordinations and city council) Participative Approach.

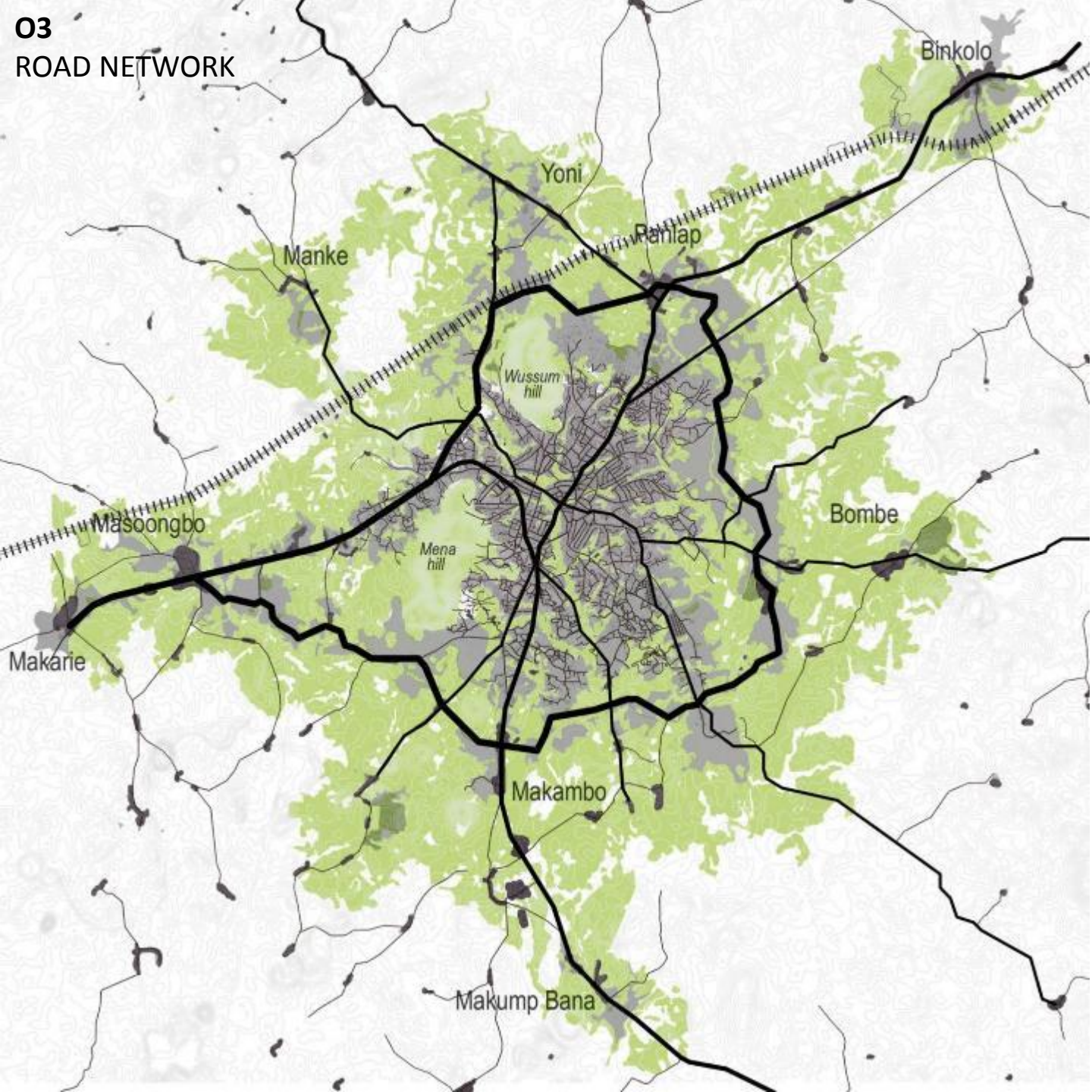
MID TERM

- 1 Articulate the South and East developing areas around an equipped urban limit.
- 2 Identify future growing areas in the main **satellite towns.**

LONG TERM

1. Work on South-West (Makeni-Makarie) and North Makeni **developing areas** articulating them along **the rail system** with a supramunicipal equipped node.
2. Identify **reserved areas** (Participative approach. Coordination with the city)

03
ROAD NETWORK



ACTIONS:

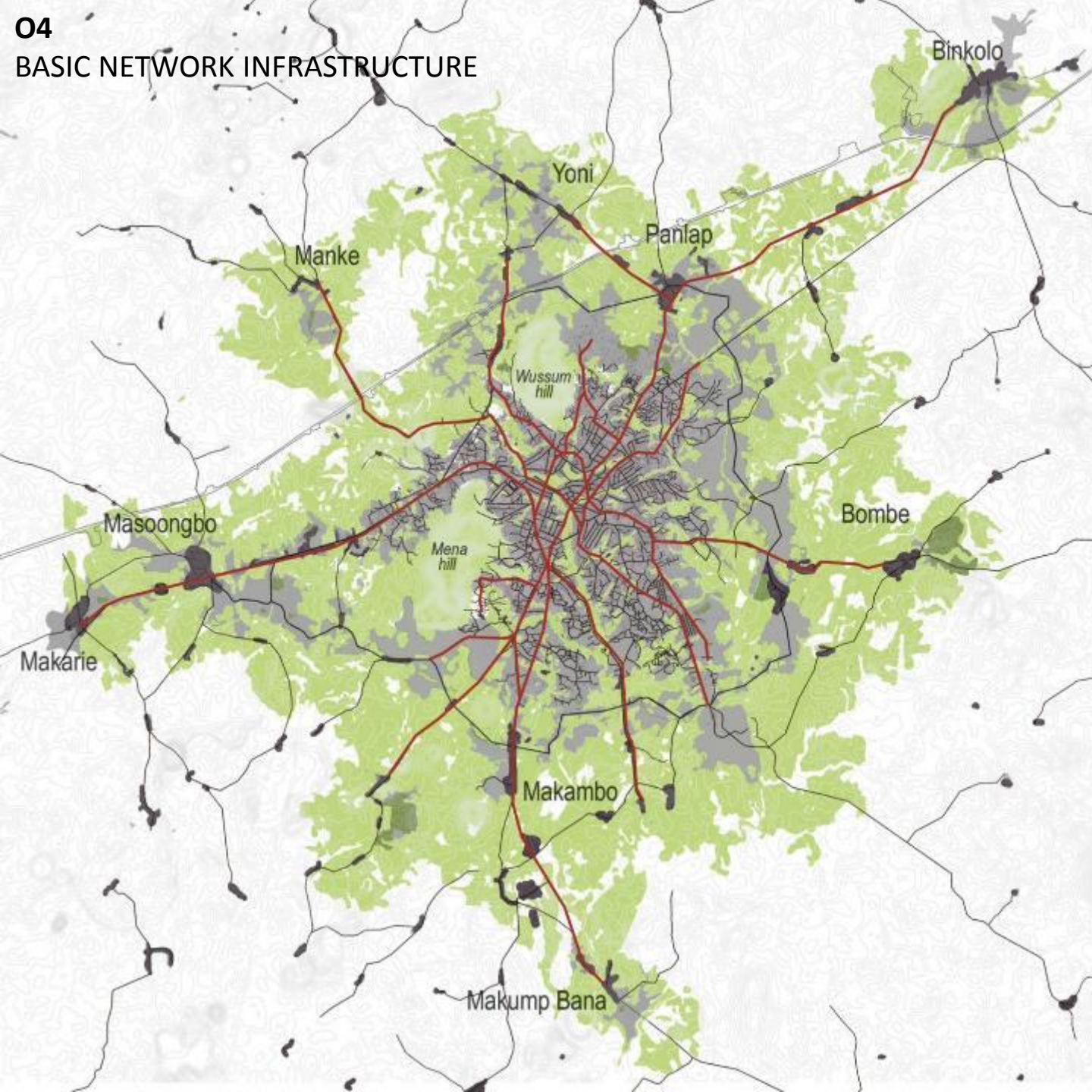
SHORT/MID TERM
1 **Road** network integrated in the Green Belt which **will organize agricultural activity and urban growth**. (Dynamic nature)

MID TERM
1 New road hierarchy
2 Define **the connection** between the new road with the existing road:
-Alternative route for **traffic Freetown-NORTH** (Kabala, Kamabai)

-**New West road**, between Masoongbo and Makambo, parallel to Mena Hill

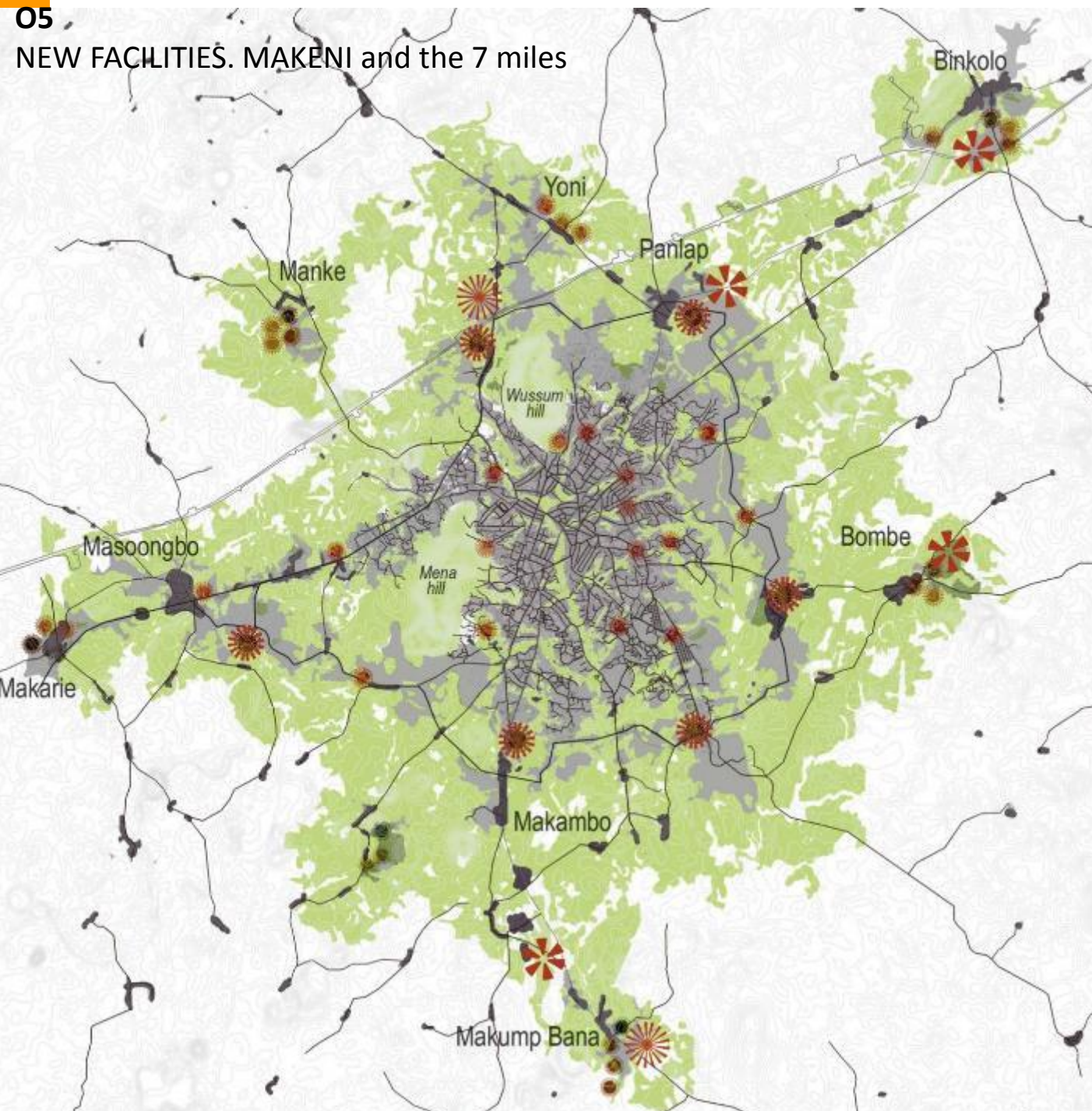
- **New South and East roads** which will organize new urban growth.

O4
BASIC NETWORK INFRASTRUCTURE



- ACTIONS:
- SHORT TERM**
- 1. Define existing and future requirements of **basic infrastructure network**: drainage, electricity, water, sanitation and waste management.
 - 2 **Reserve of land for public use**
(Participative approach. Coordination with the city)
- SHORT/MID TERM**
- 1 Strategic location of **sanitary stations**
 - Assessment of alternative sanitation systems

05 NEW FACILITIES. MAKENI and the 7 miles



1. **NEW FACILITIES**
-  **SHORT TERM**
 -  **MID TERM**
 -  **LONG TERM**

ACTIONS:

SHORT TERM

- 1 Locate new facilities and utilities in **existing neighborhoods** (Health Centre, Market...)
- 2 Locate new facilities and utilities in **urban areas of extension** (Health Centre, Market...)
- 3 New facilities and utilities (education, Health, police...) at **main satellites town**
- 4 **Landfill** between Makambo and Makump-Bana
- 5 New **cemetery** between Panlap and Binkolo.
- 6 **Industrial Areas** at Bombe.
7. **Water treatment plant** in South Makeni.

MID TERM

- 1 **Intermodal transportation hub** outside town and near the railroad.
- 2 **Multi – Purpose Youth Centre.** ¿where?
- 3 **New university** at Makump-Bana

LONG TERM

- 1 **Industrial northern areas** near the railroad.
- 2 **Health centre** at Pate-Bana Marank.
- 3 **Mini stadium**, between Panlap y Binkolo.
- 4 **Funeral Home.** ¿where?

1. INFORMAL CITIES IN DEVELOPING COUNTRIES. MAIN RISKS AND NEW URBAN PLANNING APPROACHES

2. MAKENI. CURRENT URBAN CONTEXT

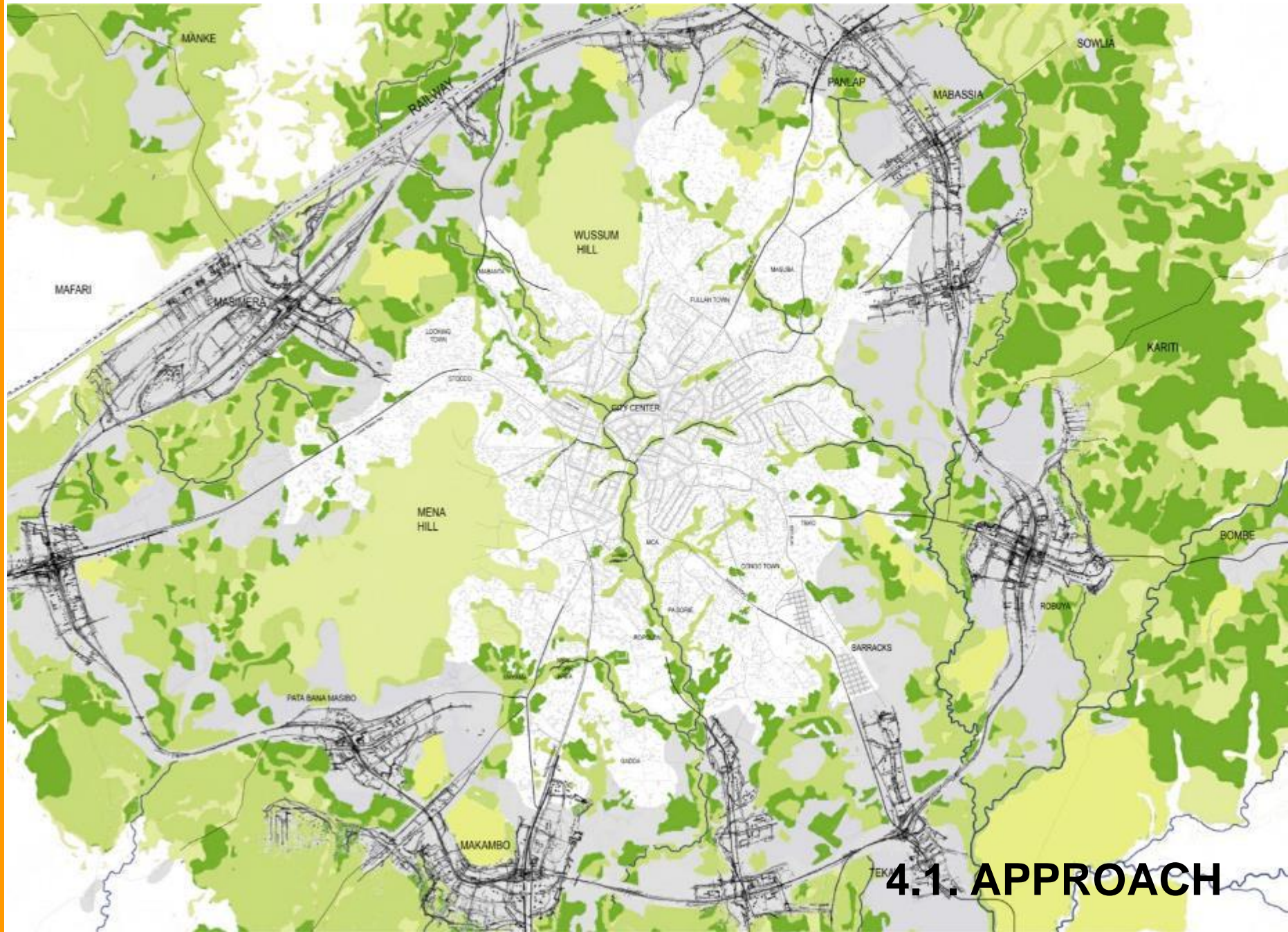
2.1. Global Framework

2.2. Urban Key Issues

3. TOWARDS A SUSTAINABLE MAKENI. PREVIOUS STEPS

4. NEW PROPOSALS FOR MAKENI CITY

5. PROPOSED NEXT STEPS



4.1. APPROACH

4.1. APPROACH

- Anticipating a **comprehensive framework** for the decision-making (10-20 years)
- Medium-Long term framework must be **linked with the Short term priority actions**
- **Strategic vision** (medium/long term), linked with the **Makeni Development Plan** (short/medium term)
- Constant **coordination among stakeholders** is required
- **Planning and reserving land** has almost no cost, but is critical for the future
- **Structural networks** must be decided with enough time.
- **Street as essential pattern** for urban growth in Makeni, Sierra Leone and África
- Is proposed a **Technical Workshop** for the Global Discussion about planning in Makeni (It was done in January 2016. See the conclusions below)
- All the proposals included should be **reviewed, discussed and analyzed detailed**



4.2. MAIN IDEAS AND ACTIONS

4.2. MAIN IDEAS AND ACTIONS

Based on the previous steps, this new proposals are focussed in the **medium-long term**. It provides a global framework for the future, in which the different actions can be implemented by phases. Considering the current priorities and needs, the proposal looks for the future, providing a framework for the decision making.

0. Defining the vulnerable and value lands (flooding, landslides, natural value areas, high productivity lands, ...).

These areas must be clearly located and mapped **for avoiding the urbanization**

1. The Linear City of Makeni. New communities, new facilities, ring road, productive areas, joint the existing urban fabric,...

2. The Green Infrastructure. Green belt as limit for the city, agriculture, natural areas, reforestation, swamps, urban public spaces,...

3. New Facilities. Integration of new territorial uses within the global framework

4. Phased Implementation. Progressive urbanism to develop step by step, under the global framework decided

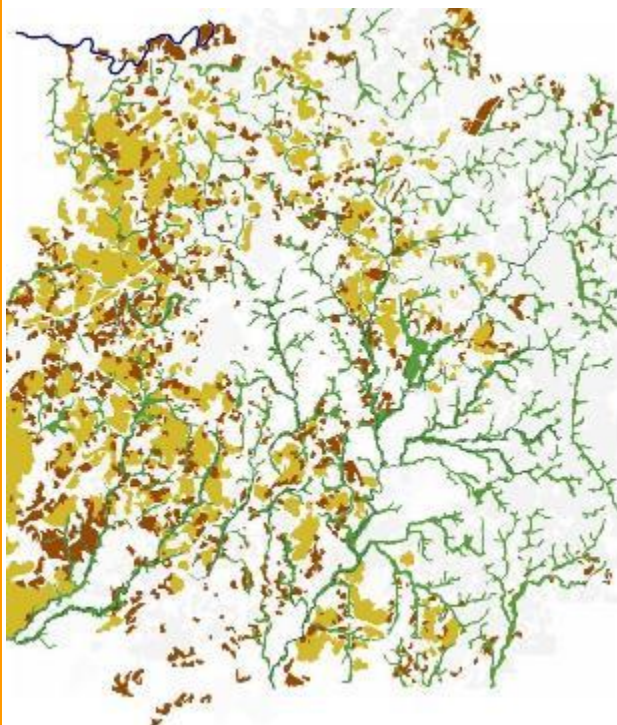
5. An Innovative Management Planning. Strong coordination among stakeholders and with regional and national authorities, strategic and participatory approach, discussion about global framework and priorities, preserving the land for roads and public facilities, avoid dispersed growth, defining some general rules, search for support to implement actions....

0. DEFINING THE VULNERABLE AND VALUE LANDS

Based mainly on the google earth information and in the personal fieldwork, some maps have been obtained to understand which are the best areas for the urban growth and which lands must be definitively avoided for urbanization.

Another detailed analysis should be developed as topography, load capacity, detailed land uses study,... Here we can present an information very useful for the decision-making, but should be confirmed. The proposals are based in this previous analysis.

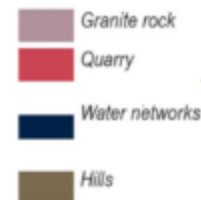
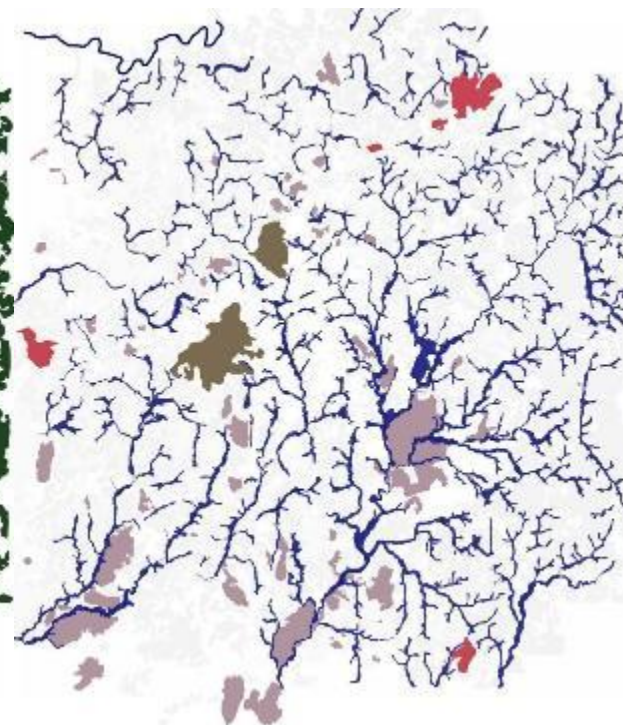
Productive Landscapes



Identity Landscapes



Vulnerable an unsuitable lands for human settlements



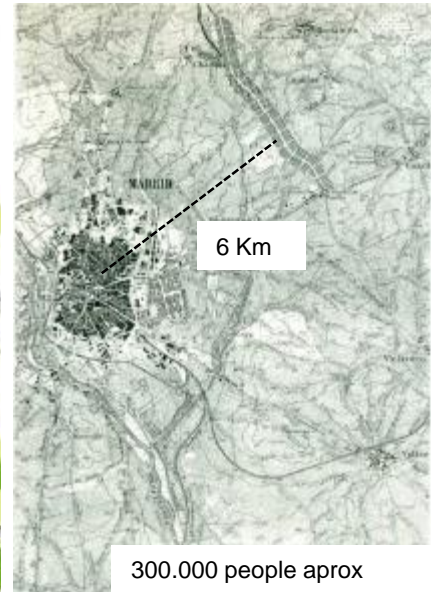
1. THE LINEAR CITY OF MAKENI

The Linear City is an urban concept that can be a reference for guiding the Makeni urban growth. Some experiences has been implemented, as the “Arturo Soria Linear City” in Madrid (Spain). The proposal in Madrid wasnt completed, but the part of it that has been constructed is today one of the best urban areas in Madrid.

This idea could work really well in Makeni, because of the current size and shape of the city.



Proposal of Makeni Linear City 115.000 people aprox



300.000 people aprox

Madrid Linear City in 1875

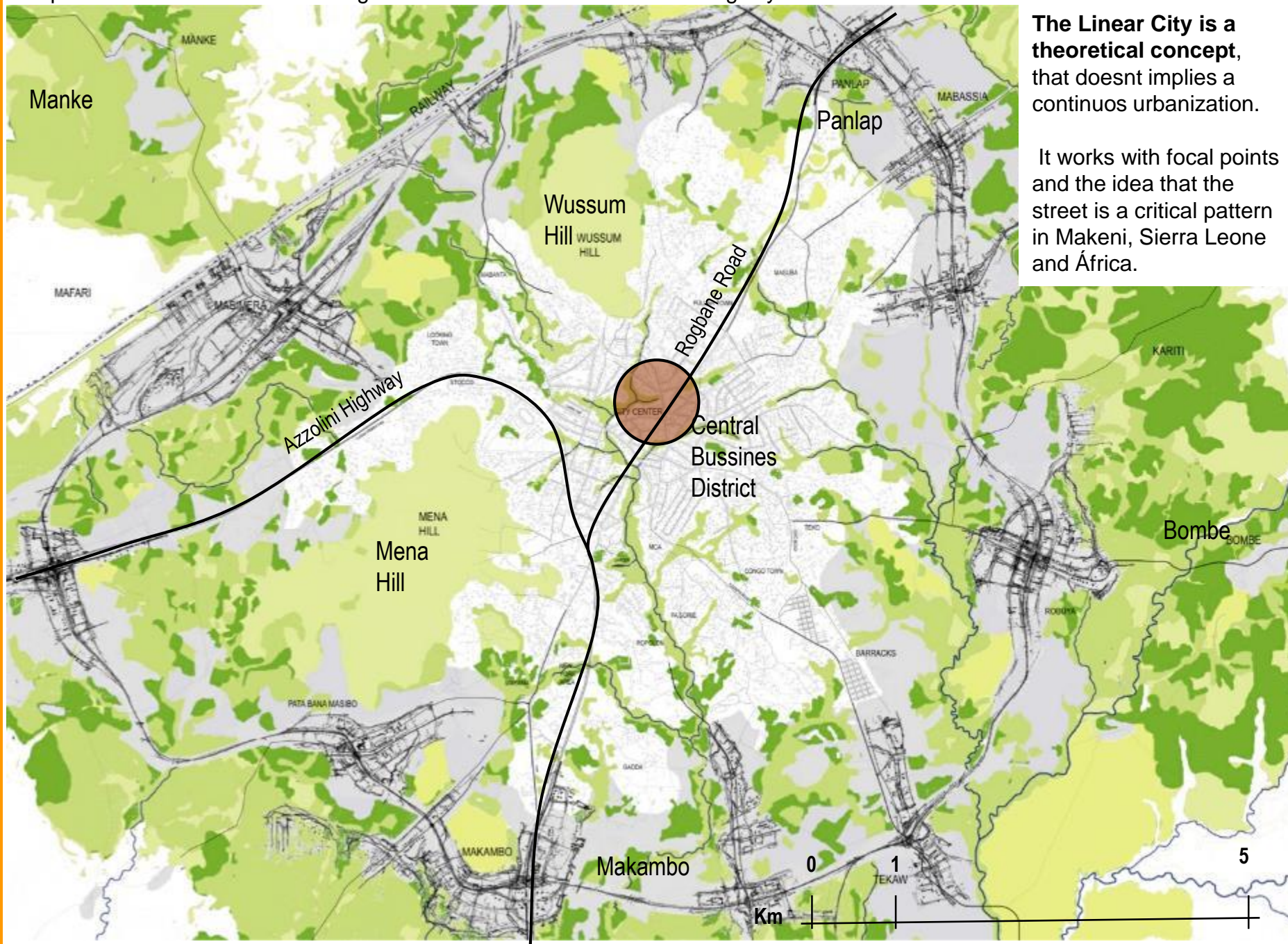


Madrid Linear City nowadays. A big avenue with many trees and vegetation, provides enough width for vehicles, but also generous public spaces for pedestrian and urban activities (market, retail, ...).

At the beginning, the project was designed with single family housing with different plot dimensions. Later, multistory buildings were allowed and the urban fabric is mixed with a good urban diversity.



THE LINEAR CITY OF MAKENI. New communities, ring road, limit the urban expansion, joint the existing urban fabric. As a comprehensive framework for linking the new urban areas and the existing city. **A vision for Makeni in 2030**

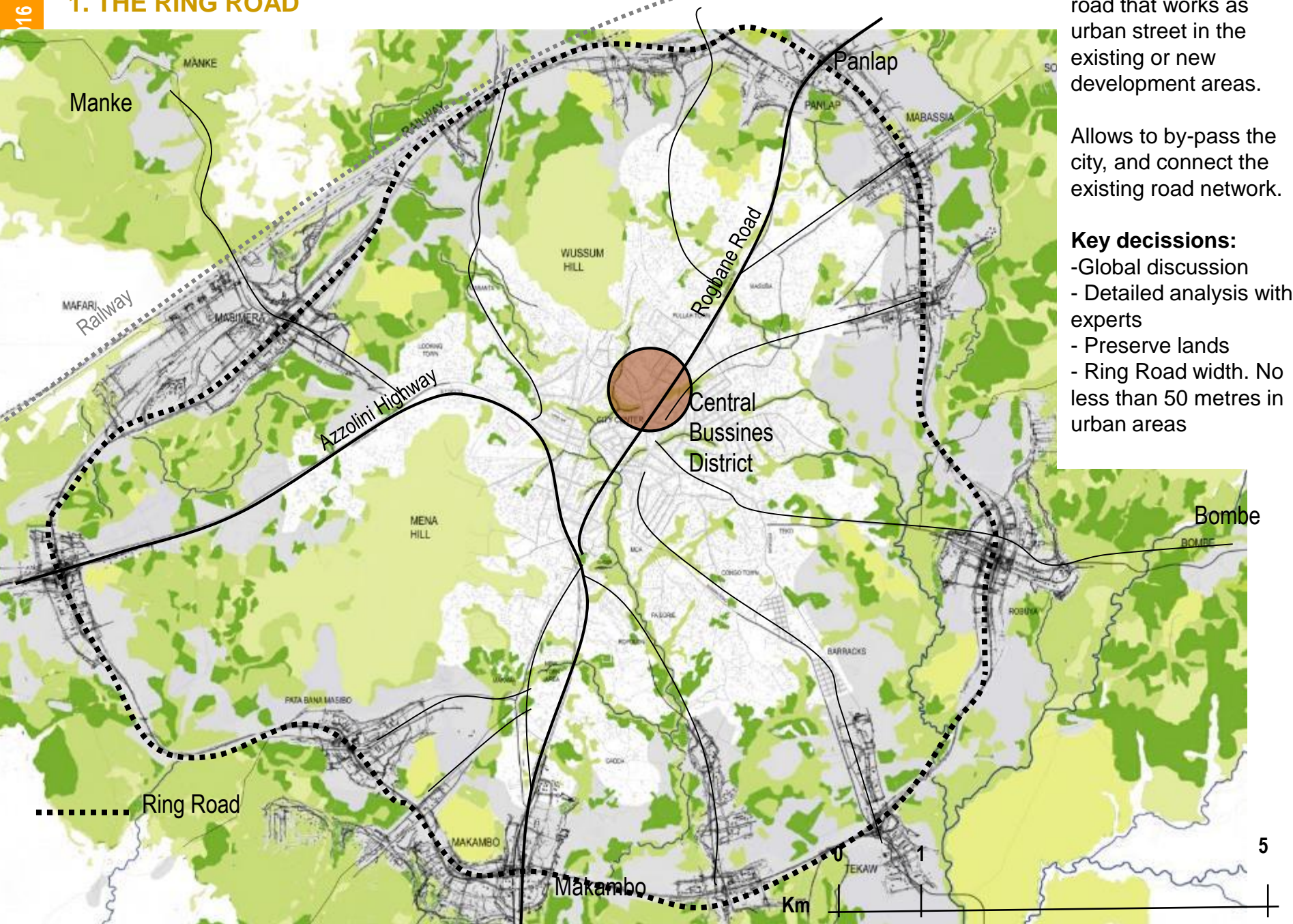


The Linear City is a theoretical concept, that doesnt implies a continuos urbanization.

It works with focal points and the idea that the street is a critical pattern in Makeni, Sierra Leone and África.

THE LINEAR CITY OF MAKENI. MAIN ELEMENTS

1. THE RING ROAD



THE LINEAR CITY OF MAKENI. MAIN ELEMENTS

2. NEW SUSTAINABLE COMMUNITIES



THE LINEAR CITY OF MAKENI. MAIN ELEMENTS

2. NEW SUSTAINABLE COMMUNITIES

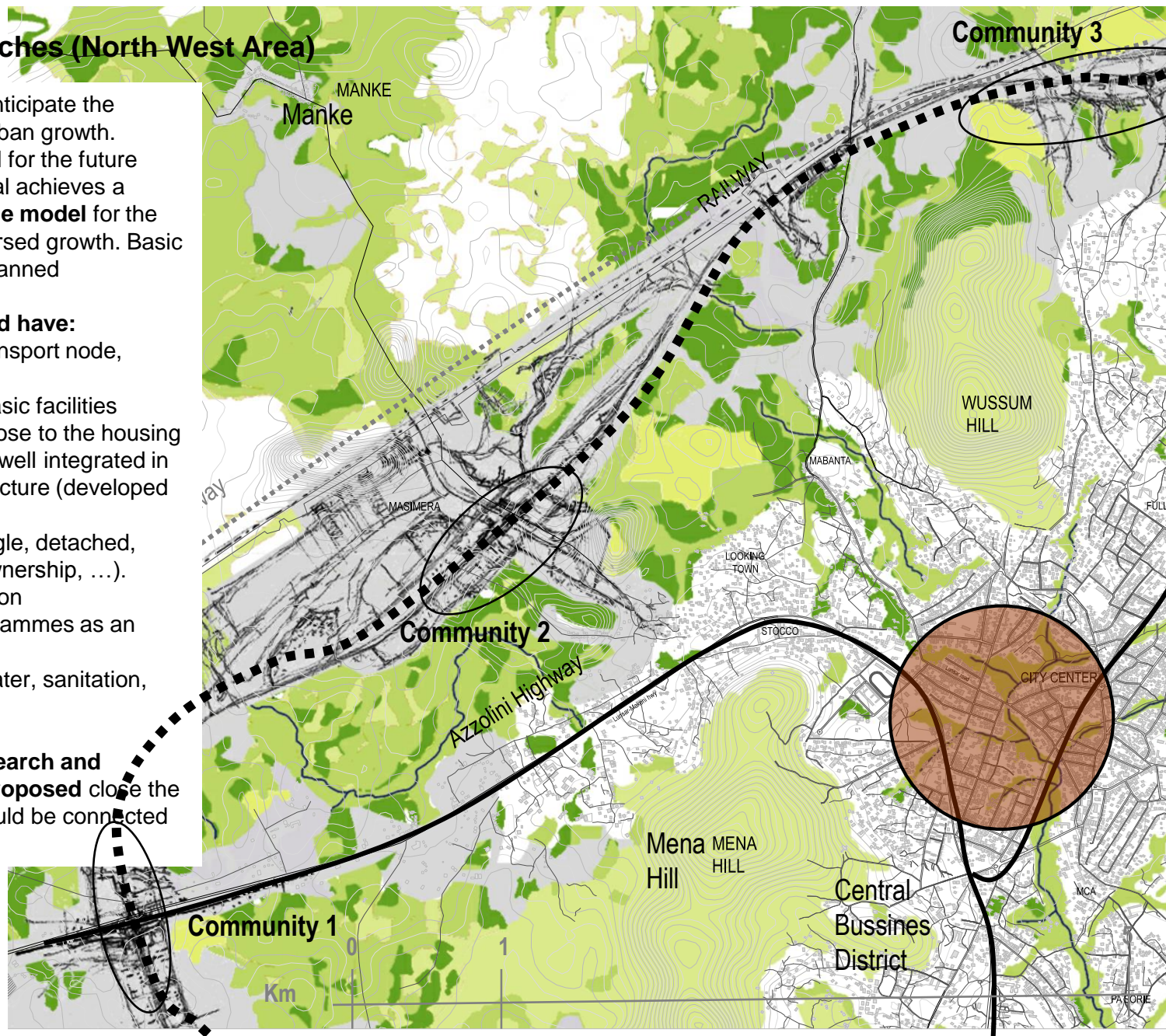
First design approaches (North West Area)

Is considered critical to anticipate the challenges of the rapid urban growth. **Preserve land is needed** for the future Makeni City. This proposal achieves a **compact and sustainable model** for the future, avoiding the dispersed growth. Basic infrastructures must be planned

Each communitie should have:

- Central area (Market, transport node, activity,...)
- Health and education basic facilities
- Acces to employment close to the housing
- Green and public areas well integrated in the global Green Infrastructure (developed after)
- Different typologies (single, detached, multistory, for rent and ownership, ...).
- Well public-private relation
- Sites and services programmes as an option
- Basic infrastructures (water, sanitation, energy)

An area for logistic, research and industrial activities is proposed close the railway. Future station could be connected (Long Term)



Ring Road

THE LINEAR CITY OF MAKENI. MAIN ELEMENTS

2. NEW SUSTAINABLE COMMUNITIES

First design approaches (East Area)

In this area between the road to Bombe and Panlap, 3 or 4 new communities could be planned. The connection with the existing road network is critical, and the new urban communities should promote the growth along streets.

Here, the ring road is a very clear limit for the future growth. In parallel, a series of swamps works as the beginning of a Green Belt, as will be explained later.



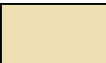

THE LINEAR CITY OF MAKENI. MAIN ELEMENTS

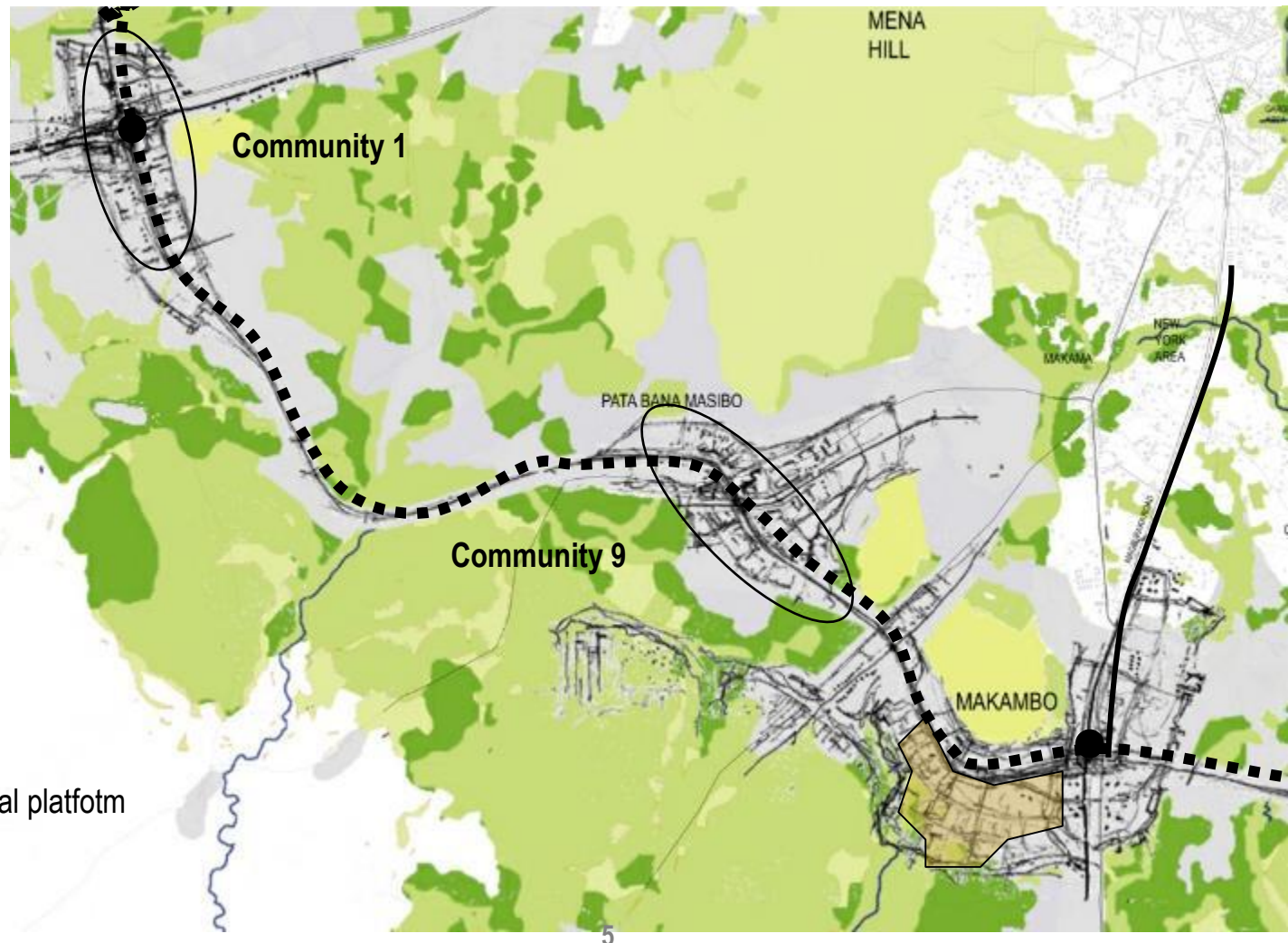
2. NEW SUSTAINABLE COMMUNITIES

First design approaches (South West Area)

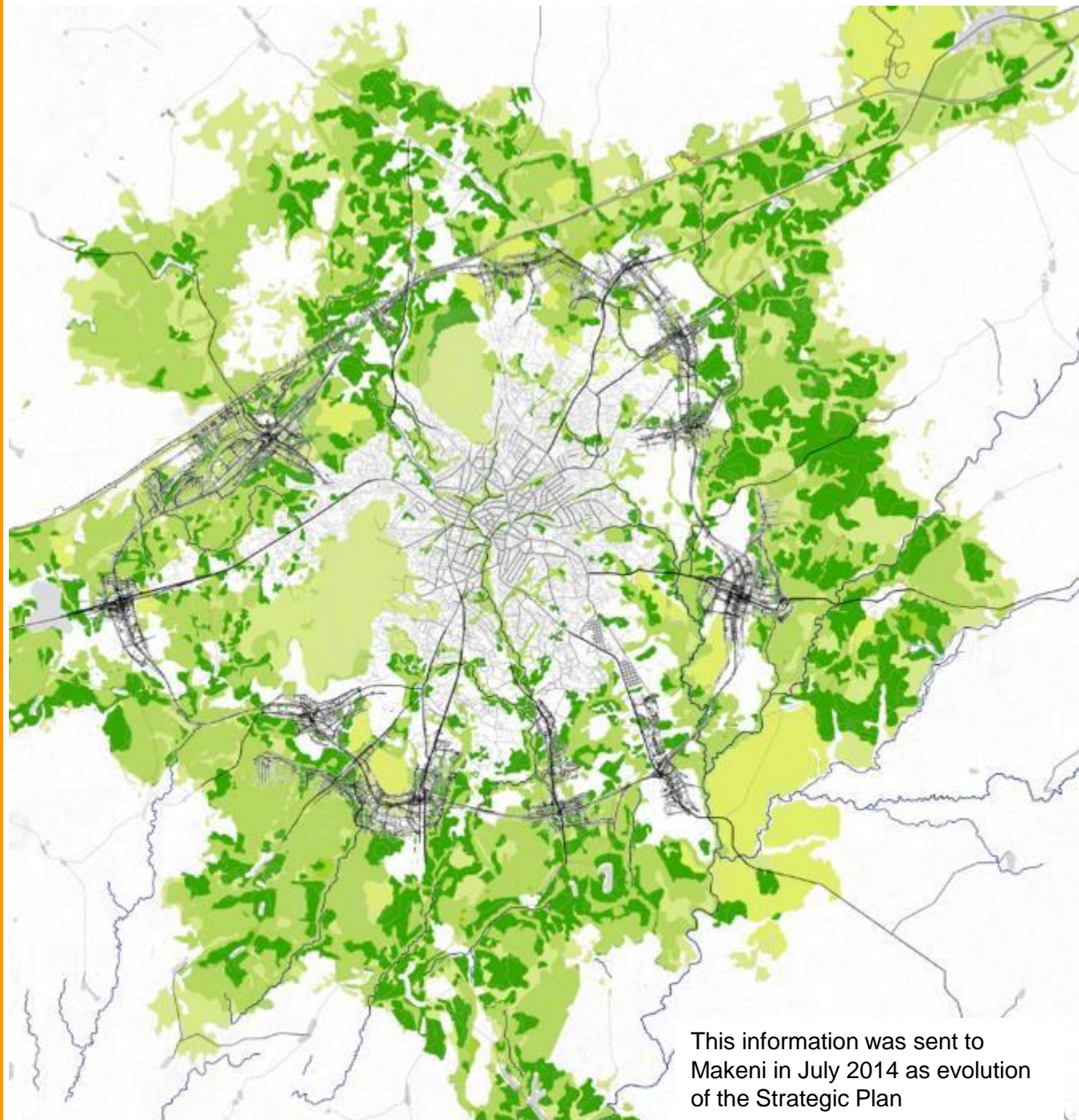
In this area, the Community 1 could work as a very important node. Transport, storage, market, ... are in a very good location to promote employment for the population of the Community and around.

A proposed area for logistic, intermodal platform, other activities is proposed close Makambo and Azzolini Highway (**Medium Term**)

-  Logistic, intermodal platform
-  Ring Road



2. THE GREEN INFRASTRUCTURE



1. The **GREEN INFRASTRUCTURE** is composed of:

- Productive landscapes
- Forest
- Natural Open spaces
- Inaptitude Landscape

2. The swamps belong to the natural and public space network along with the green ring, hills, squares, parks, natural and agricultural spaces, ...

ACTIONS:

SHORT TERM

- 1 Delimit vulnerable areas.
- 2 Define the most productive agricultural areas.
- 3 Define preserve natural areas.
- 4 **Reserve of land for public use**
(Participative approach. Coordination with the city)

MID TERM

- 1 Identify the continuities and discontinuities between the swamps and Mena Hill and Wussum Hill.
- 2 Identify the **natural and public space network**, squares and sport and recreational spaces.
- 3 Prioritize **agricultural activities** in the productive areas of the Green Belt (agricultural cooperatives, nurseries, farms, roads and routes, reuse existing elements, storage areas.....). **Linked to agricultural and natural areas.**
- 4 **Reserve of land for public use**
(Participative approach. Coordination with the city)

LONG TERM

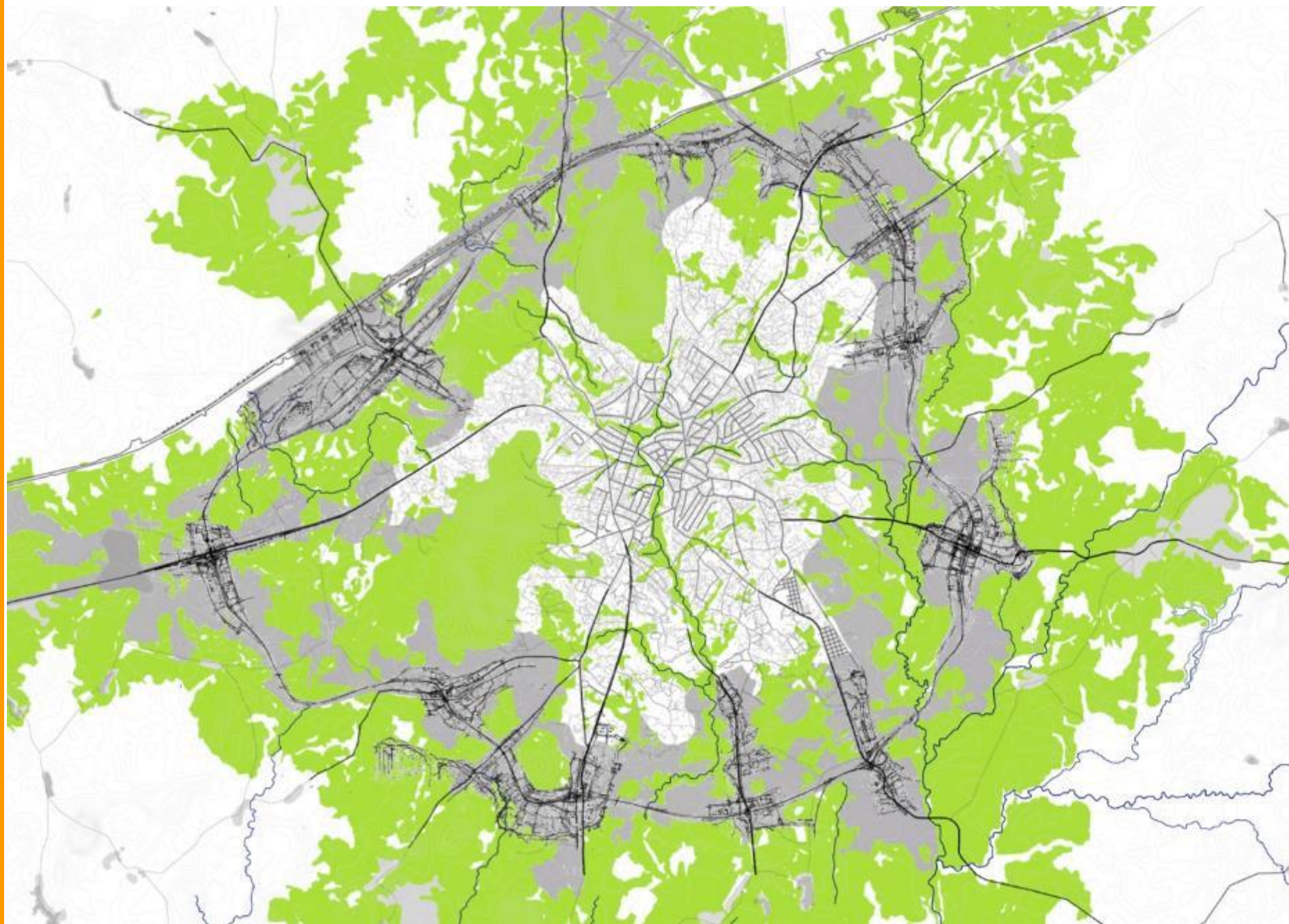
1. Implement **land reserved for public use.**
2. Implement **agricultural activities** in the productive areas of the green belt.

This information was sent to Makeni in July 2014 as evolution of the Strategic Plan

THE GREEN INFRASTRUCTURE.

1. SWAMPS NETWORK

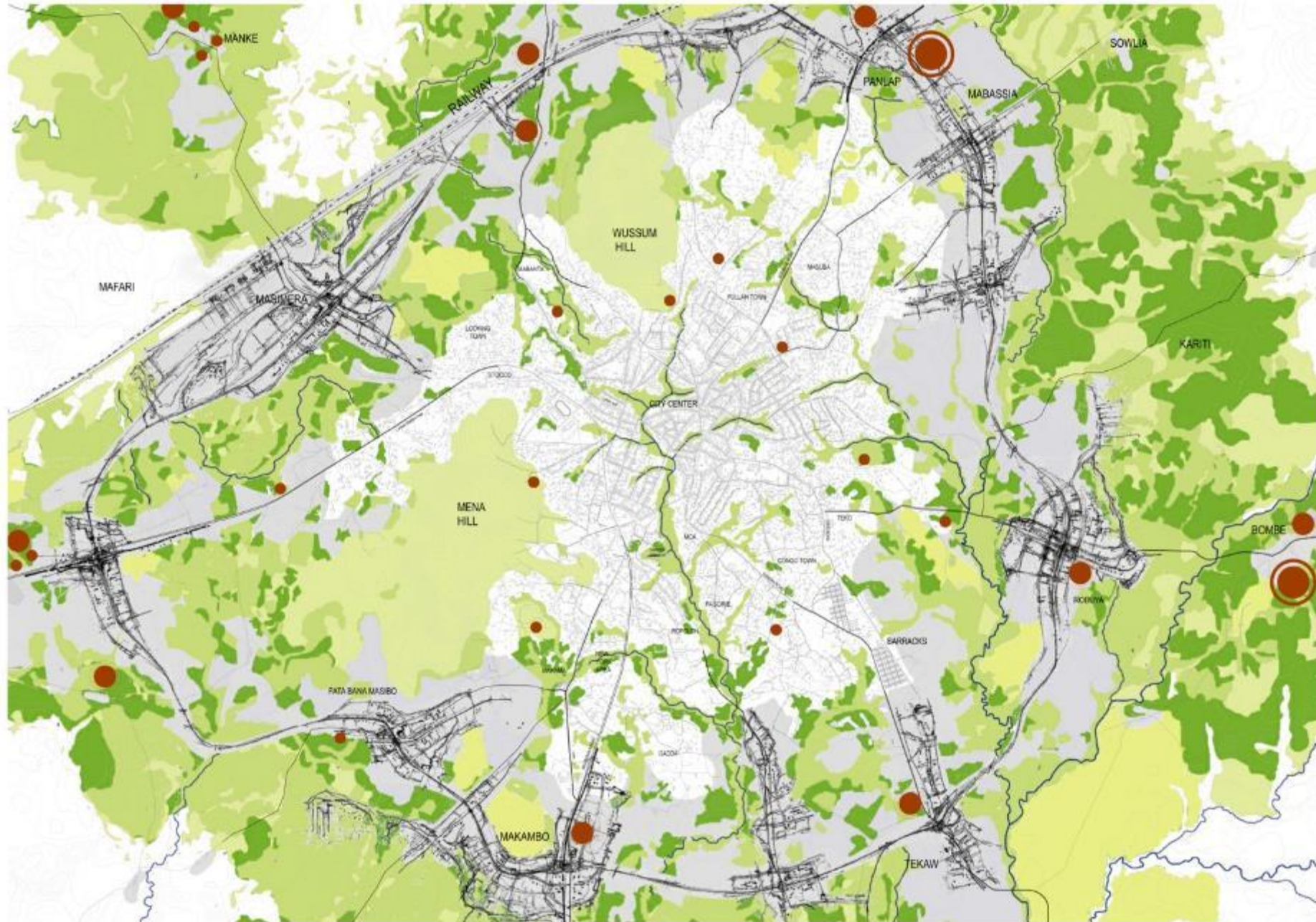
The existing swamps, configures a **public network** that could play the role of joining the diferent green spaces of the landscape.



THE GREEN INFRASTRUCTURE.

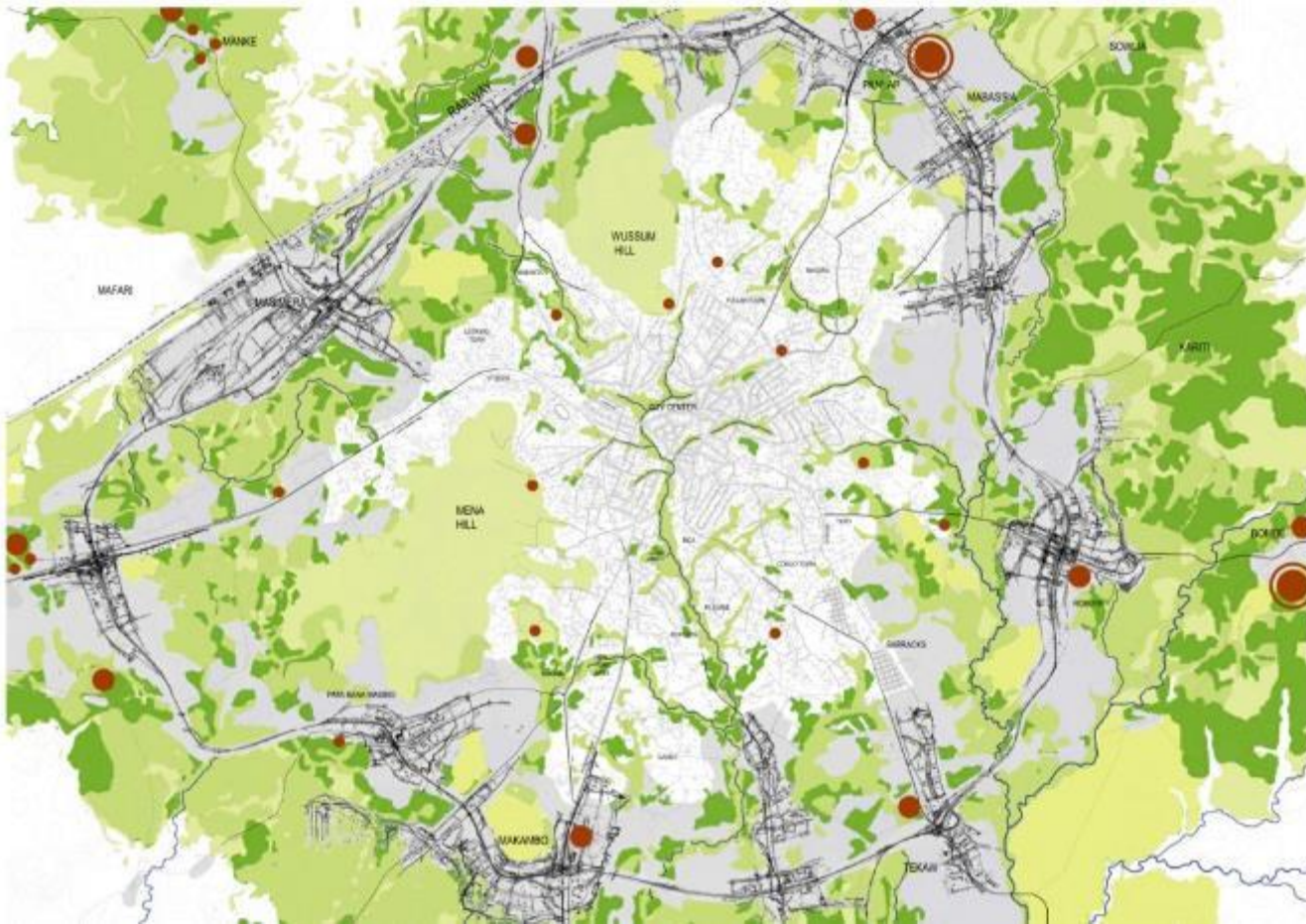
2. THE GREEN BELT

Following the idea of a compact and sustainable city, and according to the global framework, is proposed a Green Belt outside the ring road.



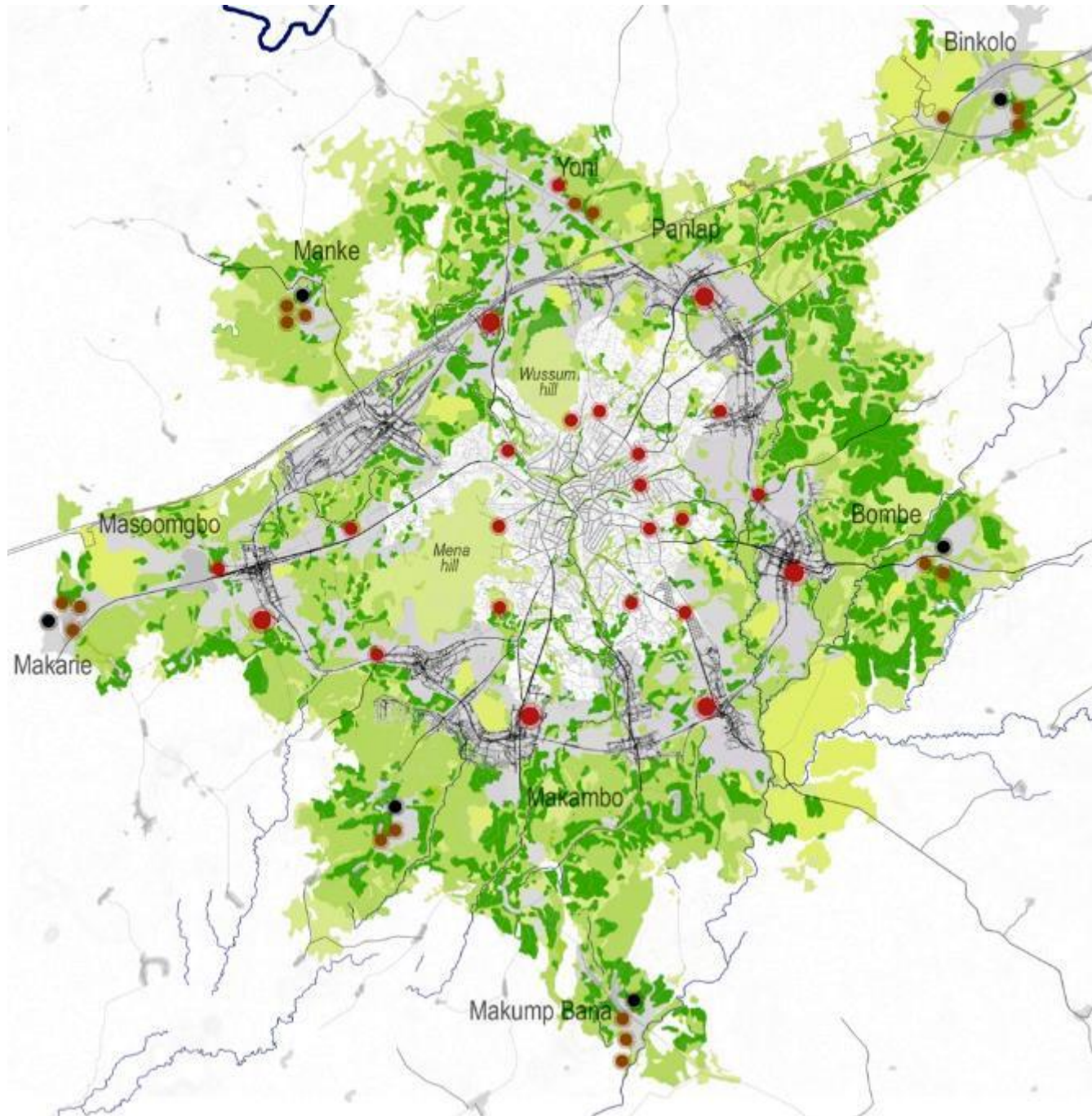
2. THE GREEN BELT

1. Natural area, connected with the urban swamps, parks, and public network
2. Agricultural areas for higher value added, greenhouses, research and forming professionals, cooperatives, ..
3. Defining areas for reforestation
4. Sports, leisure, paths, ...
5. Infrastructures and territorial facilities. Sustainable sanitation systems could be integrated inside the Green Belt, serving the new communities and the whole city. Also, water treatments plants and others
6. Storage areas close to the urban markets



- Global discussion
- Rules and legal framework
- Defining limits and preserve land
- Priority projects to develop

3. NEW FACILITIES. MAKENI and the 7 miles



1. **NEW FACILITIES**
-  **SHORT TERM**
 -  **MID TERM**
 -  **LONG TERM**

ACTIONS:

SHORT TERM

- 1 Locate new facilities and utilities in **existing neighborhoods** (Health Centre, Market...)
- 2 Locate new facilities and utilities in **urban areas of extension** (Health Centre, Market...)
- 3 New facilities and utilities (education, Health, police...) at **main satellites town**
- 4 **Landfill** between Makambo and Makump-Bana
- 5 New **cemetery** between Panlap and Binkolo.
- 6 **Industrial Areas** at Bombe.
7. **Water treatment plant** in South Makeni.

MID TERM

- 1 **Intermodal transportation hub** outside town and near the railroad.
- 2 **Multi – Purpose Youth Centre**. ¿where?
- 3 **New university** at Makump-Bana

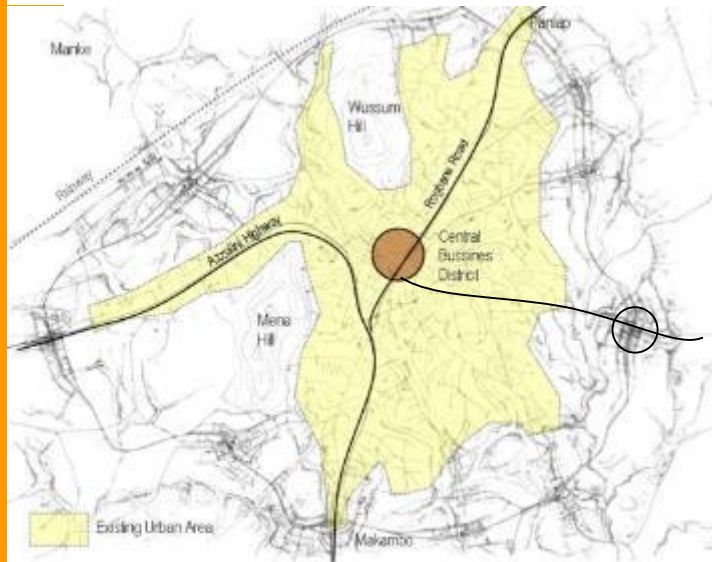
LONG TERM

- 1 **Industrial northern areas** near the railroad.
- 2 **Health centre** at Pate-Bana Marank.
- 3 **Mini stadium**, between Panlap y Binkolo.
- 4 **Funeral Home**. ¿where?

4. PHASED IMPLEMENTATION. Progressive urbanism to develop step by step, under the global framework decided. The proposals allows different options for the implementation in time. Some examples are shown below:

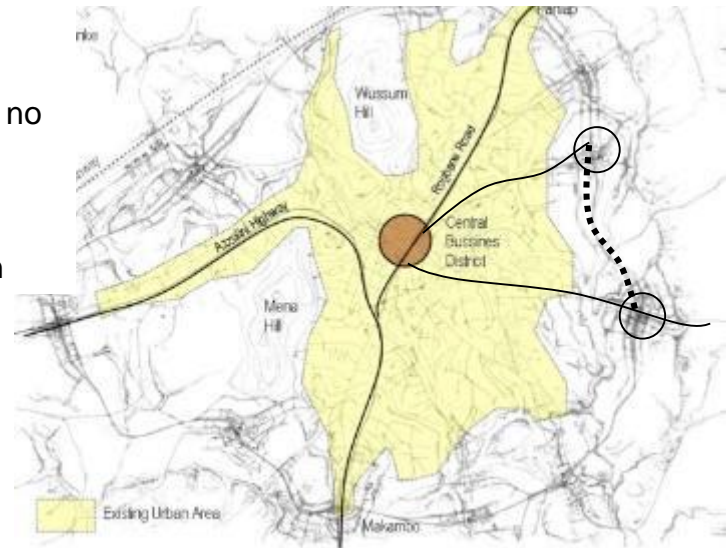
Y 2016

Phase 1. New community in the road to Bombe

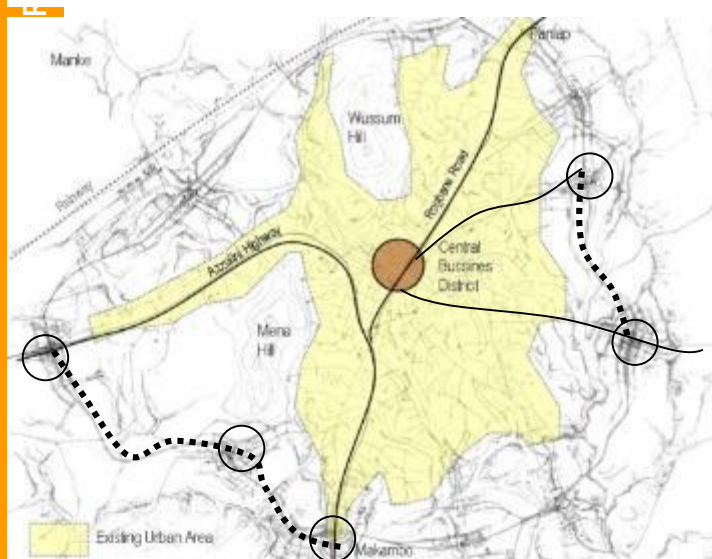


The phased implementation allows start little by little, with no disturbing the global future framework, and with a coherent intermediate operation

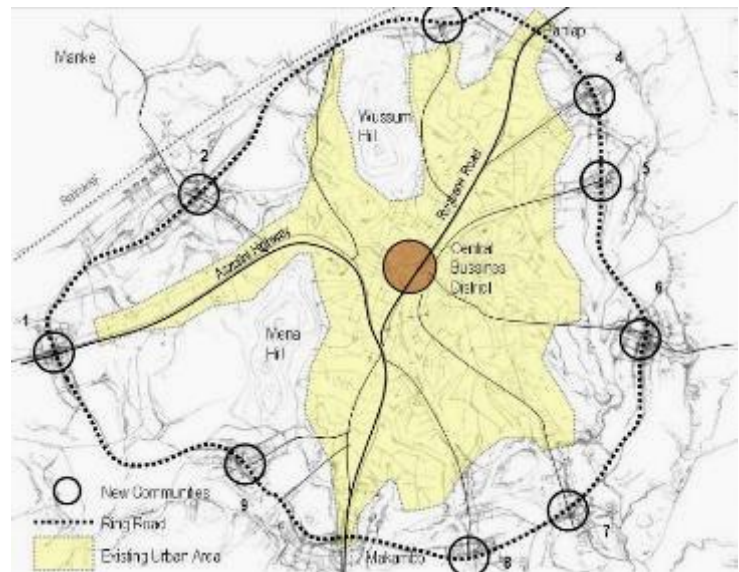
Phase 2. New community at the north and first part of the ring road



Phase 3. New communities, ring road by sections, and connections with the existing city



Phase 4. Linear city completed



5. AN INNOVATIVE MANAGEMENT PLANNING. Strong coordination among stakeholders and with regional and national authorities, strategic and participatory approach, discussion about global framework and priorities, preserving the land for roads and public facilities, avoid dispersed growth, defining some general rules, search for support to implement actions....

Coordination among stakeholders

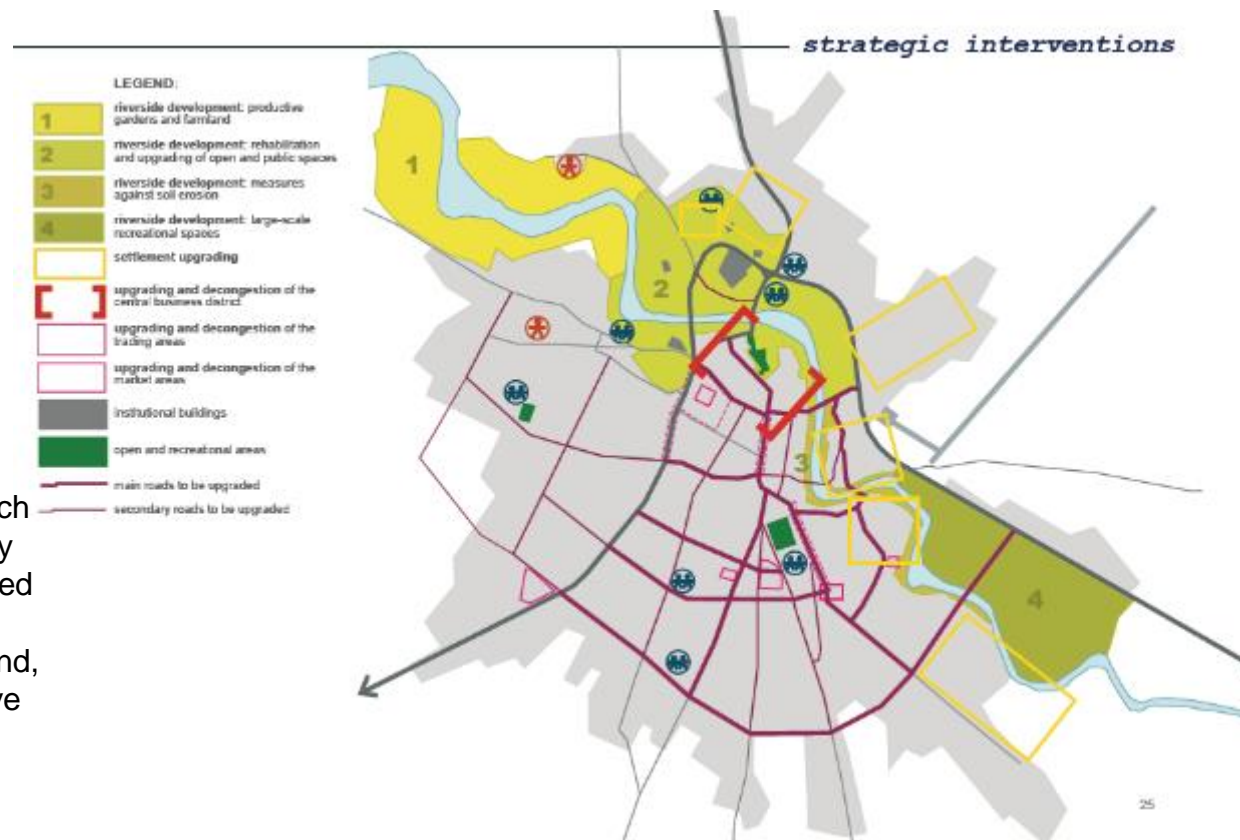
As a result of the lack in planning normative, there is a chance strengthening the coordination among local actors. With the regional and national institutions and the technical support is possible to achieve the main goals. In this process, **is proposed strongly a new Technical Workshop, for the discussion about planning Makeni**, working together in the previous steps proposed, involving the main stakeholders and deepening in the knowledge of the local reality in all levels. **The coordination with the Paramount Chief, local chiefs, owners of land is needed in all the steps.**

Strategic approach

An strategic approach, against the inability of the conventional urban planning to address the challenges of fast-growing cities. **Strategic planning focuses on ideas, is flexible, agile, able to adapt to different situations.** Gives priority to critical actions and the projects likely to have a greater positive impact on the territory.

References

As a basis, the UN-Habitat reports, in which strategic plans are developed in cities very similar to Makeni, and which are considered valid references on which they already started to work. Masaka, Burao, Somaliland, are some examples of very comprehensive reports



1. INFORMAL CITIES IN DEVELOPING COUNTRIES. MAIN RISKS AND NEW URBAN PLANNING APPROACHES

2. MAKENI. CURRENT URBAN CONTEXT

2.1. Global Framework

2.2. Urban Key Issues

3. TOWARDS A SUSTAINABLE MAKENI. PREVIOUS STEPS

4. NEW PROPOSALS FOR MAKENI CITY

5. PROPOSED NEXT STEPS

PROPOSED NEXT STEPS

The main next steps proposed in the planning process are:

1. ORGANIZE A **TECHNICAL WORKSHOP WITH THE MAIN STAKEHOLDERS FOR THE GLOBAL DISCUSSION**. Work in the previous steps and on all the documentation sent. **Celebrated in January 2016 in Makeni. See information below**
2. GET A COMPREHENSIVE PLANNING FRAMEWORK. Based on the previous steps and the Workshop proposed
3. IDENTIFY PRIORITY PROJECTS-ACTIONS-PROPOSALS-URBAN OPERATIONS... Three levels of timeline: Short term, Medium term and long term
4. DEVELOPING SOME TECHNICAL ANALYSIS. Cadastre, vulnerability (flooding, landslides,...), topography, land uses, load capacity,...
5. LINK THE LEGAL FRAMEWORK WITH THE NATIONAL LEVEL (LAND POLICY REVISION). If is possible in the short term
6. IMPLEMENT PRIORITY SHORT TERM PROJECTS. Linked with the Comprehensive planning framework. Plan in time, detailed analysis, search for funding, organize actors,...
7. PRESERVE LAND FOR THE STRUCTURAL PROPOSALS (MEDIUM AND LONG TERM). The ones that are critical for the future operation of the city. Main roads, main facilities, main activity areas, natural areas to preserve, productive agricultural lands, new communities,...
8. ORGANIZE SEQUENTIAL PARTICIPATORY WORKSHOPS FOR THE PEOPLE OF MAKENI TO BE INVOLVED. The participation must be a constant issue in the process.
9. MONITORING AND EVALUATION. To get a constant follow up

Coordination:

Makeni City Council

Unimak



CEU
Universidad
San Pablo



Associates:



Ministry of Planning and Economic Development



Ministry of Housing and Urban Development

DUyOT



THIRD WORKSHOP. TOWARDS IMPLEMENTING ACTIONS . JANUARY 2016

- 1. APPROACH.** Workshop with theoretical sessions (TS), practices (PS) and fieldwork (FW), for working about planning Makeni in **two levels: City Scale and Neighbourhood Scale.**
- 2. GOALS.** Raising awareness, disseminating, involving stakeholders, training and working together with the main urban actors of Makeni, in decision-making for the development of the Strategic Plan of Makeni. **Discussion about the new proposals presented by CEU San Pablo University**
- 3. PARTICIPANTS.** Mainly technicians and decision makers in Makeni: Landowners, Staff and students of the University of Makeni, Makeni City Council, Bombali District, Northern Province, Ministry of Lands, Country Planning and Environment, other administrative areas, SALWACO (water and sanitation in SL), roads authorities, Paramount Chief and other relevant people in the city management.
- 4. SCHEDULE.** 3 alternate days: 25th, 27th and 29th January 2016.



The model of Makeni, made by CEU University

Proposed Programme for the 2016 January Workshop “Towards a Sustainable Makeni”

Monday, January 25th:

Morning

- (TS) Planning and Context. The Strategic Plan of Makeni. *Professor of architecture (CEU Madrid) and Unimak Professor*
- (TS) Makeni. City Management, Development Plan 2013-2015 and main projects. *Makeni City Council Staff, Paramount Chief, Unimak Professor*
- (PS) Joint analysis of the existing information about Makeni city and the planning process. Previous steps in planning, Identify main areas, existing facilities not located on map, City Council proposals, study the existing cartography, identify flooding areas, detect Priority Areas (more disadvantaged), etc.

Afternoon

- (FW) Joint field visit to the key areas identified in the morning

Wednesday, January 27th:

Morning

- (PS) Obtaining a **draft Strategic Plan - City Scale**- identifying the Priority Actions and Areas (based in previous steps). Cadastre for Makeni and Map of vulnerable areas (Flooding) as possible priorities for the process
- (PS) Obtaining a Participation Questionnaire (on draft previously made). For involving the population in the process
- (PS) Identify a **Priority Expansion Area** for working in detail (Neighbourhood Scale)

Afternoon

- (FW) Joint field visit to the Priority Expansion Area identified, with owners of land and main people involved

Friday, January 29th:

Morning

- (TS) The Priority Expansion Area. Context and Background. Management of Land. Actors involved. Main challenges. *Local chief, local inhabitants, owners of land, Unimak Professor, MCC*
- (TS) Planning the Urban Expansion. *Professor of architecture (CEU Madrid)*
- (TS) Starting a cadastre and a map of vulnerable land in the Priority Expansion Area. Explain the works done in Ropolon (July 2013). *Professor of architecture (CEU Madrid) and Professor Unimak*
- (PS) Obtaining a **draft Action Plan- Neighbourhood Scale**, identifying the Priority Actions

Afternoon

- (FW) Public Meeting for Workshop conclusions and next steps

Main Goals of the Workshop

General Goals

- 1. Giving continuity to the participatory planning process**
- 2. Update priorities and deepen the needs of the city and stakeholders**
- 3. Knowing the proposals and actions of the Makeni City Council**
- 4. Check and monitor the various proposals developed under the Strategic Plan**
- 5. Deepen aspects of urban management and implementation**

Specific Goals

- 1. Obtaining a consensus draft for a global urban model 10-20 years**
- 2. Obtaining a consensus draft for a short term action (urban expansion, priority area,)**
- 3. Defining some simple rules between Owners of Land and the Makeni city Council, for the better management of land and for improving the development and the urban growth**
- 4. Signing a consensus agreement of the global workshop conclusions and on new steps to take**

Specific Goals

3. Defining some simple rules between Owners of Land and the Makeni city Council, for the better management of land and for improving the development and the urban growth

In a complex context with no legal planning framework and the overlapping of the formal and customary law, it is possible to arrange some easy rules that could be a way for promoting urban development in a proper manner

Possible rules

Structural components of the Global Model

1. **Reserve land.** For the medium-long term, is considered critical to reserve the lands for territorial elements of the Global Model (roads, facilities, nature, vulnerable,...)
2. **Zoning of urban development. Defining the expansion areas.** Not allowed outside

Priority actions and expansion areas

3. **Basic urban plan** to be followed in the expansion areas. School, health centre, public space, market, social centres, building rules, employment opportunities, ... should be included
4. **Transfer of land ownership to the municipality for equipment and / or social housing (20% in each area)**
5. **Gradual implementation of road shared owners - City Hall**
6. **Definition of certain parameters for the building.** For example, some reserve land for collective housing buildings or row crecederas approach buildings, including condominiums, housing workshops and associated trade, limit heights, maximum depth, density,
7. **Forecast sites-service programs**

Others.....



Some pictures of the third workshop in January 2016 (first and second day)

Working in the model of Makeni, made by CEU University



End of the session in Unimak



Some pictures of the third workshop in January 2016
(Afternoon second day)



Visiting the sludge treatment plant at Makump Bana



TOWARDS A STRATEGIC

Some pictures of the third workshop in January 2016
(Morning third day)

Working sesión with Landowners and other civil society groups

Specific Goals

4. Signing a consensus agreement of the global workshop conclusions and on new steps to take

It was proposed that the last day of the workshop, on Friday 29 January, findings and critical issues that have come out of the workshop are written. In the light of the views expressed by the various participants and suggested previous steps, representatives of institutions, groups and communities can sign conclusions as support for the process. **This proposal was made and the final document (similar than this one, was signed by the main stakeholders)**

Signature on behalf of

Signature on behalf of

Signature on behalf of

Signature on behalf of

Signature on behalf of

Signature on behalf of

The following key participants of the Urban Planning Workshop “Towards a Sustainable Makeni”, celebrated in Makeni City (Sierra Leone), in January 2016, on behalf of their respective institutions, groups or communities, agree with the main conclusions obtained at the end of the workshop.

These conclusions are expressed in the previous pages

In Makeni, the ... of January 2016

Signature on behalf of the
Makeni City Council:

Signature on behalf of the
University of Makeni:

Signature on behalf of the
CEU San Pablo University:

Makeni City Council

Unimak



CONCLUSIONS AND EVALUATION

Mainly, the findings are extremely positive when it refers to what has been done from the CEU San Pablo University in collaboration with Unimak and with the Makeni City Council in the urban planning process for Makeni. From 2013 until now, have happened several advances that give consistency to the process, from the identification of priorities, the involvement of stakeholders, the provision of information (maps, reports, models, ...) and the formulation of proposals.

This last workshop of three days (January 2016) has been a major breakthrough, with the participation of the main local and regional technical areas and decision-making agents.

The confidence generated by the continuity of the process shows the importance that the mayor of Makeni gives the planning and the cooperation between CEU own, Unimak and Town Hall.

Positive aspects. Strengths

- Political and institutional support from the mayor of Makeni and the City Council in general
- The continuity of the process that began in 2013 generating mutual trust
- The role of the new Chief Administrator as a key driver of the initiatives
- Awareness responsible citizens and Makeni of urban problems they experience and the importance of planning and anticipate challenges.
- The documentation that has been provided from the CEU as basis for the continuation of the process (document signed, plans current situation and proposed model, ...)
- The Strategic Plan as a long-term vision 10-20 years, as base to fit the proposals of future short-term Development Plan (2016-2018)
- Understanding the proposals and, in particular, the ring road, as critical to implementing action. Within a comprehensive strategy to consider nature, productivity, vulnerability, landscape, energy, etc. the truth is that the item of infrastructure which is the ring, can be used to boost the decision-making in a coherent joint global system.
- It is key the integration of the ring road within the overall framework for the whole Makeni in a multidisciplinary approach. Is also key to strengthen the streets of the city center for linking the ring road, emphasizing intersections as opportunities for the development of new sustainable communities, markets, employment and equipment in the new communities, crop storage opportunities near the ring road and close to the new markets, ...
- Acceptance that reserving land now (inmediatly) is critical. With the strategic plan proposals there is a clear framework for defining the areas to preserve
- The appropriation of the proposals by the council, which expressly outlined publicly that this was "their" own Plan.
- The will of the City Council to acquire land in order to control urban development
- The document signed as a potential dynamic element of the process, allowing spread the proposals and agreed actions.
- The close relationship of the various local actors and their willingness to coordinate. It is essential to maintain and strengthen the links between MCC and civil society through the representatives of the wards, to adress the short-term needs
- The new framework (not legal, but in advance) which is the reform of the land policy in Sierra Leone (Ministry of Lands with support from UNDP)
- The role of the architect Clara Abella, ex - student of CEU and living in Makeni until September 2016. The bond facing the continuity of the project is critical
- Support for the project of the University CEU San Pablo. For the coming months, representatives of Unimak and Makeni City Council are invited to Madrid to pursue urban reflections and gather support.
- Partners in Madrid (ICHAB, UPM, ...)
- The summit of Quito Habitat III as a key milestone to present the project and seek support
- Students who participated in the workshop did understand the plans and interact with the model. It is important to highlight the potential of young people in the process. In this sense, it is proposed that the process of urban planning Makeni can integrate training. Training in urban planning and other studies (administrative law, engineering, architecture, landscape, agriculture, ...) as an opportunity

Negative aspects. Weakness

- The lack of involvement of the University of Makeni.
- The enormous difficulties for understanding in Makeni the technical and graphical information
- The complexity of overlapping laws (both formal and customary)
- The technical difficulty for the MCC for leading the process (lack of trained people in urban planning)
- The weight of tradition and the role of the Landowners.
- Difficulties in the coordination among different institutions (Ministry of Lands, of Agriculture, Roads, Salvaco, MCC...)
- Excessive urgency for the implementation of actions. In this regard, the ring road, it seems that could be started without taking a sufficient degree of global reflection. For example, the potential to Works as urban avenue in areas that could be new centers and communities. Thinking and designing deeply is important, to integrate residential areas, economic activity, environmental decisions,.... Also the need for further surveying, land use, flood and vulnerability, etc. On the other hand, this urgency is partly necessary because the pace of growth in the city
- The ring road should be understood as a catalyst for a new "territorial model" for the city of Makeni in 20 years, not as a disconnected action that does not integrate environment, productivity, vulnerability, new alternatives in areas of expansion, energy,
- The rapid urban growth
 - Lack of women at meetings
- Realistic schedule for the implementation of the various actions and funding limits should be established. This, in the short term, must appear integrated into the Development Plan 2016-18 Makeni
- The immediate needs of the existing city (short-term Development Plan 2016-18) should not be forgotten while longer range proposals (ring road and Strategic Plan) are being articulated.

Next steps

- The major actors in Makeni and SL must define the planning committee and position in the process, taking an active approach
- Planning of actions over time by the MCC. Link between overall framework of the Strategic Plan (10-20 years) and immediate actions in Makeni Development Plan (2016-18).
- Dissemination of the final document signed by local actors at the local and state level. Search for funding World Bank, UNDP, ...
- Development of technical information on the immediate actions identified. Feasibility studies, maps of neighborhoods, etc.
- Reserve immediately land in critical areas. Acquisition by the City Council. Search for funding for land purchase
- Application for urban projects to CEU. Supply sector proposals from Madrid
- Development of sectorial studies; studies of flooding, land
- Definition of these immediate actions and prioritization of the critical ones. Search for funding.
- Workshop in Madrid with guests from Unimak and MCC. Set Date. Update actions, visits and preparation of Habitat III summit in Quito.
- Present the project to Habitat III (Quito, Ecuador)
- Implementation of initial actions (reserve land for the ring road areas, beginning at intersections communities...) of the strategic plan (medium-long term but reserving land in the short term)
- Implementation of actions in the short term (Makeni Development Plan 2016-18), according with the overall framework provided by the strategic plan

Project Coordinator:

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