



# Mapping of Public Spaces to Inform Master Plan Review for Secondary Cities in Rwanda

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The Global Green Growth Institute  
Jeongdong Building 19F  
21-15, Jeongdong-gil  
Jung-gu, Seoul, 100-784  
Republic of Korea

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# TABLE OF CONTENTS

Public Space in Rwanda's Planning Documents	5
Mapping Public Spaces for Rwanda's Secondary Cities	9
Huye Public Spaces	10
Muhanga Public Spaces	18
Musanze Public Spaces	27
Nyagatare Public Spaces	35
Rubavu Public Spaces	43
Rusizi Public Spaces	51
Initiatives by the Government of Rwanda and Stakeholders Addressing Public Spaces	59
Initiatives by the Government of Rwanda and Stakeholders Addressing Public Spaces	60
Piloting the Public Space Initiative in Nyagatare, Rwanda's Secondary City	60
Conclusion	62





“Public spaces can also provide basic services, enhance connectivity, boost economic activity, and raise property values while generating municipal revenues. Successful public spaces do not just happen; they require careful collaboration among local authorities, local inhabitants, and other actors”

Ban Ki-moon  
Global Green Growth Institute  
President of the Assembly/ Chair of the Council

The adoption by United Nations (UN) Member States of Agenda 2030 in September 2015 was a major milestone: for the first time there was clear recognition from the international community of the need to focus on sustainable urbanisation, with Sustainable Development Goal (SDG) 11, “make cities and human settlements inclusive, safe, resilient and sustainable”, dedicated to this aim. This included a specific provision on public space: “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”<sup>1</sup>. A number of targets under SDG 11, as well as other SDGs, are linked to functional, well planned and designed public spaces to ensure urban development responds to climate change and promotes safety, inclusivity, and public health. In 2016, countries across the world adopted the New Urban Agenda (NUA) during the UN Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador. Final text of the NUA has its emphasis on promoting safe, inclusive, accessible, green and quality public spaces, mentioned in nine paragraphs through the lens of urban sustainability or as stand-alone commitments<sup>2</sup>. The Government of Rwanda has taken positive steps to implement the New Urban Agenda (NUA) and achieve SDGs.

Rwanda, with its population of 12,600,000, growing 2.8% yearly, and significant investments in infrastructure and construction in its capital Kigali and six secondary cities, identified as economic poles of growth, aims to achieve a 35% urbanisation rate by 2024. Against this backdrop of rapid urban growth, public spaces are a key element in ensuring social cohesion and wellbeing in Rwanda, with wide-ranging benefits to security, public health, the environment, and others. They are something municipalities should be

investing in to ensure that these assets are not lost, and maximum benefits can be obtained. Public spaces should be urban assets, as important as any other. To address the lack of public spaces in its cities, the Ministry of Infrastructure, the Rwanda Housing Authority, local authorities, the Global Green Growth Institute, and other stakeholders, have committed to deliver a range of activities in this area. Their commitments include the mapping and the assessment of public spaces in six secondary cities, to be used as a baseline for the purpose of reporting on the Sustainable Development Goals public space indicators (11.7), but not just to report, it is an opportunity to actively shift public spaces into the forefront of urban and national planning. Assessment supports implementation of New Urban Agenda and further revision of the master plans of Rwanda's secondary cities. Rwanda's secondary cities are currently revising their master plans in response to the pressure of rapid urban growth in infrastructure and services. Technical assessment for 36 public spaces in Rwanda is included in this report.

The Ministry of Infrastructure, Rwanda Housing Authority, Global Green Growth Institute, and the University of Rwanda undertook the review of Rwanda's planning documents to support the development of a common and localised understanding of public space. In the Vision 2020 and Vision 2050 blueprints, an emphasis is placed on developing basic infrastructure in urban centres to enable the decongestion of agricultural zones, investment in job creation, and service provision to ensure a good quality of life. The latter anticipates that the proportion of Rwandans living in cities and towns will increase to 35% by 2024 and has as its main goal the

transformation of Rwanda's agriculture-based economy to industry and services. Following the 2nd Economic Development and Poverty Reduction Strategy 2013–2018 which focused on urbanisation and the promotion of six secondary cities as poles of economic growth, Rwanda initiated the 1st National Strategy for Transformation 2018–2024 as a first step to achieve its objective of becoming a low middle-income country by 2024, middle-income country by 2035, and high-income country by 2050<sup>3</sup>. Urbanisation is identified as one of the main ways to achieve this transformation in Rwanda. To implement the urban component of NST1, the Government of Rwanda, through the Ministry of Infrastructure, has elaborated the Urbanization and Rural Settlement Sector Strategic Plan 2018–2024. The Government of Rwanda also adopted the National Urbanization Policy (NUP) in December 2015: this emphasises urbanisation as an engine of economic development and sustainable growth<sup>4</sup>.

The main legislation regulating urbanisation is the Law Governing Urban Planning and Building in Rwanda of 2012 and its implementing orders of 2015<sup>5</sup>. Local physical development is regulated based on clear procedures. Master plans are guided by the National Land Use and Development Master Plan of 2010 which provides the general directives and principles for land use development including densification, mixed land use, mixed housing, green design, and participation. The National Land Use and Development Master Plan is currently under revision.

In Rwanda National Land Use Planning Guidelines “public spaces are all places publicly owned or of public use, accessible and enjoyable by all for free”<sup>6</sup>. The Rwanda National Land Use Planning Guidelines have also set guidelines for the promotion, protection and creation of public, open and green spaces in Rwanda. In Rwanda, most sidewalks, markets, and similar areas may be considered as public spaces freely accessible to all. Rwanda Building Code does not define public space uses specifically but refers to “recreational land use”. In the aforementioned document, recreational land use “includes public open space, greenways and green areas, recreation and sports facilities”<sup>7</sup>.

The National Land Policy stated that green spaces, as well as valleys, would be protected, and suggests that the creation

of parks and protection of existing green areas in urban zones could eventually be transformed into accessible open public spaces<sup>8</sup>. The document, in conformity with the Urban Planning Code (UPC), states that small neighbourhood parks should provide access to basic public space functions. The UPC serves as the basis for the sustainable development and management of land use for human settlements in Rwanda: for instance, it recommends that at least 5% of urban residential areas should be allocated to public spaces and facilities and provides recommended standards on the widths of sidewalks when designing intra-urban roads<sup>9</sup>.

Article 46 of the Organic Law no. 04/2005 of 08/04/2005, determining the modalities of protection, conservation, and promotion of the environment in Rwanda, calls for the government and citizens to “establish, maintain, and manage parklands and green spaces”. Ministerial Order no. 04/Cab.M/015 of 18/05/2015, determining urban planning and building regulations in Rwanda in articles 3, 5 and 14 calls for “quality public space and greening” in urban planning. The Order also determines various public space typologies: these are numerous and include public parks, communal gardens, public spaces associated with public buildings and others, and are aimed to be evenly distributed throughout urban residential areas, sport related spaces, and others.

Another planning document is the Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development. Designed to support Rwanda's development into a climate-resilient, low-carbon economy by 2050, the strategy suggests favouring the creation of high-density, walkable cities to avoid excessive sprawl and long commuting times. The strategy also recommends corridors for pedestrians and cyclists, and green public spaces to improve the population's quality of life. The national strategy also calls for urban areas that are attractive with trees, parks, and public spaces to promote low-carbon transport, improve quality of life, and reduce the risk of flooding<sup>10</sup>.

As a layout guidance for Rwanda's 30 districts to achieve their development vision and objectives, Vision 2020 and Vision 2050, District Development Strategies (DDS) emphasize strategic interventions to implement the current NST1. DDSs were the result of a year-long

consultation process reviewing what remained from the 2013–2018 District Development Plans and developing new strategic interventions. While for 24 Rwandan districts the Ministry of Local Government (MINALOC) hired consultants to facilitate discussions and draft strategies, in Rwanda's six secondary cities, Global Green Growth Institute seconded its technical district assistants to facilitate discussions. During the facilitation process with stakeholders, public spaces were identified as one of a number of important socio-economic public assets.

Review of planning documents shows that different terms, though they do not have the same meaning, are used interchangeably in different governmental publications to mean “public spaces” that might result in an uneven interpretation of what constitutes public spaces and could impede the delivery of such services. Laws and regulations need to be reviewed to create an enabling regulatory environment to create, revitalise, manage, and maintain public space, including participatory processes to define their use and manage access to public spaces<sup>11</sup>.

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# Mapping Public Spaces for Rwanda's Secondary Cities

The Ministry of Infrastructure, Rwanda Housing Authority, local authorities, the Global Green Growth Institute, and other stakeholders have committed to deliver a range of activities on public spaces including the mapping and the assessment of public spaces in six secondary cities. Such mapping and the assessment of 36 public spaces in Rwanda is done after city wide surveys and would support the further revision of the master plans of Rwanda's secondary cities by informing revision process of master plans with technical analysis of public spaces and their possible (better) use. Mapped spaces are in most cases belonging to the government, and in some cases privately owned, where recommendations on private sector investments are made in the assessment. Rwanda's secondary cities are currently revising their master plans in response to the pressure of rapid urban growth in infrastructure and services. Assessment provides information on the current state of spaces that could be transformed into public spaces. In the report unplanned spaces are those that are intended for other purposes, while planned spaces are those used as streets, markets, beaches, etc. Assessment suggests its possible use, while case study in Nyagatare offers details on urban furniture and other infrastructure needed to turn space into well designed public spaces. Assessment shows that consistently missing infrastructure and amenities includes street lighting, safe access for person living with disability (handrails, ramps, signages) and public toilets. Those aspects should be introduced when public spaces are designed and implemented. There is an urgency of putting public spaces more squarely on the green city and national planning agenda.



Rubavu District consultation meeting for master plan revision, February 2019





# HUYE

public spaces



## Huye

Center of Knowledge, Research and Culture

### Background

Huye, secondary city is the main urban center of Huye District, one of the eight Districts of Rwanda's Southern Province. Located in the southwest of Kigali capital city, the city is strategically located at the intersection of two national highways that connect to the Republic of Burundi and eastern part of the Democratic Republic of Congo. The city is known as a centre for knowledge and higher education, particularly in science and technology, with the University of Rwanda campus and other educational facilities. It is also a cultural Capital of Rwanda where the National Museum Complex is located. Agriculture is the backbone industry of Huye District, involving 76 percent of the workforce, followed by trade which involves 7 percent of the workforce while the others are in the services and manufacturing sectors. With vast resources of fertile land, the agriculture sector can be further developed together with related industries, transforming the city into an agri-business hub.

<b>Area</b>	581.5 km <sup>2</sup>	93 km <sup>2</sup>
<b>Population</b>	328,398	52,768
<b>Population growth rate</b>		1.9 percent/year
<b>Density</b>	565 inhabitants/km <sup>2</sup>	1050 inhabitants/km <sup>2</sup>

*Comparison of Huye District and Huye City data*

### Building and Construction

Rapid population growth and associated demand for housing in urban areas has led to the proliferation of unplanned settlements that occupies around 66 hectares in Huye City. Moreover, the City also accounts challenges related to the shortage of urban infrastructure, services and affordable housing. As a response to the challenges, various measures are being taken; among those including the upgrading of unplanned settlements, as well as acquiring and servicing land to develop affordable housing. In addition, as part of its plan to integrate ICT into city development and operations, Huye, like other secondary cities, is using the

Building Permit Management Information System (BPMS) to enhance monitoring of an organized urban development while ensuring transparency and improved service delivery. In line with root problem solving, the previous city master plan is also being revised by taking into consideration the new paradigms of sustainable urban development.

### Energy

In energy sector, Huye has been facing a poor electricity supply challenge that mostly affects industrial and commercial sectors. In 2016, electricity coverage in Huye District was still at 22 percent and only 14 percent of the population use electricity for lighting. This low access to electricity is hindered by high costs related to over dependence on fossil fuels as well as the terrain, which complicates grid extension. Biomass remains the major source of energy for cooking where, according to 2018 statistics, 88.2 percent of households were using firewood and 11.4 percent using charcoal and 0.4 percent using gas or biogas at District level. The District Development Strategy 2018-2024 targets the use of other alternative sources of energy such as cooking gas and biogas in the urban area. Apart from increasing electricity connection among urban and rural households, efforts are being put in working with the private sector in the provision of affordable renewable sources of energy for lighting and cooking, mainly solar and biogas. In line with the government agenda, Huye District envisions at achieving 100 percent access to electricity by 2024.

### Urban Mobility

Currently road transport is the main mode of transport in Huye City with one of the well-developed Complex Bus Parking in the Country that directly links four Districts of the Southern Province namely Nyanza, Nyaruguru, Nyamagabe and Gisagara; at the same time a transit towards Burundi and Democratic Republic of Congo. The City also has an aerodrome infrastructure that, once rehabilitated, would facilitate the easy and faster movement of people and goods. To date, within the urban limits, Huye accounts for 12.2 kilometers of National Paved Roads, 4.3 kilometers of National Unpaved Roads



and 13.6 kilometers of District Roads. Urban Roads also make 18 kilometers of asphalt roads, 11.3 kilometers of cobblestone roads, and 2 kilometers of cycling lanes in the City. Given the increasing rates of private car ownership in Huye (1.1 percent in 2015), public transport use (regular: 5.8 percent; often: 33.4 percent in 2018), and bicycle ownership (14.9 percent) in the city; there is a high potentiality for the city to promote low carbon transport modes.

## **Water Production, Distribution and Sanitation**

Water production and distribution in Huye City is characterized by increasing access to clean water where by 2018, 50 percent of urban households were connected to protected springs, 32.7 percent to public standpipe and 4.7 percent to the dwelling/yard piping. Current status reveals that 89.7 percent of the population have access to improved water in entire District. However, with an increasing demand that is projected to be 2,073 m<sup>3</sup> in 2020 from 1,055 m<sup>3</sup> in 20128. Districts works to provide reliable, affordable and adequate quantity of water reaching a 100 percent affordability by 2024. Like in other developing cities, sanitation sector in Huye is still limited, and there is a need for improvement and innovations. Statistics of 2016/17 reported a 78.7 percent of access to improved sanitation in the entire District. The City still faces challenges such as the direct disposal of grey water and human excreta into the environment and waterless latrines, soak pits or ordinary pits on individual premises, in addition to the absence of integrated collection, transportation or treatment facility for fecal waste treatment, all leading to the human exposure to sanitation diseases and environmental contamination. For the District to achieve a desired goal (100 percent by 2024), Huye District is envisioning at establishing semi-centralized sewerage systems and a faecal sludge treatment plant at the city level that will serve in the treatment and transformation of wastes to resources such as energy and fertilizers.

## **Waste Management**

As urbanization increases in Huye Secondary City, waste generation also increases over time. Current situation analysis of 2018 found a daily waste generation of 0.7 kilograms per capita per day from 0.5kg/cap/day in 2015 in the entire District. Therefore, considering 65,555 population in the city, 50 tons of wastes are generated in a day. Among wastes generated, organic ones accounts for 75 percent of the collected waste,

while among the recyclable waste, plastics and paper are the highest share, marking 8 percent and 6 percent respectively. To date, no source segregation mechanism is enforced, while informal waste pickers scavenge recyclable wastes for commercial purposes. In addition, there are no public bins in the City which leads to waste littering in public drainage, putting more than 50 percent of the city population exposed to health risks and water contamination. In regard to the waste treatment and disposal, Huye has a sanitary landfill located 15 kilometers away from the city center, managed by a private company.

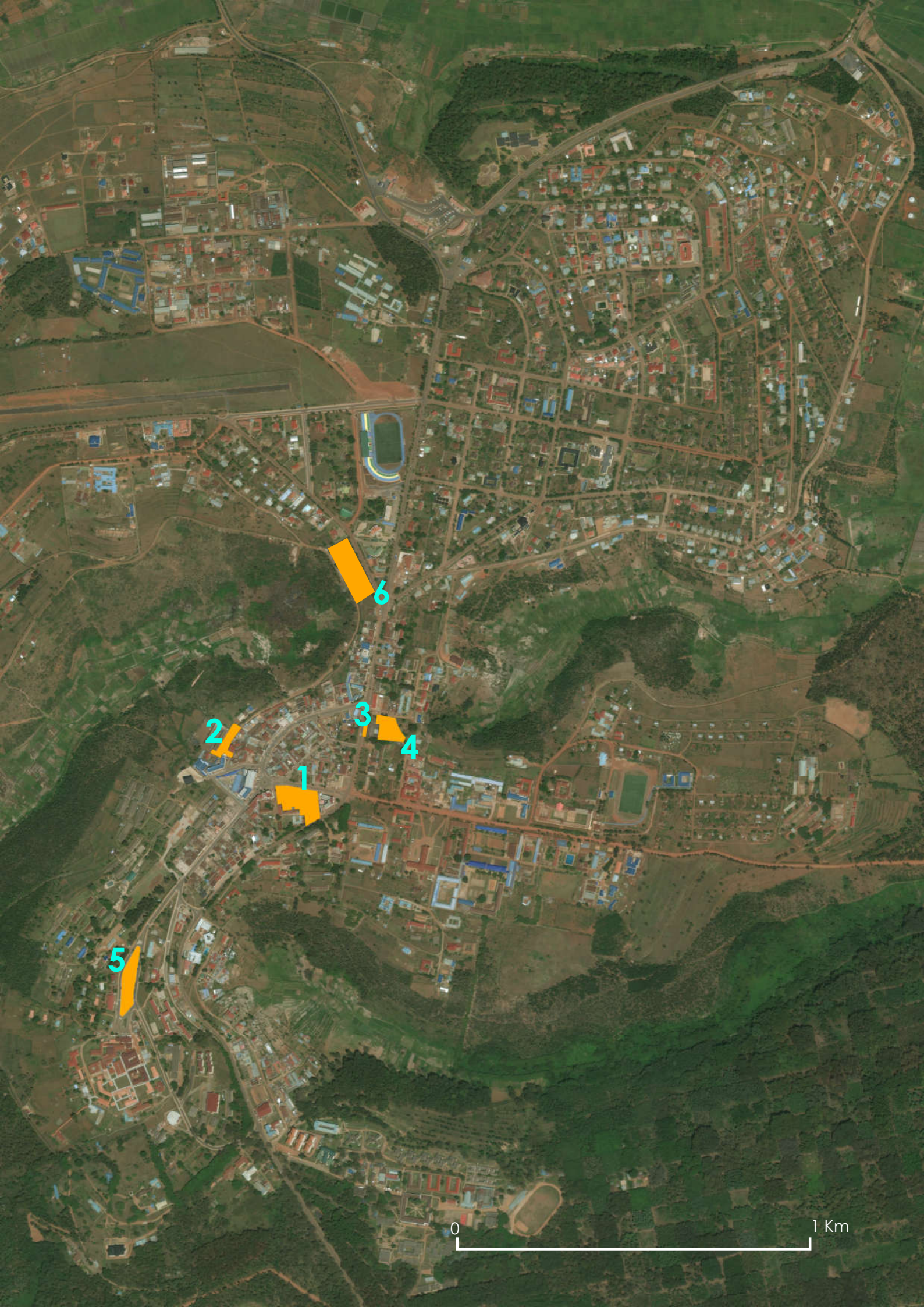
## **GGGI's support to District**

GGGI has a full-time staff embedded in Huye One Stop Center to provide technical assistance and support to integrate green growth principles and initiatives in the District's short and long-term plans. GGGI also supported the District in developing the District Development Strategy 2018-2024 and revising its master plan, and capacity building on green growth, green city development and the financing green growth projects through training of trainers program. GGGI also undertook a situation assessment of solid waste management in Huye to identify opportunities in waste to resource. Mapping public spaces in Huye shows underutilized potentials of green open spaces within the city, especially spaces with infrastructure that youth could use given that Huye hosts University of Rwanda campus. Being former capital city, Huye also has historic heritage buildings from the beginning of the 20<sup>th</sup> century that could be more utilized and together with the well designed public spaces create an interesting city image. Current master plan shows 2.5 percent of the urban land dedicated to green open spaces, yet as revision of the master plan is ongoing, it is hoped that the percentage will strategically increase given city's potentials.

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0 1 Km



## CONNECTING GREEN AREA

1



**Basic shape** irregular, 7120 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** walkways / meeting points

**Surrounding features** shops / restaurants / roads

**Accessibility** connected to roads

**Activities** walking

**Users** women / men of various ages

The space looks like an open public garden which is located in front of the Sector Office. It is surrounded by commercial buildings. The place is accessed through the tarmac road RN1 and Avenue de la Prefecture. This infrequent space is used only by those who come to ask for services from the Sector Office. Given the importance of the Government's Office, space could be turned into public space with urban furniture, shaded areas, and other infrastructure.





## URBAN COURTYARD

2



**Basic shape** irregular, 1400 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** walkways / meeting points

**Surrounding features** shops / restaurants / roads

**Accessibility** connected to roads

**Activities** walking

**Users** women / men of various ages

Place is used as a car workshop/garage. It is always full of workers working in the garage, street vendors, those who come to seek part time jobs and some who pass by because there is the road connecting Rwabayanga to Ngoma sector. The place is a courtyard surrounded by spare-parts shops, the main block of the garage and other shops. It is accessed through the unpaved road and there are less planned drainage paths. Space could become well used space for leisure especially for working population of the area.



## FRONT OPEN SPACE

3



**Basic shape** rectangular, 480 sq.m

**Planning** planned public space

**Infrastructure and amenities** bus stop / meeting points

**Surrounding features** shops / restaurants / roads

**Accessibility** connected to the main road

**Activities** meetings

**Users** women / men of various ages

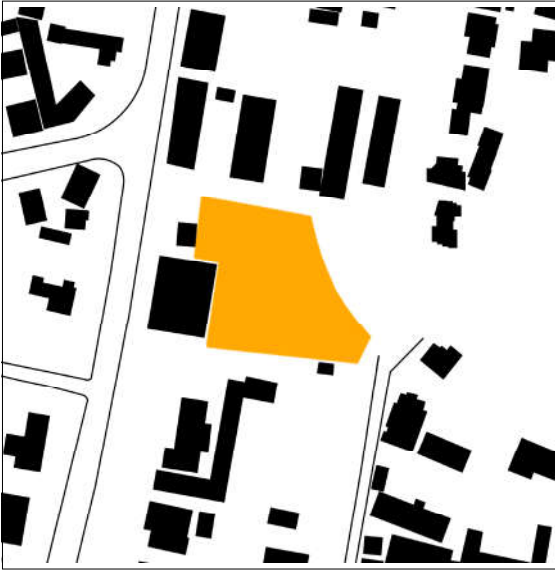
The front/entry space of the multi-purpose hall seems very open to the public. The building was designed to host different activities and the front is used by those who are using the hall. Due to the fact that it is directly connected to the road, the place could be beneficial to the passengers. Sometimes the place is used in an informal way as a parking. Well-designed public space would support businesses in the area.





## PUBLIC GARDEN

4



**Basic** irregular shape, 4500 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** walkway / meeting point

**Surrounding features** garage / accomodation / road

**Accessibility** connected to a street

**Activities** cultural

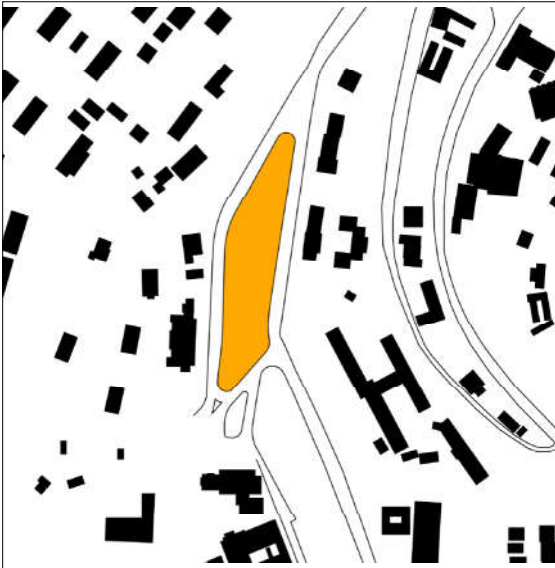
**Users** women / men of various ages

The space is usually used for different entertainment and cultural dances events. Residents use this space for leisure although there is no urban furniture fit for that activity. The place is surrounded by a multi-purpose hall, a garage, government office and different religious facilities. The place is accessed through the unpaved road surrounded by drainage paths. This place would benefit from urban furniture, shaded area and children playground.



## UNUSED GREEN AREA

5



**Basic shape** irregular, 5200 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** none

**Surrounding features** hospital / hostels / university

**Accessibility** connected to roads

**Activities** none

**Users** none

Seemingly an open public park, the space located in front of the hospital contains a garden which is currently unused. It is surrounded by roads which connect the space to buildings like IPRS Butare, the hospital, College of Medicine and Health Sciences and private hostels. Due to different public spaces around, this specific space should be designed to attract more users. The space is accessible through tarmac roads. There are drainage channels. No urban furniture is existing and it is something that could activate the space if provided.





## POST OFFICE PUBLIC SPACE

6



**Basic shape** rectangular, 11950 sq.m

**Planning** planned public space

**Infrastructure and amenities** bicycles and motor-cycles stop and parking / bus stop / walkways / meeting points

**Surrounding features** Post office / shops / Hotel Falcon / District Office / Theatre / Court of Huye

**Accessibility** connected to roads / close to main road

**Activities** walking / meetings / small scale trade

**Users** women / men of various ages

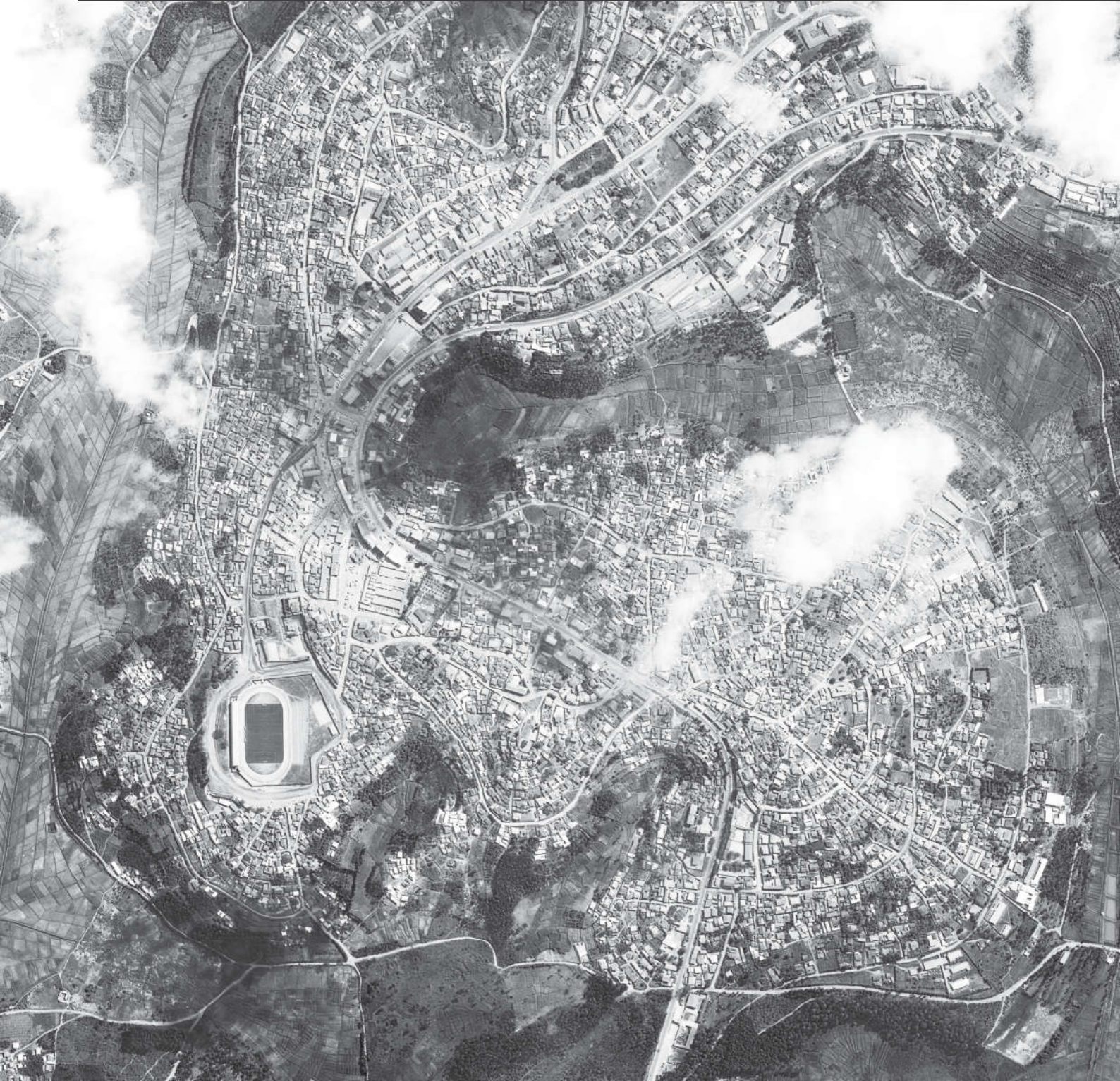
The place serves as a public space well used by those on bicycles, motorcycle, and other services close to the space. The place is connected to the road from the city center to Matyazo and Ngoma Cell and the NR1 road from Kigali to border posts towards Burundi. This space is a meeting point in the center of between Astrida (which is a center for various cultural activities) and other features such as Jibu corporate Ltd, Post Office, District Office and the city center. Well-designed space could be used as public space by residents, especially those that would spend time before or after using services by the Government or businesses in the close proximity to the public space.







# MUHANGA public spaces





## Muhanga

*Green Secondary City with an Essential focus in Mining, Quarry and Commercial Businesses*

### Background

Muhanga Secondary city is in the Muhanga District, in Southern Province and located west of Kigali Capital City – the closest to Kigali among the six secondary cities. Agriculture sector takes 78 percent of the workforce and the second main economic sector is trade. The priority local economic clusters identified are trade and logistics centre, mineral deposits and quarries, craft industry and livestock industry. Muhanga is positioned as mining, logistics and regional trade centre of Rwanda. Most of the secondary cities are linked to Kigali via Muhanga that offers a competitive edge for Muhanga to become the domestic logistics centre from where the domestic goods can be redistributed to other secondary and tertiary cities. While Muhanga can also potentially profit from outsourcing activities from Kigali and export goods for processing, Muhanga could be positioned as a consolidation and distribution centre for goods and raw materials from surrounding regions to be processed, value-added and then re-distributed to Kigali or other secondary cities. Frequent floods, aggravated by modest drainage, lead to infrastructure damage that disrupts economic and social development. Muhanga district has a Local Land Use Development Plan and the urban area has a Master Plan, which is currently being reviewed.

<b>Area</b>	647.7 km <sup>2</sup>	48.22 km <sup>2</sup>
<b>Population</b>	319,141	50,608
<b>Population growth rate</b>	1.1 percent/year	2.1 percent/year
<b>Density</b>	493 inh,abitants/km <sup>2</sup>	1050 inh,abitants/km <sup>2</sup>

*Comparison of Muhanga District and Muhanga City data*

### Building and Construction

About 20.6 percent of the district's population live in unplanned urban settlements. Clay tiles and metal sheets, 86.3 percent and 13.0 percent respectively, are mainly roofing materials used in the District. Over half of the houses have walls built of mud bricks

while 36.6 percent use cement to plaster the mud-brick walls. Most houses have floors made out of beaten earth.

### Energy

District of Muhanga has 19.6 percent of households with access to electricity, mostly using it as a source of lighting. This is to say that most of the District households are using other sources of lighting such as oil lamps, candles, lanterns, etc. The lack of electricity has a considerable negative impact on the development of Muhanga District. Electricity is not used for cooking and almost all households use firewood.

### Urban Mobility

The urban perimeter of the district has a total road length of 166.7 kilometers. Of this, about 25 kilometers are national roads and 3 kilometers are district roads. All roads are gravel and the urban roads, in particular, are in poor condition, with potholes and rain grooves, making for rough road travel. Urban transportation is still a challenge. Car owners make 0.4 percent while the bicycle is the most common mode of transportation, with 11.6 percent owning one and 1.7 percent owning a motorcycle.

### Water Production, Distribution and Sanitation

District has 89 percent of households with access to clean water using an improved water source while target for 2024 is 100 percent. The District of Muhanga has well performed in terms of population with access to basic sanitation having majority of population using pit latrines with solid slab. As in many other districts, there is no centralized sewage system transporting fecal waste away from households.

### Waste Management

Waste management is still a problem where 63.5% of households thrown their domestic wastes in bushes or field and only 31.4% have composts. In the town, the rate of HHs using public rubbish is 1.8%. Muhanga District is aiming to have the modern eco-friendly landfill by 2021 (DDS).

## **GGGI's support to District**

Since 2017, GGGI started the operationalization of the National Roadmap for Green Secondary Cities Development by embedding District Technical Assistant in Muhanga District One Stop Center and providing capacity development for District Technicians and project implementers on a regular basis on green city development project identification, prioritization and project proposal development, and others. GGGI also assessed the feasibility of waste to resource project for sustainable waste management. GGGI facilitated the development of Muhanga District Development Strategy (2018-2024) as part of its contribution to the NSTI process. GGGI is supporting Muhanga District in revising its master plan to ensure that Muhanga is developed in a sustainable way.

Mapping public spaces in Muhanga shows underutilized potentials of open spaces within the city, especially spaces with infrastructure that could be used for better access to spaces for citizens being in commercial areas. Investing in well designed, implemented and maintained public spaces can contribute to the business growth. Current master plan shows 14 percent of urban land dedicated to green open spaces, yet as revision of the master plan is ongoing, it is hoped that the percentage will strategically increase given city's potential to attract business, and proximity to Kigali would also enhance tourism potential of Muhanga given its well designed and maintained public spaces.

## **References**

1. Rwanda State of Environment and Outlook Report, 2017.
2. District Development Strategy DDS 2018-2024.
3. Fifth Integrated Household Living Conditions survey (EICV5).





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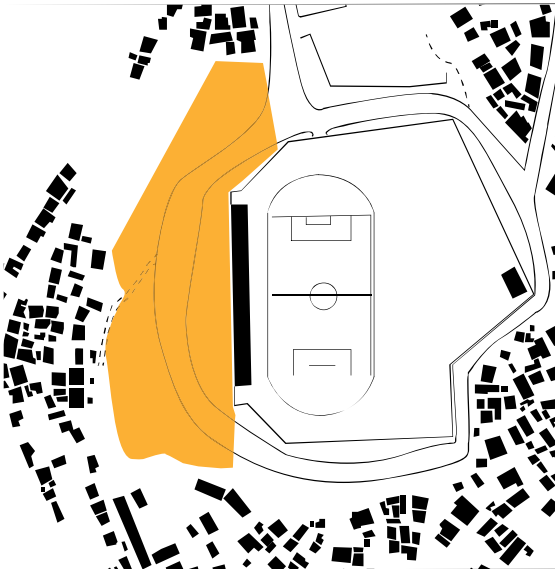
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## STADIUM PARK

1



**Basic shape** Irregular, 16200 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** water drainage system / shaded spaces / meeting points

**Surrounding features** roads / stadium / residential area / school

**Accessibility** connected to the main road

**Activities** meetings

**Users** women / men of various ages

The space is located at the western wing of the Muhanga Stadium. The space is covered with grass and trees which creates a canopy and allows people to sit under in shaded area. Yet, there is no urban furniture or other leisure facilities. The road surrounding the Stadium cuts the space into two parts and is responsible for the access to the space connecting it to other surrounding structures including residential areas. A walkway that branches to the road connects the space to the sloping residential area down to valley. Given its location, this space could be equipped to serve as an extension of sport and recreational activities happening at the Stadium.





## MUHANGA MARKET SQUARE 2



**Basic shape** trapeze, 3020 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / lights / parking places / meeting points

**Surrounding features** shops / roads / market / health post

**Accessibility** connected to stone-paved streets

**Activities** street trade / parking / meetings

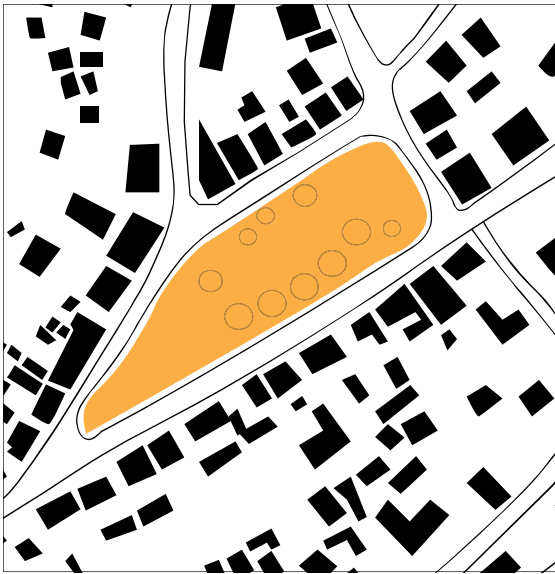
**Users** women / men of various ages

Known as 'Ku rya nyuma' space is located in front of the Muhanga market, and can be accessed through the two stone paved roads and one earth road. The place is used as car parking and water collection point on market open days. When market is closed only few people use it. The space itself is open with no greenery in it and surrounded by planned drainage. Around the space, a health post (south), a service building (north), Muhanga market (east) and shops (west) are found. Given its location, space could be designed to serve the market, being leisure space and meeting point for market visitors.





## FORMER STADIUM



**Basic shape** trapeze, 8000 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / park / storage for road construction materials

**Surrounding features** shops / residential area / mosque

**Accessibility** connected to the main road

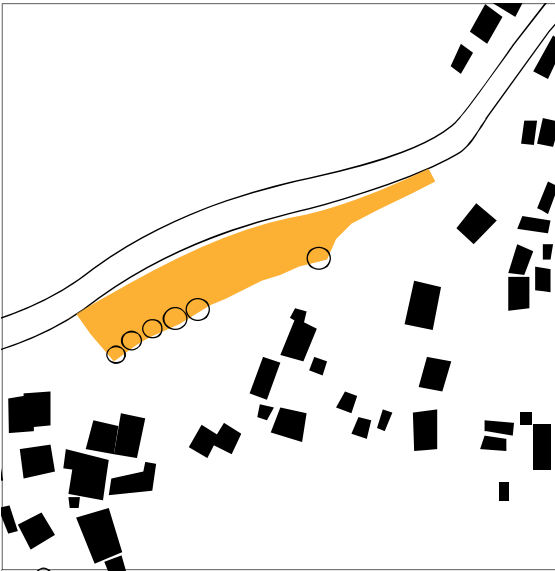
**Activities** road construction materials storage / meetings

**Users** women / men of various ages

This iconic green space of Muhanga has its history of being a public space. It is located between the District Office and the main car park. The four roads around it with the main being the RN7 allow it to be accessible. The garden covers one third of the space with a number of walkways, and the remaining two thirds with bush and trees is fenced and is used to store road construction materials. The structures, such as, a cultural centre, shops, residential houses and a mosque around this green space prove the diverse nature of activities in the area. While the District might have plans for mixed use development in coming years, this space could remain green public space in revised master plan and with proper urban furniture and greening could become prime public space of the city.







**Basic shape** long trapeze shape, 2930 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** water drainage system / meeting points / walkway

**Surrounding features** roads / churchyard

**Accessibility** connected to the main road

**Activities** walking / meetings

**Users** women / men of various ages

The retained space lies on higher level than the RN1, and about 3 meters retaining wall marks the end of it. It is located between the “Ku musaraba” junction and the hospitality facility, and it is accessed through the staircases and a ramp. The linear space itself is a public walkway with grass and trees near the retaining wall above which the residential houses are built. Such space could benefit from well-designed pavement and urban furniture that could bring more visitors to surrounding businesses.







**Basic shape** irregular, 2300 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** water collection point / meeting points

**Surrounding features** bar / road / residential area

**Accessibility** connected to the main road

**Activities** meetings

**Users** women / men of various ages

The junction in front of the restaurant and bar is accessed through the RN1 road and two earth roads that continues to the residential area and farms. Space is surrounded by residential area. The space itself does not have a planned drainage. Such unplanned space could become large scale public space for residents.



## MAKERA GARDEN

6



**Basic shape** trapeze, 8140 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / meeting points

**Surrounding features** shops / roads / restaurant

**Accessibility** connected to the main road

**Activities** street trade / meetings / parking

**Users** women / men of various ages

Makera Garden is located in Cyakabiri right after the bus stop, where the road to Makera Sector Office branches out from the main road RN1. The space features a small garden surrounded by a paved walkway with a drainage channel. The Makera Garden square is vibrant as it is a junction for a variety of activities like motorbike reparations, shopping, etc. This space currently serves mainly for car parking. In addition, the area is bordered by roads, residential area and a bar. The buildings in the surrounding are one or two stories high. Space requires small urban design intervention that would turn this space into well used public space.





# MUSANZE

public  
spaces





## Musanze

Centre of Rwanda's Tourism

### Background

Musanze Secondary city, main urban hub within the Musanze District, is found in Rwanda's most mountainous district, containing five of eight volcanoes of the Virunga chain and forms volcanoes national park. Despite 91 percent of population working in agriculture, namely, coffee, tea, pyrethrum, wheat, bananas, beans, sorghum, and potatoes, District of Musanze is known for its tourism industry being the home of the most of Rwanda's mountain gorillas. In order for Musanze Secondary City to meet its ever increasing population demand, and development of forward looking tourism sector, highly visionary urban planning and development tools, which will generate economic transformation and be a foundation for sustainable urban living have been formulated through the District Development Strategies (DDS) 2018/2024, facilitated by the GGGI, which is set out to achieve the national Vision 2020/2050.

<b>Area</b>	530.4 km <sup>2</sup>	101.97 km <sup>2</sup>
<b>Population</b>	368,563	102,082
<b>Population growth rate</b>	1.8 percent/year	3.2 percent/year
<b>Density</b>	695 inh,abitants/km <sup>2</sup>	

*Comparison of Musanze District and Musanze City data*

### Building and Construction

In the District, 52.3 percent of households are located in planned settlements while others live in unplanned, mostly isolated rural housing. The District plans to construct 11 Integrated Development Projects (IDP), planned villages, by 2024.

### Energy

In urban areas of Musanze District the main source of energy for lighting is electricity, 54.9 percent of the population is using it, while others still use kerosene lamps and candles. In rural areas of the District people would also use firewood for lighting, 12.5 percent. In the District, the main sources of energy for cooking in households are firewood

(78.3 percent), charcoal (15.4 percent) and grass/leaves (5 percent). In rural areas private households use mainly firewood. The District plans to work with citizens to use cooking gas as the main source of energy for cooking by 2024. District also plans for 56.2 percent of households with access to electricity by 2024.

### Urban Mobility

The District currently has no bus lines operating within the District or dedicated terminal, and citizens are relying on bus lines operating from Kigali to urban centres as City of Musanze or Rubavu. By 2024 the District strategizes to have 5 bus lines, 5 bus terminals, and 18 kilometers of cycle lanes constructed to promote non-motorized transport as well.

### Water Production, Distribution and Sanitation

Majority of population in Musanze District, 95.3 percent, have access to clean water including usage of protected springs, public pipes, and 9.9 percent of population having water piped into housing units or yards. District has 7650 households with rainwater harvesting facilities that would double by 2024. In the District of Musanze 84.27 percent of the population has access to basic sanitation, compared to national level of 83.4 percent. The majority of the population in the District are using protected latrines. Currently there is no improved central sewage system or a centralized wastewater treatment plant, hence, by 2024 the District Development Strategy plans for 3 systems installed.

### Waste Management

Waste management is still a problem in Musanze, where 52.49 percent of households dispose of their domestic waste in nearby fields, while others would use composts. In urban areas of the District of Musanze, relatively low number of residents is using public waste disposal system. By 2024 the District plans to have constructed a modern fully operational landfill.



## **GGGI's support to District**

GGGI's supports Secondary Cities of Rwanda in planning the distribution of economic growth, achieving the national urbanization target and supports poverty reduction, inclusive growth and job creation. In Musanze, GGGI facilitated development of the District Development Strategy that guides development up to 2024. GGGI supports the City of Musanze in revising its master plan as a development framework to guide Musanze's future growth. Public Bike Sharing system is being piloted in Musanze, to support the city in promoting non-motorized transportation. GGGI also has its staff embedded in the District Government supporting the elaboration of Local Urban Development Plans to ensure that green city development guidelines are integrated in the plans.

Mapping public spaces in Musanze shows underutilized potentials of green open spaces within the city. Most of those spaces would benefit from well designed recreational and leisure facilities and reach its full potential. Well designed public spaces would also contribute to well established tourism sector in Musanze. Current master plan shows 4.84 percent of urban land dedicated to green open spaces, yet as revision of the master plan is ongoing, it is hoped that the percentage will strategically increase given city's potentials.

## **References**

1. EICV5, Thematic Report. Environment and Natural Resources, 2016-17.
2. Rwanda State of Environment and Outlook Report, 2017.
3. District Development Strategy DDS 2018 – 2024.
4. MININFRA, Rwanda Urban Development Program and Preliminary Designs for Infrastructure - Musanze Secondary City, 2016.





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## BUS PARK

1

**Basic shape** irregular, 15690 sq.m

**Planning** planned public space

**Infrastructure and amenities** offices / shops / toilets / meeting points / walkways / lights

**Surrounding features** shops / residential area / roads / forest

**Accessibility** connected to a street / two gates

**Activities** commercial

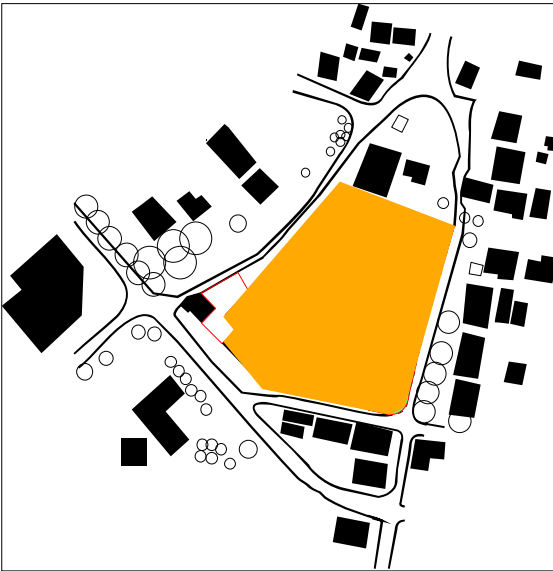
**Users** women / men of various ages

Musanze bus park is located in the heart of the city with planned linear roads, shops, residential areas and forest that surrounds it. It is quite busy at all times due to transportation and movements of people. It has structures inside for shops, offices and sheltered bus waiting area. Nearby there are toilets, outside there are two gates. With better planning and design of this space, it can keep its current function with added areas for leisure for passengers and residents.



## AGRI - MARKET

2



**Basic** irregular, 10400 sq.m

**Planning** planned public space

**Infrastructure and amenities** shops / street lights

**Surrounding features** shops / roads / bars and entertainment

**Accessibility** connected to a street / two gates

**Activities** car park / trading / storage

**Users** women / men of various ages

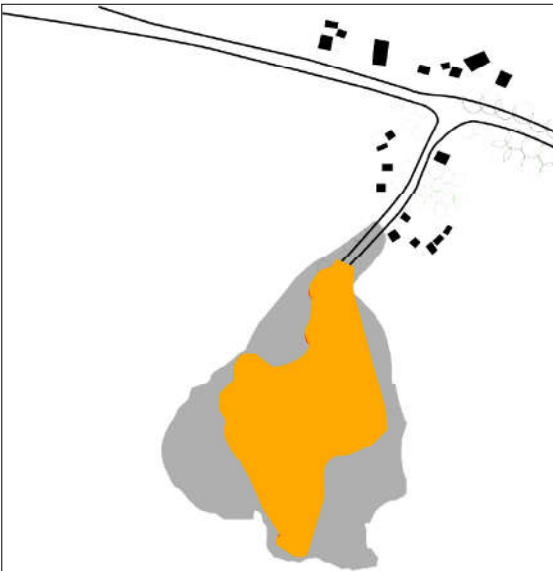
This market is located near the government offices and lodges. It is irregular in shape and partially planned with a nearby outside parking area for motorbikes. It is surrounded by stone outcrops which are used as a sitting area for people who sell goods outside the market zone. The area is surrounded by shops, a road and walkways, and residential area. It is fenced with fired bricks, paved and surrounded by a small seating area with grass, flowers, and shrubs. There should be better structured space division and better planned communications within the public space as well as well-designed, appropriate urban furniture.





## ARTIFICIAL LAKE

3



**Basic** irregular, 8450 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** water body

**Surrounding features** natural elements

**Accessibility** road

**Activities** driving tests

**Users** women / men of various ages

This place is located and accessed from the road RN4. It is surrounded by excavated rocks where an artificial lake was created. It is irregular and unplanned. It is used as a recreational space and driving polygon. People also use the artificial lake for fetching water, swimming, and cleaning their clothes. It is surrounded by forested areas on all sides. Space could become an interesting park if well planned and designed.



## RECREATIONAL AREA



**Basic shape** irregular, 27500 sq.m

**Planning** planned public space

**Infrastructure and amenities** street light

**Surrounding features** sector office / roads / court house / petrol station

**Accessibility** connected to the sector office road

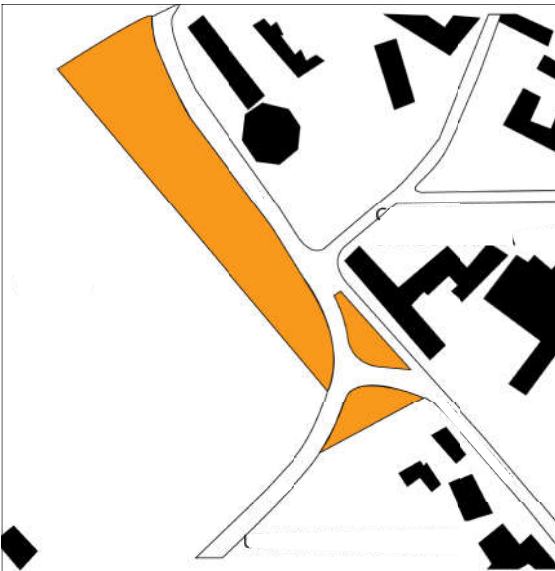
**Activities** leisure

**Users** women / men of various ages

Space is located in front of Muhoza Sector Office (the bus park), and near Musanze Police College. It is accessible from road RN4 which goes to Rubavu District. The place is green with grass and small shrubs as a fence. It is irregular in terms of shape, and has drainage that passes through the space. It is used as a recreational space although it is not totally public all the times because it belongs to the Sector Office. It would benefit from having well-designed urban furniture and proper pavement.







**Basic shape** Irregular, 17000 sq.m

**Planning** planned public space

**Infrastructure and amenities** parking lot / temporary playing ground / Garden / Street lights / drainage channel

**Surrounding features** stadium / hotel / vegetation / university / airstrip

**Accessibility** fully accessible from the main road

**Activities** commercial / recreational

**Users** women / men of various ages

This space is made up of 3 public open spaces that form one T-Junction en route to the Virunga mountains, national park. This space is surrounded by public facilities for commercial and recreational use. The space is also characterised by an open, temporary playground, pedestrian walkway, and parking lot. Part of the space is proposed to have a pedestrian walkway in the green space off the main road for safety measures. Well designed public space would be more vibrant, adding value to the District's touristic image.





## GACURI CITY ENTRY POINT

6



**Basic shape** irregular, 3170 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** billboards / street lights / drainage channels

**Surrounding features** hill / petrol station / main road from Kigali to Musanze-Rubavu

**Accessibility** fully accessible from the main road

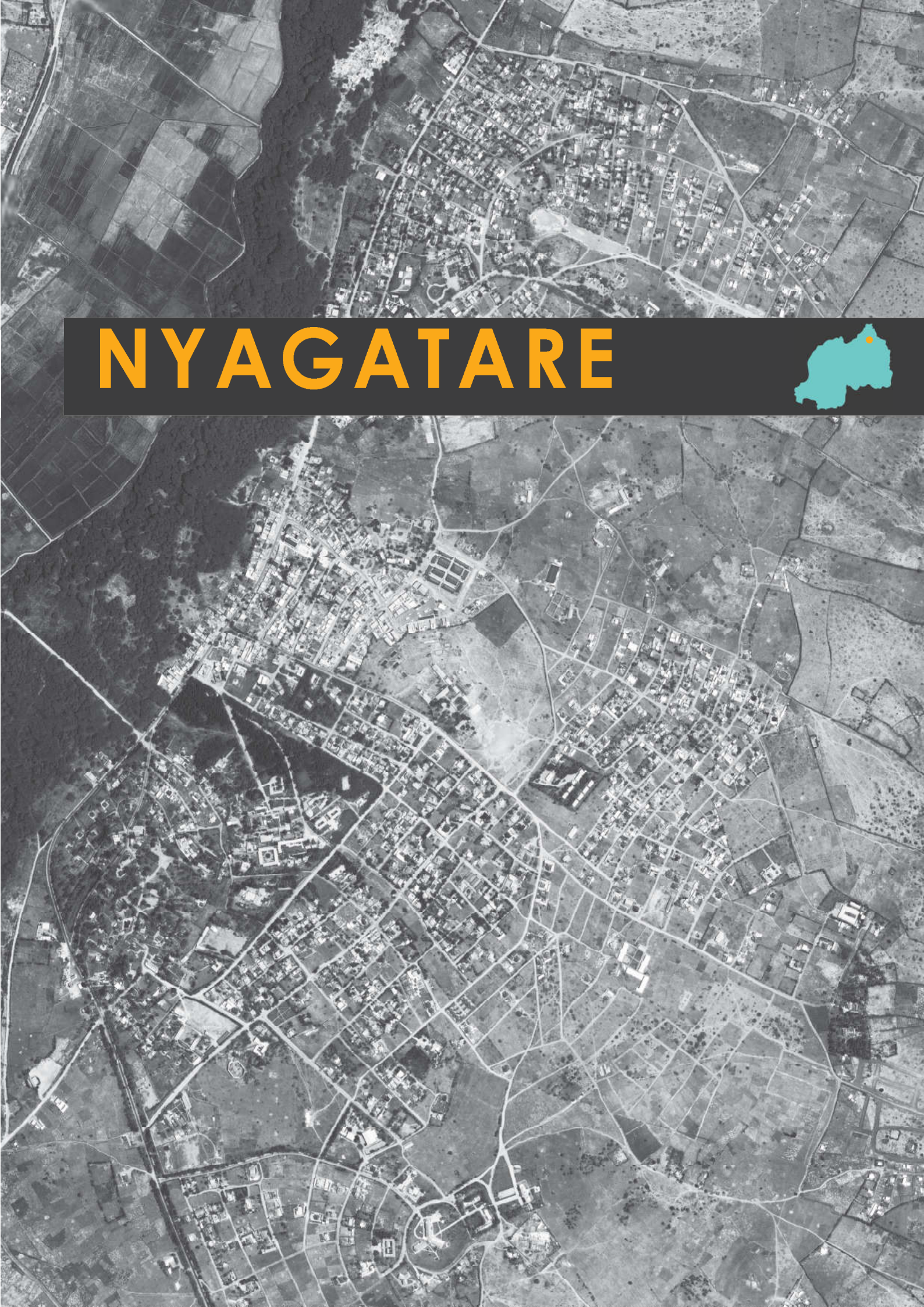
**Activities** none

**Users** women / men of various ages

This space is strategically located at the entry point of the City of Musanze and offers the opportunity of giving a sense of place if well designed. This space is zoned as green space within the current masterplan and is surrounded by a petrol station and national road. If well designed this space can become an image of the city.







# NYAGATARE





## Nyagatare

*Agro Processing Hub Commercial Hub of the East and Dairy Centre*

### Background

Nyagatare Secondary City is in the Nyagatare District, Located in the Eastern Province, branded as the agricultural trade hub of Rwanda. Nyagatare city lies in the central part of the district strategically located on the main road connecting Uganda-Rwanda-Tanzania that makes cross border trade easier. Nyagatare has the highest population growth rate among the six secondary cities, which stands at 6.2 percent. Nyagatare's workforce, 80 percent, is engaged in agricultural activities and the city is well known for its cattle breeding and production of milk dominating Rwanda's market.

Area	11,386 km <sup>2</sup>	1,741 km <sup>2</sup>
Population	466,855	47,480
Population growth rate	1.1 percent/year	1.6 percent/year
Density	242 inhabitants/km <sup>2</sup>	

*Comparison of Nyagatare District and Nyagatare City data*

### Building and Construction

A majority of people in Nyagatare, 97.9 percent lives in single family houses, and the quality varies widely. Metal sheets were the most popular roofing material with 99.6 percent of houses have them. The walls of 53.5 percent of houses in the District are built with mud bricks using cement to plaster the walls. Most of the houses have floors made out of beaten earth.

### Energy

Electricity at the household level is mainly used for lighting, with 15.3 percent of households using it. Electricity is not used for cooking. More than 90 percent of households use firewood for cooking while 5.5 percent use charcoal. The District is aiming to increase access to electricity with 100 percent of households. This would reduce pressure on forests, encourage diversification of off-farm livelihood activities, especially

those related to agri-processing, and improve the delivery of services, such as education, health and ICT at the local government level.

### Urban Mobility

Roads within the district's urban perimeter have a total length of 160.4 kilometers including both national and District roads. Of this, about 16 kilometers are national roads and 10 kilometers are district roads. Only 0.2 percent of residents own a car, which is under the national figure of 1 percent. The bicycle is the most common mode of transportation with 35.2 percent of residents owns them.

### Water Production, Distribution and Sanitation

About 42.6 percent of households in Nyagatare district use an improved source of drinking water that are public standpipes. Poor sanitation and limited access to potable water, especially in the city's unplanned areas, risks the use of contaminated water with consequences on human wellbeing.

### Waste Management

Waste management is still a challenge in Nyagatare, with about 52.2 percent throwing domestic waste directly into fields. However, a high proportion 42.2 percent maintains a compost heap, which reduces the amount of organic waste going to the dumpsite and simultaneously provides organic fertilizer.

### GGGI's support to Nyagatare

GGGI has been supporting Nyagatare city to be climate resilient and green city in different ways. Currently, the revision of the Nyagatare master plan is ongoing where GGGI has secured Green Climate Fund Readiness Project support. GGGI in partnership with MININFRA and RHA also mapped public spaces in the city and is piloting the initiative in Nyagatare.

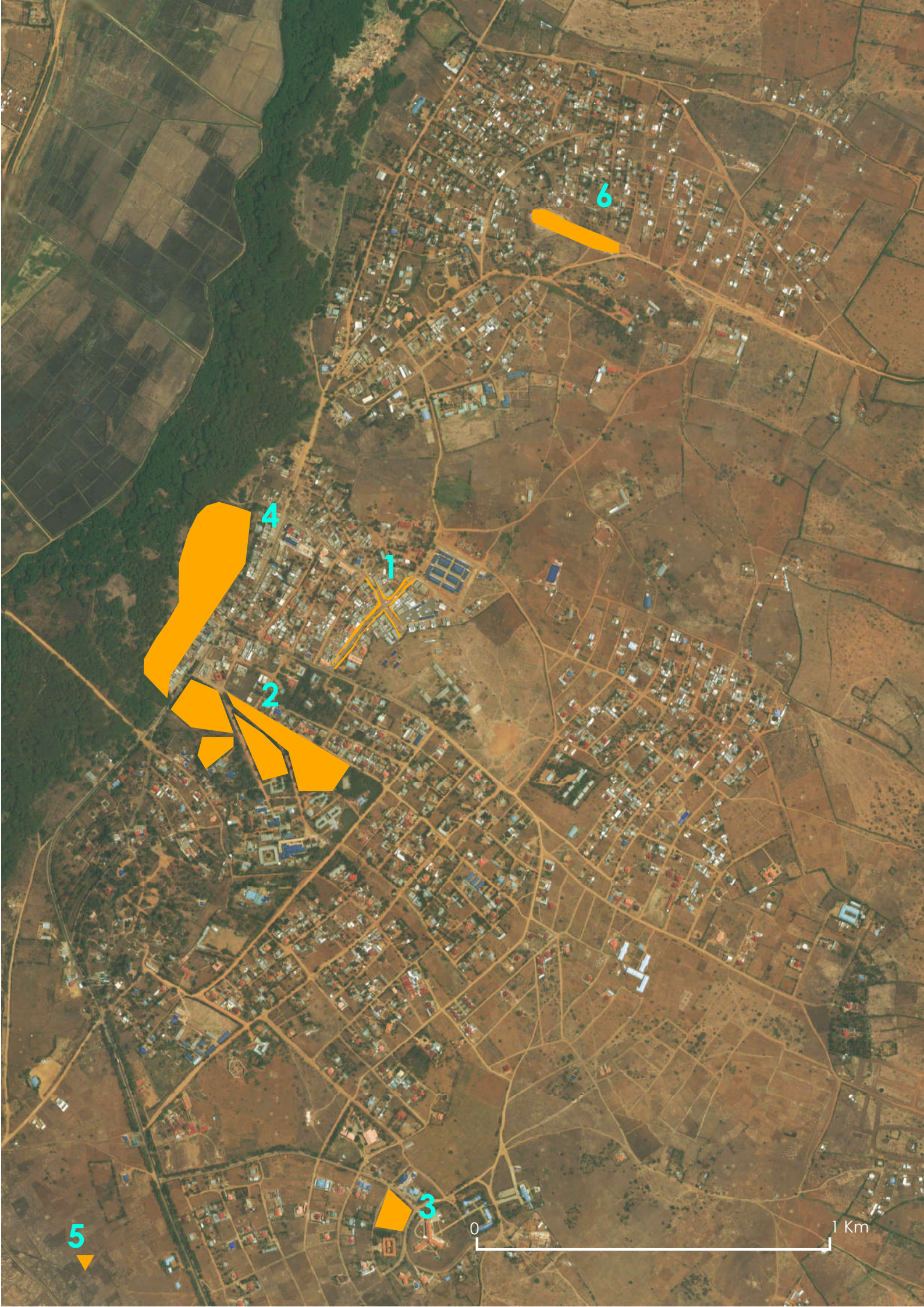


Mapping public spaces in Nyagatare shows underutilized green open spaces within the city, especially spaces close to public buildings such as District Office or Hospital, University or Market, etc. Green open spaces in Nyagatare could become well designed and visited parks while streets, especially along business linear centers could become well utilized public spaces that could also contribute to the economic activities in the city. Current master plan shows 10 percent of the urban land dedicated to green open spaces, yet as revision of the master plan is ongoing, it is hoped that the percentage will strategically increase.

## **References**

1. Rwanda State of Environment and Outlook Report, 2017.
2. District Development Strategy DDS 2018-2024.
3. Fifth Integrated Household Living Conditions survey (EICV5)





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## BUSINESS CENTER STREETS

1



**Basic shape** linear, 5020 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / meeting points / walkways

**Surrounding features** shops / accomodation / roads

**Accessibility** connected to the stone paved streets

**Activities** walking / meetings

**Users** men / women of various ages

Nyagatare business centre streets are flanked by pedestrian ways and a strip of shops on the outer. These walkways have street headlights and the paths are covered in stone. To better use this space, urban furniture and shading could be added to the street. Surrounding businesses would also benefit from the improvement of this linear public spaces.





## DISTRICT HOSPITAL PARK



**Basic shape** irregular, 72660 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / toilets

**Surrounding features** shops / roads / hospital

**Accessibility** connected to the road

**Activities** street trade / meetings

**Users** space is not fully accessible for users, yet roads and improvised paths in the green area are being used by women / men of various ages

Nyagatare District hospital park is at the entrance of the hospital, bridging the hospital and the business centre. It is man-made forest informally used for social gatherings like cooperative meetings. However, it is only active during the day because there are no lights or other urban furniture to make it user friendly. The space has a public toilet and features unpaved paths. The park is seen from the main road. Adding urban furniture to the park would increase its use and be more beneficial for residents and even hospital users and visitors. Part of the space, closer to the road is currently being developed through participatory design process, facilitated by the Ministry of Infrastructure, Rwanda Housing Authority and GGGI.







**Basic shape** trapeze, 7840 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system

**Surrounding features** district office/ palace of justice/  
university / roads

**Accessibility** connected to the road

**Activities** meetings

**Users** women / men of various ages / students

Nyagatare District Office square is the junction of the District Office and the University of Rwanda campus. The space has planted flowers. The nature of activities in the surrounding area is executive and academic. Such institutions would benefit from well designed and equipped public space.



## CITY CENTER PARK

4



**Basic shape** irregular, 96270 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** walkways / meeting points

**Surrounding features** shops / road

**Accessibility** connected to the road

**Activities** none

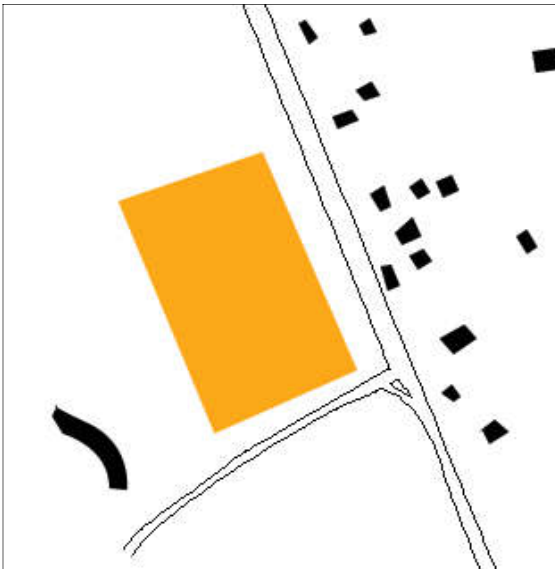
**Users** women / men of various ages

Muvumba forest is a potential area for public space / the city center park. It is diverse in flora and fauna and is natural forest and wetland that requires special treatment and consideration. There are few organic paths that people use. If turned into public space with lifted walking platforms, not affecting existing greenery and water body, it would also affect potential increase of trade in the business district, and support tourism potentials.





## PUBLIC SPACE NEAR THE MAIN ROAD



**Basic shape** rectangular, 17200 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** road / street lighting

**Surrounding features** Epic hotel / residential houses / main road

**Accessibility** connected to the road

**Activities** none

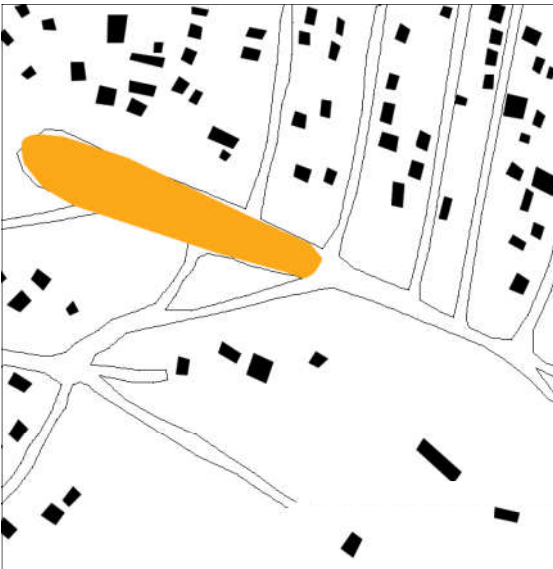
**Users** none

The proposed location for the public space is opposite to the Epic Hotel and next to the main road Ryabega-Nyagatare. Residents of Nyagatare and guests from Epic Hotel would access such public space once it is equipped with the necessary facilities, mostly shaded areas and urban furniture. New public space would contribute to economic activities at the entry space of Nyagatare and further support tourism.



## PUBLIC SPACE NEAR THE SECTOR OFFICE

6



**Basic shape** oval, 8400 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** road

**Surrounding features** Nyagatare sector office / military camp / stadium under construction

**Accessibility** connected to the road

**Activities** driving test

**Users** residents / government employees

The proposed location for the public space is near the Nyagatare Sector Office and Nyagatare Stadium that is under construction. It is currently used by a driving school. Once it would be equipped with the basic infrastructure to facilitate leisure and recreation, residents and people coming from Sector and Cell would use it. Such space could also host temporary small businesses adding to the District's revenue and creating a new image of the area.







# RUBAVU

public spaces





## Rubavu

Lakeside Hub for Tourism and Industry

### Background

Rubavu city is in the Western Province, located at the northeast of Lake Kivu, The city is the main tourist destination in Rwanda and a strategic trading post. It is commonly regarded as the International Gateway City due to its location near the border city of Goma in Democratic Republic of Congo (DRC). The city relies on Goma for crossborder commercial transactions and jobs as 25 percent of Rubavu's population works in Goma. This economic activity has also made Rubavu the most developed city in the western province requiring urban planning and development tools, to generate economic transformation and be a foundation for sustainable urban living. Tourism is one of the city's economic pillars and several large industries provide employment for its local population. Besides, Rubavu is the only district where agriculture employs less than 50 percent of the workforce. The priority local economic clusters identified are trade and logistics with DRC, nature tourism, and maritime transport.

Area	388.3 km <sup>2</sup>	45 km <sup>2</sup>
Population	403,662	149,209
Population growth rate	3.3 percent/year	5 percent/year
Density	1039 inhabitants/km <sup>2</sup>	1,940 inh/km <sup>2</sup>

*Comparison of Rubavu District and Rubavu City data*

### Building and Construction

About 190 hectares of the urban area within Rubavu City are currently unplanned. The proportion of households living in Umudugudu declined from 40 to 19.4 percent between 2010/2011 and 2013/2014. In addition, the extent of unplanned housing in the urban areas increased from 5.9 to 9.9 percent over the same period. The District plans to construct 5 Integrated Development Projects (IDP), and 30 affordable houses villages, by 2024.

## Energy

In urban areas of Rubavu District the total number of households with access to the lighting is high with electricity at 40.8 percent, firewood 7.2 percent, lantern 2.9 percent, candle 14.4 percent, solar panels 31.6 percent, batteries 0.4 percent, and oil lamps 2 percent. Sources of primary fuel for cooking include firewood at 58.9 percent, charcoal 40.1 percent and others.

### Urban Mobility

Rubavu currently has only one bus park for pick up and drop passengers with limited mini vans operating as a means of public transportation in the outskirts of the city. By 2024 the District strategizes to have another bus terminal constructed with bus stations, shelters, and 35 kilometers of tarmac roads constructed to integrate non-motorized transport as well.

### Water Production, Distribution and Sanitation

Majority of population in Musanze District, 98.6 percent, have access to clean water including usage of protected springs (12.1 percent), public pipes (67.3 percent), and 16.3 percent of population having water piped into housing units or yards. In the District of Rubavu 94.1 percent of population has access to basic sanitation, compared to national level of 86.2 percent. Currently Rubavu has no improved central sewage system or a centralized waste water treatment plant, hence, by 2024 the District Development Strategy plans for 1 system installed.

### Waste Management

Waste management in Rubavu is still a need, with 63.2 percent of households disposing their domestic waste in nearby fields, 26.4 percent using composts, 8 percent using collection services and 1.7 percent of the waste is publicly managed. In urban areas of the District of Rubavu, relatively low number of residents are using public waste disposal system. By 2024 the District plans to have constructed a modern fully operational landfill.



## **GGGI's support to Rubavu**

GGGI facilitated development of the District Development Strategy that guides development up to 2024 inspired and aligned with national policies such as Vision 2020 and international agendas such as EAC Vision 2050, Africa Agenda 2063, SDGs, New Urban Agenda and Paris Climate Agreement. GGGI supports the City of Rubavu in revising its master plan as a development framework to guide Rubavu's future growth. GGGI also has its staff embedded to the District supporting the elaboration of Local Urban Development Plans to ensure green city development guidelines are integrated in the plans.

Mapping public spaces in Rubavu shows that public beach and other green public spaces are well in use, yet could benefit from well designed spaces given that tourists are also using such spaces. Further development of public spaces in the area close to city markets is highly recommended. Current master plan shows 35 percent of the urban land dedicated to green open spaces, including forests, yet as revision of the master plan is ongoing, it is hoped that the percentage will remain or increase and public spaces be well designed and implemented.

## **References**

1. EICV5, Thematic Report. Environment and Natural Resources, 2016/17.
2. Rwanda State of Environment and Outlook Report, 2017.
3. District Development Strategy DDS, 2018-2024.
4. MININFRA, Rwanda Urban Development Program & Preliminary Designs for Infrastructure - Rubavu Secondary City, 2016.





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## MBUGANGARI MARKET

1



**Basic shape** rectangular, 3284 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** electric transformer / meeting points

**Surrounding features** shops / market / roads

**Accessibility** connected to the road

**Activities** trade

**Users** women / men of various ages

Resulting from the lack of selling posts inside the city market, and having enough space next to the market, it is being used as a vegetable and livestock trade space. It is surrounded by a tarmac road to the east and west and an earth road to the west with the built market on the south. Small shops mark the boundary and inside the space is an electric pole and lava stones covers almost the entire surface. This public space could be well utilized by adding urban infrastructure and extending existing market for District's revenue generation.



## BORDER SUPERMARKET

2



**Basic shape** rectangular, 500 sq.m

**Planning** unplanned public space

**Infrastructure and amenities** walkway / meeting points / road / light poles / camping site for security officers

**Surrounding features** shops / checkpoint / supermarket

**Accessibility** connected to the road

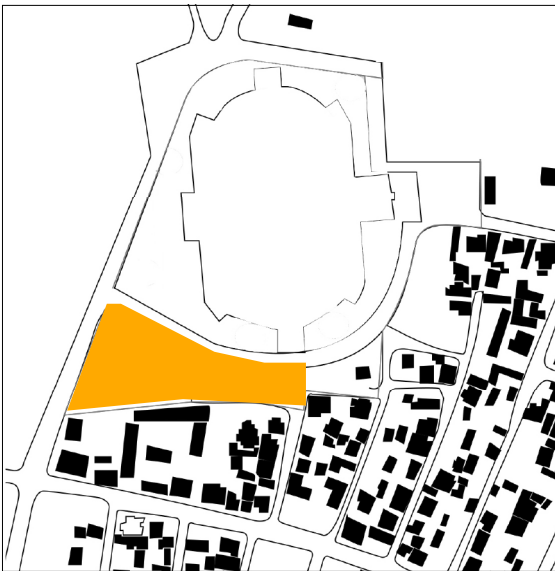
**Activities** street trade

**Users** women / men of various ages

Surrounded by the Border Migration Office, the Democratic Republic of Congo – Rwanda Border Checkpoint, the cross-border shopping mall and residential area, this public space is used for packing and unpacking of goods for trade. The surface is covered in grass and has a couple of trees in it. The space is wire fenced on the side of the Border Checkpoint and the mall. This makes the place quiet, although there is a lot of potential for its full public use. It is accessed by taking an earthed road that passes behind the shopping mall and the Border Checkpoint. While it could still keep its current function, space could also be used for leisure with adding more trees and urban furniture. This site was assessed as a public space for potential demonstration project under Urban LEDS II Project, work jointly conducted by the UN-Habitat, ICLEI and GGGI.





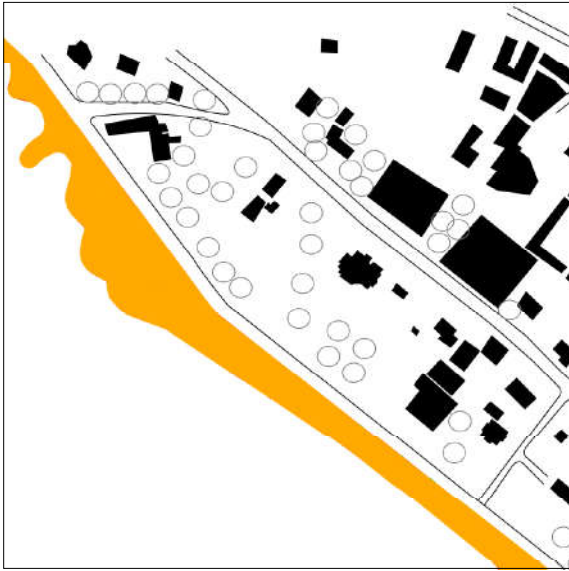


- Basic shape** irregular, 4870 sq.m
- Planning** planned public space
- Infrastructure and amenities** walkways
- Surrounding features** road / airfield / nursery
- Accessibility** open
- Activities** sport / walking / driving test polygon / parking / meetings
- Users** women / men of various ages

The big tarmac space in front of the Stadium is mainly used for driving lessons and as a space for sport, although it was initially built as the Stadium's parking. Opposite the public space is the city's airfield and it is bounded by residential buildings and a nursery school on its south side while the Stadium lies on its northern part. The public space is divided into two parts that are of different elevation and they are connected by stairs. Each part has access to the tarmac road. This public space could have dual function by keeping the existing and adding certain elements for leisure and shade at its borders. Being next to the stadium space could also be planned and designed as extended recreational and sports area.



## LAKE KIVU SHORE GREENERY



**Basic** irregular, 90 sq.m

**Planning** planned public space

**Infrastructure and amenities** urban furniture / childrens' playground / marina / meeting points / shaded spaces

**Surrounding features** roads / walkways / hotels / lake

**Accessibility** fully accessible

**Activities** swimming / sports / leisure / walking

**Users** women / men of various ages, especially youth

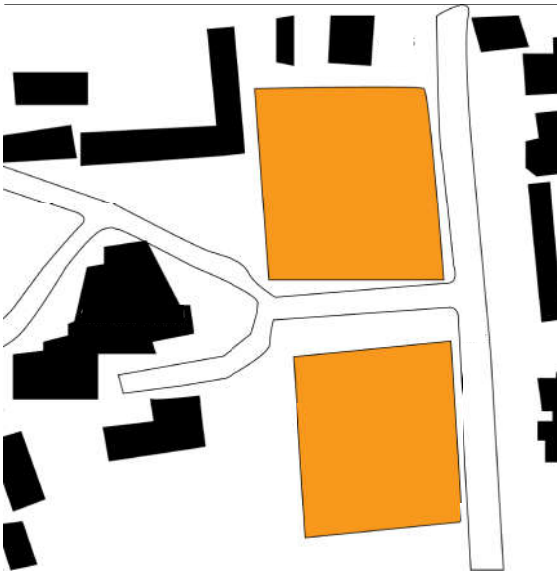
The elongated greenery lies on the shore of the Lake Kivu and is accessible through the avenue de la Cooperation. Space is gated with certain spots for entry. The space is mainly grass and sand with several trees, seating and children playground equipment. It is mainly used for different events which range from exhibitions to wedding ceremonies. While this space is widely used, it could benefit from well-designed urban furniture and planned pathways that could serve as touristic spots also while being public space for social interaction and activities for residents. This site was assessed as a space for potential demonstration project LEDS II project work jointly conducted by the UN-Habitat, ICLEI and GGGI.





## PLAYGROUNDS NEAR STELLA MARIS PARISH

5



**Basic shape** rectangular, 875 sq.m

**Planning** reserved as sport playgrounds

**Infrastructure and amenities** asphalt road / partial paved / basketball playground

**Surrounding features** District Headquarters / Catholic Church and priests' residence / electric control room / Post office

**Accessibility** fully accessible

**Activities** recreation and leisure

**Users** women / men of various age, mostly youth

This site is used as a complex playground for various sports namely football, basketball, volleyball and handball. It is bounded in north with the Catholic Church building and priests' residence, in south has the asphalt road, in west electric control room and Post Office, and in east the earth road used as an entrance to Church facilities. Open space is fully in use, yet with proper sport facilities and urban furniture it could become central city meeting point, especially for youth.



## URBAN FORESTRY AT RUBAVU- MUSANZE ROAD 6



**Basic shape** irregular, 85993 sq.m

**Planning** recreation land use

**Infrastructure and amenities** forest, asphalt road

**Surrounding features** Mount Rwaza cemetery / petrol station / Sebeya river

**Accessibility** fully accessible

**Activities** none

**Users** women / men of various age, mostly youth

This plot is used as an urban forestry with trees and grasses while it is reserved for recreation land use. This urban forestry plot belongs to a private owner hence developing site as potential leisure and recreational spot for Rubavu would further prone interest of private sector into public spaces. The plot has both flat and inclined land with a view to the Kivu Lake and Sebeya River.







**RUSIZI**

public  
spaces





## RUSIZI

*Western Gateway for Trade and Tourism*

### Background

Rusizi city is strategically situated at the southern tip of Lake Kivu waterfront and at the borders of Bukavu in Democratic Republic of Congo (DRC) and Bujumbura in Burundi. Located southwest of Kigali capital city, it is the farthest secondary city from Kigali. Rusizi City is located in the north-western part of the District covering an area of 88.2 square kilometers (9.4 percent of the entire District). Its location on the border with DRC and Burundi, has led it to sustain a substantial amount of trade and logistics opportunities. It is known as an international trade and transportation hub. It is one of the best performing border cities in the country with a long history of active cross-border trade and experienced traders. The city hosts one of Rwanda's three major ports on Lake Kivu, and the region has an extensive system of rivers and waterways. Agriculture sector employs 70 percent of Rusizi's workforce and 14 percent for trade sector. In recent years, there is an increase of opportunities in the trade sector and low-tech industry. The spatial development of the city is guided by the local urban development plan of 2014 with a 100 hectares detailed physical plan. Being a secondary city brings increased population growth, and a pressure to the infrastructure needs.

Area	940.95 km <sup>2</sup>	88.16 km <sup>2</sup>
Population	430,789	66,962
Population growth rate	2 percent/year	2.4 percent/year
Density	755.7 inhabitants/km <sup>2</sup>	1091 inh/km <sup>2</sup>

*Comparison of Rusizi District and Rusizi City data*

### Building and Construction

As a highly urbanizing city, the building and construction sector in Rusizi has faced challenges such as shortage of affordable housing, unplanned settlements expansion (currently 8.2 percent of urban housing), and low access to basic services and lack of sustainable local construction materials, amongst others. The Government of

Rwanda and the District are putting effort in attracting investments in affordable housing through public private partnership.

### Energy

The core sources of energy production in Rusizi are the two hydropower plants (Rusizi I and II), while two other are being developed, one being the Rusizi III Hydropower plant and Gishoma Peat power plant. The Bugarama hot springs also present a potential for geothermal energy generation. Current status reveals that around 77 percent of the urban population has access to electricity, the target being 100 percent access by 2024. On the other hand, biomass remains the major source of energy for cooking where by 2018, 86.2 percent of households were using firewood and 12.4 percent were using charcoal and 0.5 percent using gas or biogas at the District level. The District Development Strategy 2018-2024 targets the use of other alternative sources of energy such as cooking gas and biogas in the urban area. Apart from increasing electricity connection among urban and rural households, efforts are being put in working with the private sector in the provision of affordable renewable sources of energy for lighting and cooking, mainly solar and biogas. Over the next period of time, Rusizi District looks forward to embrace more renewable sources for the main grid, acquiring and installing efficient lighting along with automated lighting systems in public buildings and for street lighting; scaling-up the off-grid energy to offset pressure from on-grid energy; and the promotion of sustainable consumption of fossil fuel for energy efficiency.

### Urban Mobility

Currently, Rusizi City is a home to three main modes of transport, air, road and water transport. The air transport is mainly used for Kigali-Kamembe flights. Known as a cross-border trade city, one national road (NR11) passes through the City towards the two neighboring countries, Democratic Republic of Congo (DRC) and Burundi. Water transport is also used mainly for



the transport of goods and products to and from the four districts that are along the Lake Kivu, as well as DRC, with a new port to be developed. To date, Rusizi urban roads together make 14.5 kilometers of asphalt roads and 8.9 kilometers of cobblestone roads. The city also has one bus park that serves as an interlink between Rusizi and other Districts, as well as the south-western-corridor of the District towards Bugarama Centre.

### **Water Production, Distribution and Sanitation**

Water production and distribution in Rusizi City is characterized by an increasing access to clean water where by 2018, 34.3 percent of urban households were connected to protected springs, 45.7 percent to public standpipes and 5 percent to the dwelling/yard pipes. Current status reveals a 87.6 percent of improved water access in the entire District, reason being the new established water production plants and 240 kilometers of supply networks. Over the next period of time, the District envisions at scaling up sustainable technologies for improved water production and treatment, including the use of a solar system in case of electricity shortage. The Rusizi District is envisioning at establishing a faecal sludge treatment plant at the city level that will serve in the transformation of wastes to resources such as energy and fertilizers. On the other hand, the greening of sanitation system will be strengthened across different areas of the city, key objectives being to raise household sanitation coverage to 100 percent by 2024 from 90.4 percent in 2018.

### **Waste Management**

Waste management system is currently being run by the District where waste is collected from “door to door” and dumped in the landfill after segregation of biodegradable from the non-biodegradable waste at the site. Biodegradable waste is further composted and used by local farmers as organic fertilizers. On the other hand, non-biodegradable waste is set aside, currently with no measures for the treatment. The Rusizi City in collaboration with development partners plans to

establish a modern landfill facility that will work parallel to the fecal sludge treatment plant to treat waste in a more transformative way. The landfill site is located 2.3 kilometers from the city center and covers an area of 10.64 hectares.

### **GGGI's support to Rusizi**

The GGGI has a full-time staff embedded in Rusizi City to provide technical assistance and support to integrate green growth principles and initiatives in the District short and long-term plans. GGGI also supported the District in developing the District Development Strategy 2018-2024, and did capacity building on green growth, green city development and financing green growth projects through training of trainers program. GGGI is working on green city development and takes part in the review of the City Master Plan to ensure that Rusizi City is developed in a more sustainable and climate resilient way.

Mapping public spaces in Rusizi is another initiative of Ministry of Infrastructure, Rwanda Housing Authority and GGGI with support of University of Rwanda, School of Architecture and Built Environment. Spaces mapped in Rusizi show underutilized potentials of green open spaces at the Kivu Lake waterfront but also public spaces such as streets and markets that are highly used but would still benefit if turned into well designed, accesible for all, public spaces. Current master plan shows 4.2 percent of the urban land dedicated to green open spaces, yet as revision of the master plan is ongoing, it is hoped that the percentage will strategically increase.

### **References**

1. Informal settlement upgrading study, 2017.
2. Ubudehe data, 2017.
3. EICV5 Utilities and Amenities Thematic Report, 2016/17.
4. District Imihigo 2018-2019 Progress report.
5. Feasibility Study of Modern Landfill for Rusizi and Karongi-Final Draft, 2018.





3

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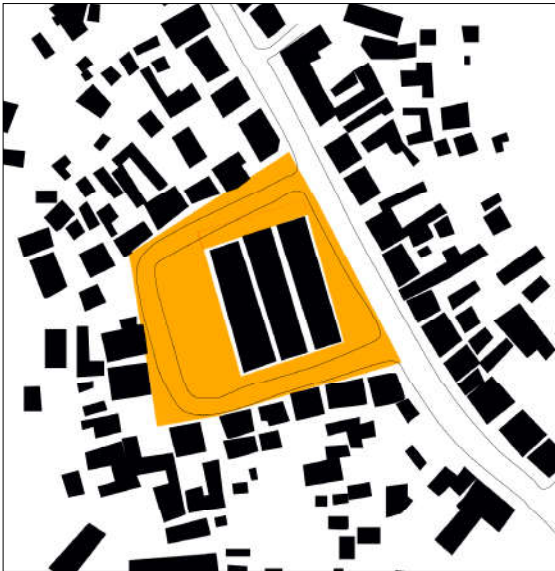
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1 Km



## MARKET CONTOURS

1



**Basic shape** trapeze/ rectangular, 5270 sq.m

**Planning** planned public space

**Infrastructure and amenities** water tank / walkway / meeting points

**Surrounding features** shops / hotels / road / market

**Accessibility** connected to the main road

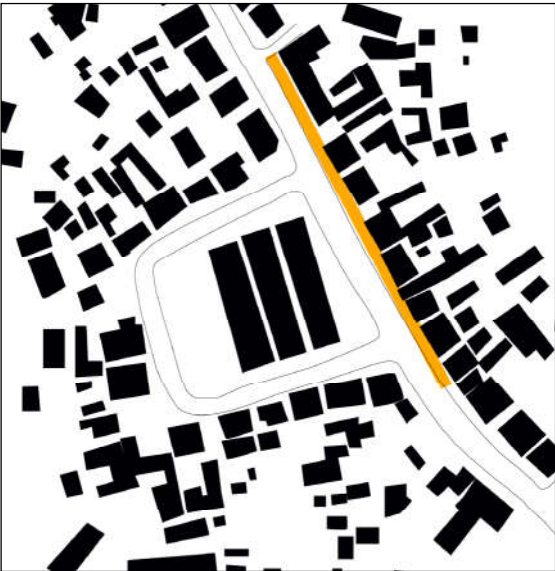
**Activities** street trade

**Users** women / men of various ages

The market place of Rusizi, located in the city centre is surrounded by four roads used to connect the market area with the rest of the city. Public spaces surrounding the market are missing some of the public facilities and urban furniture including seating, and surrounding parking areas for the users. These places are directly connected to the urban roads creating more opportunities for their usage if well designed. These public spaces are of the District importance and can serve as an extension and addition to the market facilities and activities.







**Basic shape** rectangular, 4156 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / lights / walkway / meeting points / shaded spaces

**Surrounding features** shops / road

**Accessibility** connected to the main road

**Activities** street trade / walking / meetings

**Users** women / men of various ages

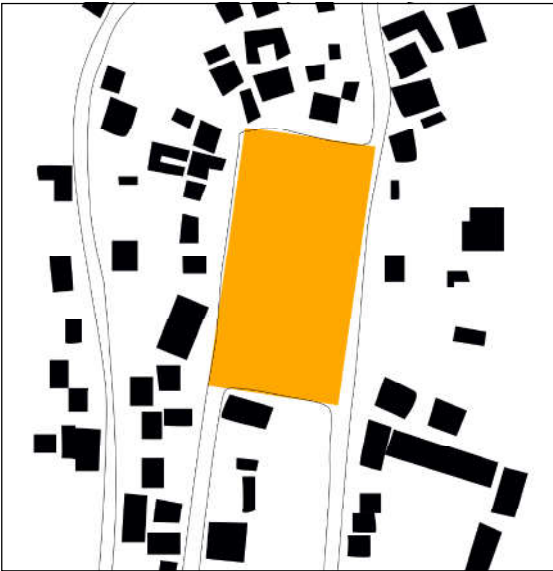
The urban road passing through the Rusizi city centre creates the development of the commercial strip of shops along the road, the main setbacks reserved for the road is now in a function as public space mostly used by the street vendors with goods to serve the community. This public space connects shops and street vendors and the main road, contributing to the overall image of active urban area. Potentially, if well designed and with appropriate urban furniture, this linear public space can also serve as a leisure space where citizens would be able to consume products or services offered by shops surrounding the space.





## PLAYGROUND

3



**Basic shape** rectangular, 6365 sq.m

**Planning** planned public open space

**Infrastructure and amenities** basic sports equipment / playground / connecting space

**Surrounding features** school / shops / graveyard

**Accessibility** connected to the unpaved streets

**Activities** sport / walking / meetings

**Users** children / youth

The playground is the most used space within the city as public space for the gathering and active participation of children and youth to activities. It is surrounded by school and residential areas, that gives the space the possibility to be developed with dual functions: as public space for the community gathering and for outdoor activities of the school children. Current limitations for the full use are lack of public facilities within the space such as shading elements, pavement, advanced sports infrastructure, seating and others. Usage of public space is affected by rain, as there is no nearby shelter. Further investment in sports and recreational infrastructure would contribute to more regular use of the space.





**Basic shape** trapeze, 17760 sq.m

**Planning** planned public space

**Infrastructure and amenities** water drainage system / improvised sitting / meeting points / shaded spaces

**Surrounding features** shops / road / churchyard

**Accessibility** connected to the road

**Activities** street trade / meetings

**Users** women / men of various ages

The space between shops, unpaved road and the church, create the highly used public space by community. This specific public space, and other public spaces in the area surrounded by shops along the main national road contribute to social interaction between the users and the community that uses the road. This public space also has an interesting spatial dialogue with the church frontage. As it is already highly in use, quality of public space could be improved by adding urban furniture contributing to the overall quality of urban life in Rusizi.







**Basic shape** trapeze, 71020 sqm

**Planning** unplanned public space

**Infrastructure and amenities** garden

**Surrounding features** shops / roads / National Bank of Rwanda / mosque

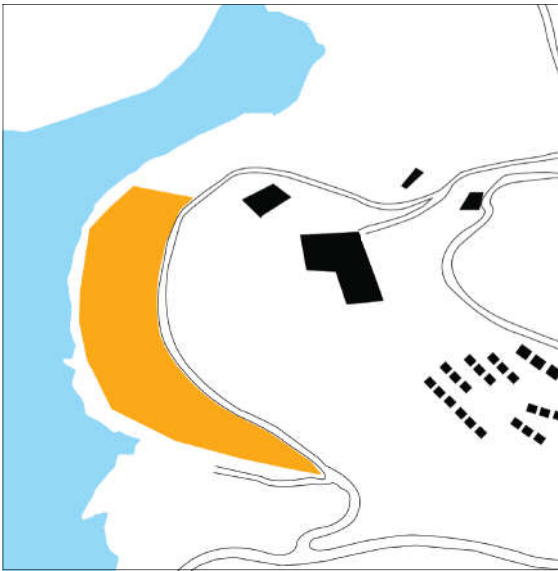
**Accessibility** connected to the main road and access road

**Activities** recreation / meetings

**Users** women / men of various ages

The green space is located in the city center of Rusizi, surrounded by the main road, access road within a mixed residential and commercial areas known as "Ku rya Kabiri" in the neighborhood known as "Sité". The space has been greened yet has no urban furniture and is not easily accessible. Currently space is planned for commercial purposes, yet, as master plan is being revised this space could be planned as green and public space. This will require some provision of walkways to allow accessibility and well designed urban furniture. In addition, the space could be connected to the other open space that is in front of the market that serves as a walkway, for street sale and connectivity to the shops along the main road.





**Basic shape** trapeze, 10280 sqm

**Planning** unplanned public space

**Infrastructure and amenities** green space / walkway

**Surrounding features** Lake Kivu / main road / hotels

**Accessibility** connected to the main road and Lake Kivu

**Activities** fisherman activities

**Users** fishermen

The green space is located in the buffer zone of Lake Kivu surrounded by the Hotel and roads. The fishing activities are the only ones currently at the open space known as "Budike". City port is planned in the area hence this public space could be developed as public space of great importance as could be used by residents and tourists using hotel or port facilities.







## **Initiatives by the Government of Rwanda and Stakeholders Addressing Public Spaces**

A number of initiatives related to urbanisation are being implemented by the Government of Rwanda through the Ministry of Infrastructure and other line ministries and agencies. Currently, such initiatives are the Review of City of Kigali and secondary cities master plans (process that is benefiting from mapping and the assessment of public spaces), implementation of smart transport systems, elaboration of local urban development plans for emerging urban centres, promotion of car-free zones, and implementation of early warning systems, among others. Through the Rwanda Housing Authority, the Ministry of Infrastructure is supporting the implementation of concepts for green and smart cities and villages. A number of policy and action programmes related to urban infrastructure and construction are being implemented with support from multilateral partners and organisations, in particular regarding the upgrade of infrastructure to respond to challenges induced by rapid urbanisation and climate change.

The Government of Rwanda's initiatives, or those supported by it, promote new forms of cooperation between the national, district, and city governments, development partners, civil society, women's and youth groups also used to create a new approach to urban planning and the governance of public spaces.

The government-led Sector Working Groups aim to improve the coordination of programme development and delivery across multiple government institutions and organisations. The Sector Working Group on urbanisation and rural settlements is led by the urbanisation division of the Ministry of Infrastructure and World Bank. Members of the Sector Working Group are other line ministries and government agencies, also other stakeholders such as UN-Habitat, Global Green Growth Institute, the Rwanda Women's Network (RWN), the University of Rwanda, and others. One of four thematic sub-sector working groups is focusing on urbanization and public

spaces, co-chaired by the Ministry of Infrastructure and Global Green Growth Institute. The first meeting of the thematic sub-sector working group was held in October 2018 to ensure the programmes of actions were aligned to the national priorities and commitments, as well as the identified priority areas for urban development. The thematic sub-sector working group on urbanization and public space is an important step in mainstreaming the needs and opportunities for public spaces in Kigali and secondary cities.

Innovative events such as Urban Walk, Inclusive Cities Talk, Urban Cinema and others aim to engage general and expert communities in the importance of public spaces through participation and consultation in its planning, design, and implementation. While at first events were organised as "pilot events", they are now institutionalised by being incorporated into the Ministry of Infrastructure's performance contract for 2019–2020.

The Ministry of Infrastructure, the Rwanda Housing Authority, and the Global Green Growth Institute undertook citywide public space surveys in Rwanda's secondary cities to better understand the needs of citizens for public spaces as well as what facilities and utilities these spaces should include. These surveys followed on a series of stakeholder consultations facilitated by Global Green Growth Institute in preparations for the District Development Strategies (DDSs) 2018–2024, where public spaces were identified as one of the priorities to support sustainable urbanisation

### **Piloting the Public Space Initiative in Nyagatare, Rwanda's Secondary City**

The Ministry of Infrastructure, Rwanda Housing Authority, and the Global Green Growth Institute undertook citywide public space surveys in Rwanda's secondary cities to better understand the needs of citizens for public spaces as well as what facilities and utilities these spaces should include. These surveys followed on a series of stakeholder consultations facilitated by Global Green Growth Institute in preparations for the DDSs 2018–2024, where public spaces were identified as one of the priorities to support sustainable urbanisation.



The initial survey results indicated that secondary cities residents were in favour of safe, inclusive, and accessible green and public spaces and would prefer spaces with child-friendly playground equipment and leisure facilities. The citizens are willing to walk and ride bicycles to and from public spaces and to maintain the cleanliness and functionality of these public spaces, thus contributing to their overall sustainability.

Survey results indicate that more than 98 percent of urban population would use well designed and equipped public spaces. The survey was done city wide. After initial main city public spaces are implemented and in use, it will be possible to estimate number of beneficiaries based on the dominant surrounding activities of the selected zones and their locations in general. For potentially main city public spaces, assumption is that all city residents would use them and benefit from them.

The surveys were conducted between August and November 2018. The survey was accompanied by a short training session by Global Green Growth Institute staff to surveyors with background information about the project and the types of questions that surveyors might receive. All respondents were asked if they consented to the survey before being asked the first question. The face-to-face surveys were designed to cover more than one theme and included 20 multiple choice and open-ended questions. There was no incentive for those who completed the survey. On average, survey response rates were above 85 percent. This is especially encouraging given that the survey was conducted with a wide range of residents including the urban poor, women, and youth, some of whom did not have access to formal education and would have had no previous knowledge or experience of public spaces benefits.

The high response rates are in large part the result of the surveys being conducted face-to-face, helped by the involvement of the Rwanda Women's Network (RWN), an organisation widely known by residents, and an initiative being led by the Government. Most of the surveys were conducted close to the market, school, and border crossing with the Democratic Republic of Congo in Rubavu, all of which are known for their vibrant social scene.

In addition to the survey, a technical assessment of public spaces in Rwanda's six secondary cities was undertaken to gather information on what facilities and utilities were currently available in public

spaces or their surroundings to support the next steps of the planning process.

Following these processes, the city of Nyagatare hosted a two-day public space participatory design workshop organised by the Ministry of Infrastructure, Rwanda Housing Authority, and Global Green Growth Institute. Local authorities assisted with site identification by conducting an analysis of land ownership and master plan and defined the boundaries of the public space: the selected areas belong to the central government and are surrounded by public buildings and commercial areas that would benefit from well-designed and well-maintained public space.

In Nyagatare, public space, coupled with agroforestry and water management, can support water retention for longer periods and its use for community gardens and public space maintenance, important in particular during the prolonged drought periods. The allocated site for public space is part of the proposed city-wide resilience infrastructure that could include a series of open spaces, water and infrastructure works, and a green network linking the peri-urban ecosystems with urban green areas. While supporting increased resilience, the public spaces will also support the absorption of greenhouse gas emissions and so reduce the heat island effect, improving microclimate and regulating temperatures in particular in the dry season.

The Ministry of Infrastructure, Rwanda Housing Authority and the Global Green Growth Institute held validation meeting, to present final design of the public space in Nyagatare informed by citizens through participatory approach. The design is validated and is ready for implementation.





## **Conclusion**

In Rwanda's current stage of rapid urbanization, public spaces could play an important role in determining quality of life. The government's main regulatory planning documents highlight the necessity of creating and maintaining public spaces. While research on public spaces in the Rwandan context is ongoing, designs developed through participatory approaches and laws in the process of being adopted to support their implementation, therefore what Rwanda lacks is adequate funding to realise these public spaces in practice.

This report is primarily to be used to inform revision of the master plans with technical analysis of public spaces and their possible (better) use.

This report is presented and shared with members of the Urbanization and public spaces thematic sector working group chaired by the Ministry of Infrastructure to inform work of stakeholders on public spaces in Rwanda.



## About the Global Green Growth Institute

The Global Green Growth Institute was founded to support and promote a model of economic growth known as “green growth”, which targets key aspects of economic performance such as poverty reduction, job creation, social inclusion and environmental sustainability.

Headquartered in Seoul, Republic of Korea, GGGI also has representation in a number of partner countries.

Member Countries: Australia, Burkina Faso, Cambodia, Costa Rica, Denmark, Ethiopia, Fiji, Guyana, Hungary, Indonesia, Jordan, Kiribati, Republic of Korea, Lao PDR, Mexico, Mongolia, Norway, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Rwanda, Senegal, Sri Lanka, Thailand, Tonga, United Arab Emirates, United Kingdom, Uganda, Uzbekistan, Vanuatu, Vietnam.

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