

REPUBLIC OF RWANDA



MINISTRY OF INFRASTRUCTURE

RWANDA REPORT

HABITAT III

Kigali 2015



General Data on Rwanda

Surface (land) Area	26,338 km ²
Population	10,515,973 inhabitants; 44.4% less than 16 years and 4.9% 60 years and above (2012)
Population Density	415 p/km ²
Urban Population	1,737,684 Inhabitants or 16.5% (2012)
Capital	Kigali
Official Languages	Kinyarwanda, English, French
Country Borders	Burundi, DR Congo, Uganda and Tanzania
Mountain Ranges	The North-South Ridge of the Congo-Nile Divide, with an average elevation of 2,750m; Five volcanoes in North West, with snow-capped Mount Karisimbi (4,506m) being the highest.
Climate	Subtropical; two rainy seasons and average temperature: 20 ° C
Administrative Divisions	4 Provinces and City of Kigali; 30 Districts; 416 Sectors
GDP	5,389 Bio FRW (2014)
GDP per capita	USD 718 (2014)
GDP Growth	4.8 % (2013)
Literacy (+16 years)	69.7% (2013/14)
School Net Enrolment Ratio	96.6% (2013)
Life Expectancy at Birth	64.4 years
Infant Mortality Rate	32 per 1,000 live births (2014/15)
Under Five Mortality Rate	50 per 1,000 live births (2014/15)
Maternal Mortality Rate	210 deaths per 100,000 live births (2014/15)
Doing Business	62 out of 189 (2016)





Table of Contents

General Data on Rwanda	iii
List of Acronyms	vii
List of Figures	ix
Foreword	xi
Introduction	1
I. Urban Demography	5
1. Managing Rapid Urbanization	5
2. Managing Rural-Urban Linkages	8
3. Addressing Needs of Urban Youth	9
4. Responding to the Needs of the Aged	10
5. Integrating Gender in Urban Development	11
6. Challenges experienced and lessons learnt	13
7. Future challenges and issues for the New Urban Agenda	14
II. Land and Urban Planning	17
8. Ensuring Sustainable Urban Planning and Design	17
9. Improving Urban Land Management Including Addressing Urban Sprawl	19
10. Enhancing Urban and Peri-Urban Food Production	21
11. Addressing Urban Mobility Challenges	22
12. Improving Technical Capacity to Plan and Manage Cities	23
13. Challenges Experienced and Lessons Learned	23
14. Future Challenges and Issues for the New Urban Agenda	24
III. Environment and Urbanization	27
15. Addressing Climate Change	27
16. Disaster Risk Reduction	28
17. Reducing Traffic Congestion	29
18. Air Pollution	30
19. Challenges Experienced and Lessons Learnt	32
20. Future Challenges and Issues for the New Urban Agenda	33
IV. Urban Governance and Legislation	35
21. Improving Urban Legislation	35
22. Decentralization and Strengthening of Local Authorities	36
23. Improving Participation and Human Rights in Urban Development	38
24. Enhancing Urban Safety	39
25. Improving Social Inclusion and Equity	39
26. Challenges Experienced and Lessons Learnt	41
27. Future Challenges and Issues for the New Urban Agenda	42
V. Urban Economy	43
28. Improving Local Finance	43
29. Strengthening and Improving Access to Housing Finance	44
30. Supporting Local Economic Development	46
31. Creating Decent Jobs and Livelihoods	47
32. Integration of the Urban Economy into National Development Policy	49
33. Challenges Experienced and Lessons learnt	50



34.	Future Challenges and Issues for the New Urban Agenda.....	52
VI.	Housing and Basic Services	55
35.	Slum Upgrading and Prevention	55
36.	Improving Access to Adequate Housing.....	56
37.	Ensuring Sustainable Access to Safe Drinking Water	58
38.	Ensuring Sustainable Access to Basic Sanitation and Drainage	59
39.	Improving Access to Clean Domestic Energy	60
40.	Improving Access to Sustainable Means of Transport.....	63
41.	Challenges Experienced and Lessons Learnt	64
42.	Future Challenges and Issues for the New Urban Agenda.....	66
	Indicators.....	69
	References	71



List of Acronyms

BRD	Banque Rwandais de Développement
CoK	City of Kigali
DDP	District Development Plan
DRC	Democratic Republic of Congo
EDPRS	Economic Development and Poverty Reduction Strategy
EICV	Integrated Household Living Conditions Survey
FARG	Genocide Survivors Assistance Fund
FRW	Franc Rwandais
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GHG	Green House Gas
GOR	Government of Rwanda
HHs	Households
ICT	Information and Communication Technology
KCMP	Kigali City Master Plan
LED	Local Economic Development
LODA	Local Development Authority
LTRP	Land Tenure Regularization Program
MIDIMAR	Ministry of Disaster Management and Refugee Affairs
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Economy and Finance
MINEDUC	Ministry of Education
MININFRA	Ministry of Infrastructure
MINIRENA	Ministry of Natural Resources
NISR	National Institute of Statistics of Rwanda
p/km ²	People per square kilometre
PMO	Prime Minister's Office
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper
PSUP	Participatory Slum Upgrading Program
RBS	Rwanda Bureau of Standards
RDRC	Rwanda Demobilization and Reintegration Commission
RGB	Rwanda Governance Board
RHA	Rwanda Housing Authority
RLDSF	Rwanda Local Development Support Fund
RNP	Rwanda National Police
RNRA	Rwanda Natural Resources Authority
RRA	Rwanda Revenue Authority
RURA	Rwanda Utilities Regulatory Authority
RSSB	Rwanda Social Security Board
SSP	Sector Strategic Plan
TVET	Technical Vocational Education and Training
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change



UR	University of Rwanda
USD	United States Dollar
VUP	Vision 2020 Umurenge Program
WDA	Workforce Development Authority
WFP	World Food Program



List of Figures

Fig. 1: Population densities in Rwanda.....	5
Fig. 2: Percentage (%) of population migrating in the last five years, at district level.....	6
Fig. 3: Strategic Infrastructure Investments and the six Secondary Cities	7
Fig. 4: Planning types and hierarchies	19
Fig. 5: Key sources for GHG emissions sectors	27
Fig. 6: Kigali ring roads as planned Land use and Transportation Master Plan (2012) of Kigali City.....	30
Fig. 7: Jobs in secondary cities, 2014	48
Fig. 8: House price affordability with changing interest rates	50
Fig. 9: Housing Demand Strata.....	57
Fig. 10: Composition of current Rwanda energy sector	60
Table 1: Electricity generation mix in Rwanda	62
Table 2: Indicators requested for the Habitat III report	69

Foreword

This report describes the evolution of habitat in rural and urban areas of Rwanda over the course of the last twenty years, however with particular focus on the recent years. In 1996, the country was just rising from ashes after the genocide against Tutsi of 1994. The Government of Rwanda was challenged by the influx of returning refugees, for whom to find shelter, and to resolve arising land and property conflicts.

Rwanda's rapid population growth and density on a small area with a difficult to develop terrain are challenges which it faces when striving for sustainable development. By taking a proactive approach to plan and master its urbanization, Rwanda is positioning itself for the future. The overall goal of policies and strategies followed is to promote good urban development that enhances local and national economic growth and ensures good quality of life for everyone.

Rwanda guides urbanization and human settlement in a way to efficiently use and manage its natural resources while promoting sustainable development, to reinforce its system of urban areas and human settlements for local economic development based on local potentialities, to promote densification for cost effective public investment and infrastructure service delivery, to preserve land for agricultural production, open space and conservation of the environment, and to plan for the needs of transportation, housing, culture, recreation, utilities, waste management, information and telecommunication, commercial and industrial development in response to macro-economic strategies and citizens views. The responsibility for well-managed urban development is across the actors, while, however, one overarching Urbanisation and Rural Settlement Sector has been created with the second Economic Development and Poverty Reduction Strategy 2013-18.

This report highlights the main achievements and also the challenges related to urbanisation, human settlement, and governance in achieving sustainable *habitat*. It provides global recommendations as a contribution to the Habitat III conference.



Introduction

Rwanda has made great strides on almost all development indicators in the last two decades. The country's Vision 2020 has guided national development strategies toward five broad targets: rapid economic growth to middle income status, increased poverty reduction, more off-farm jobs and urbanization, reduced external dependency, and private sector as the engine of growth. The National Economic Development and Poverty Reduction Strategy, EDPRS2, has the overarching goal to accelerate progress toward a middle income status and better quality of life for all Rwandans. It focuses on four thematic areas: Economic transformation, Rural development, Productivity and Youth Employment, and Accountable governance.

The list of positive developments in Rwanda over the last 10 years includes a growth of GDP of 8% on average, growth in exports at 500% and imports at 300%, and the S & P Country Credit Rating being B with a positive outlook. Rwanda was ranked Africa's most efficient Government in the 2014-2015 Global Competitive Report and the 2nd most competitive place to do business in Africa after Mauritius and positioned 62nd out of 189 countries in the World Bank Doing Business 2016. Such achievements can be attributed to the strong political will driving these positive changes.

Having embraced urbanization as a key priority area in the national development strategies including Vision 2020, the country highly considers the urban development agenda as a possible resource to unlock the transformative economic opportunities for growth and poverty reduction. Rwanda's national overarching goal of 35% urbanisation rate by 2020 from 16.5% (Census, 2012) is driven by the strong political will to undertake

significant investments in infrastructure, services and skills development. Under EDPRS2, six secondary cities were identified as economic poles of growth to promote investment in priority sectors, off-farm job creation and a green economy approach driven by private sector.

Appropriate policies, legal and institutional frameworks for housing and urban development have been established to foster a network of human settlements. Urbanization and human settlements are guided by the Urbanization and Rural Sector Strategic Plan 2013-18. The strategy develops the objectives of good development management and of spatial distribution of growth, and translates them into two high level priorities:

- To develop the basis for good urban and rural settlement management cross-cutting all development sectors and following clear guidelines and procedures at all levels of governance;
- To create a hierarchical network of urban and urbanizing centers providing services and attracting economic activities countrywide, and to support the development of secondary cities, districts, towns and villages, as well as the capital, Kigali.

Rwanda has also adopted a National Urbanisation Policy formulated with the highest level of stakeholder inclusion. Performance targets have been identified and implementation is being tracked. Each district has begun articulating its district level vision, local economic development strategy, district development plan, and detailed performance targets. The harmonious collaboration between all development sectors and actors shall lead to their achievement.

Despite the above achievements and current initiatives, the success cannot be without challenges and lessons learnt to provide a guiding agreement for the new



urban agenda. This report puts on record the achievements in the sector while highlighting challenges, lessons learnt and emerging issues to be addressed globally during the coming two decades. The data and analysis are based on document review, data from various government institutions, field visits, surveys and interviews with private, public and civil society leaders.

Emerging from this report as future challenges and issues for consideration in the new urban agenda are highlighted the following, but are not limited to:

▪ **Urban Demography**

- a) Support local governments in their capacity to identify the opportunities and constraints for poverty reduction and economic development provided by rural-urban linkages.
- b) Pay attention to social safety programs for elderly who are likely to not have benefitted from just establishing social security programs and life-long schemes.
- c) Help create attractive family-friendly conditions in urban areas.

▪ **Land and Urban Planning**

- a) Base public investment on evidenced resource efficient and effective spatial growth models, and integrate investment decisions about emerging centers, which usually pose a challenge to local governments.
- b) Ensure integrated planning to be supported by modern technologies, which requires diverse skills. Application areas are planning, implementation and monitoring for integrated infrastructure systems.
- c) Ensure sustainable linkage between environmental protection and agricultural production.

▪ **Environment and Urbanisation**

- a) Properly and in “green” manner manage the demand for increased industry and services establishment.
- b) Emphasize on measures to improve traffic safety, including safety for pedestrians and cyclists.
- c) Reduce the impact of disasters on vulnerable communities by integrating mitigation measures from planning through project implementation.

▪ **Urban Governance and Legislation**

- a) Emphasize on the need to collaborate with civil society based organizations, to achieve and sustain policies and legislations which are inclusive and participatory despite development pressure and shortage of resources, and to maintain social cohesion and conviviality with inbuilt early dispute management.
- b) Mitigate social life in Sub-Saharan African cities which is at risk of erosion of family and other social relations.
- c) Adopt cross-sectoral approaches to policy development and program design for completeness, comprehensiveness, harmony and sustainability, and to embed addressing of human rights across the sector priorities.

▪ **Urban Economy**

- a) Intensify collaboration between National governments, finance sector and civil society when setting up housing programs, with the objective to carry financing risks collectively and to integrate population groups with low and irregular incomes.
- b) Improve investment environments, resolve administrative bottlenecks, enhance customer orientation and emphasize on economic feasibility.



- c) Focus on creating opportunities for the population currently active in the farming or informal sector, and for the students to find a good job when graduating.

- **Housing and Basic Services**

- a) While striving toward higher quantities of housing units produced, ensure high-quality, likeability and cultural identity in housing neighborhood design, as well as raise quality and skill levels in design, engineering and construction.
- b) Facilitate collaborative schemes that bundle capacities as a vehicle to overcome shortage of finance and other resources in housing development, urban upgrading, and commercial development.
- c) Ensure access to safe water, intensify measures to prevent water contamination in the ground and during transmission, and reduce the use of polluting sources of energy.
- d) Improve public transport in support of adequate mass mobility, to make better use of urban space, reduce the dependence on more polluting modes of transport, and to enhance affordable means of transport for urban residents.





I. Urban Demography

1. Managing Rapid Urbanization

Rwanda is among one of the least urbanized countries in the world with 16.5% of the population living in urban areas (NISR, 2012). Simultaneously, its annual urban growth of 4.5% far exceeds the worldwide average of 1.8% (MININFRA/MINALOC, 2013).

urban areas evolved from administrative posts.

Today, Rwanda is experiencing considerable internal migration, both within and between provinces, and from rural to urban areas (MININFRA/MINALOC, 2013). 1.4 Million people have migrated within or to Rwanda in the last five years, accounting for around 12% of the total population, among which 1.3 Million (11% of the total resident population) are internal migrants and approximately 98,000 (0.9% of the total population) are international migrants

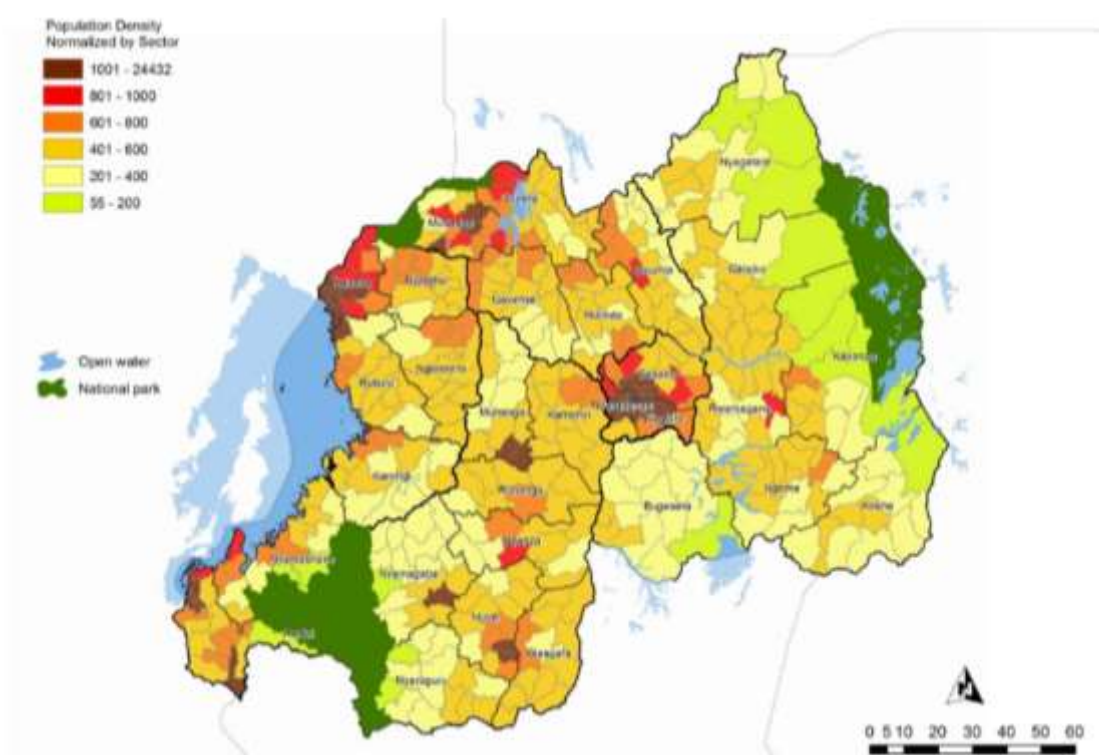


Fig. 1: Population densities in Rwanda (Source: EICV4)

Urban growth is a recent phenomenon in Rwanda. The traditional settlement pattern with families living isolated for the purpose of cultivation started to change during the colonial era¹, when the first planned settlements were introduced and

(EICV4). The percentage of population migrating internally increased from 9% in 2011 to 11% in 2014 (ibid.). Kigali is the major urban centre, hosting about 48% of all urban dwellers and assimilating most migration due to the concentration of economic activities. EICV4 proves that Kigali City assimilates the highest percentage (29%) of migrants. Besides

¹ German protectorate (1896-1916), Belgian colony (1916-1962)



Kigali, the Districts Nyagatare, Rwamagana and Kayanza in the Eastern Province have experienced the highest rates of migration since 2011.

Migrants are more likely persons in the highest consumption quintile. Their most commonly cited reasons for internal migration relate to employment (19.9%) or

management framework is established. Rwanda intends to proactively get prepared to accommodate the experienced and expected urbanization growth instead of trying to prevent it. Several factors speak for the program: the shortage of land, the limitation of land subdivision, and a shift toward more professionalized agricultural production with a growing

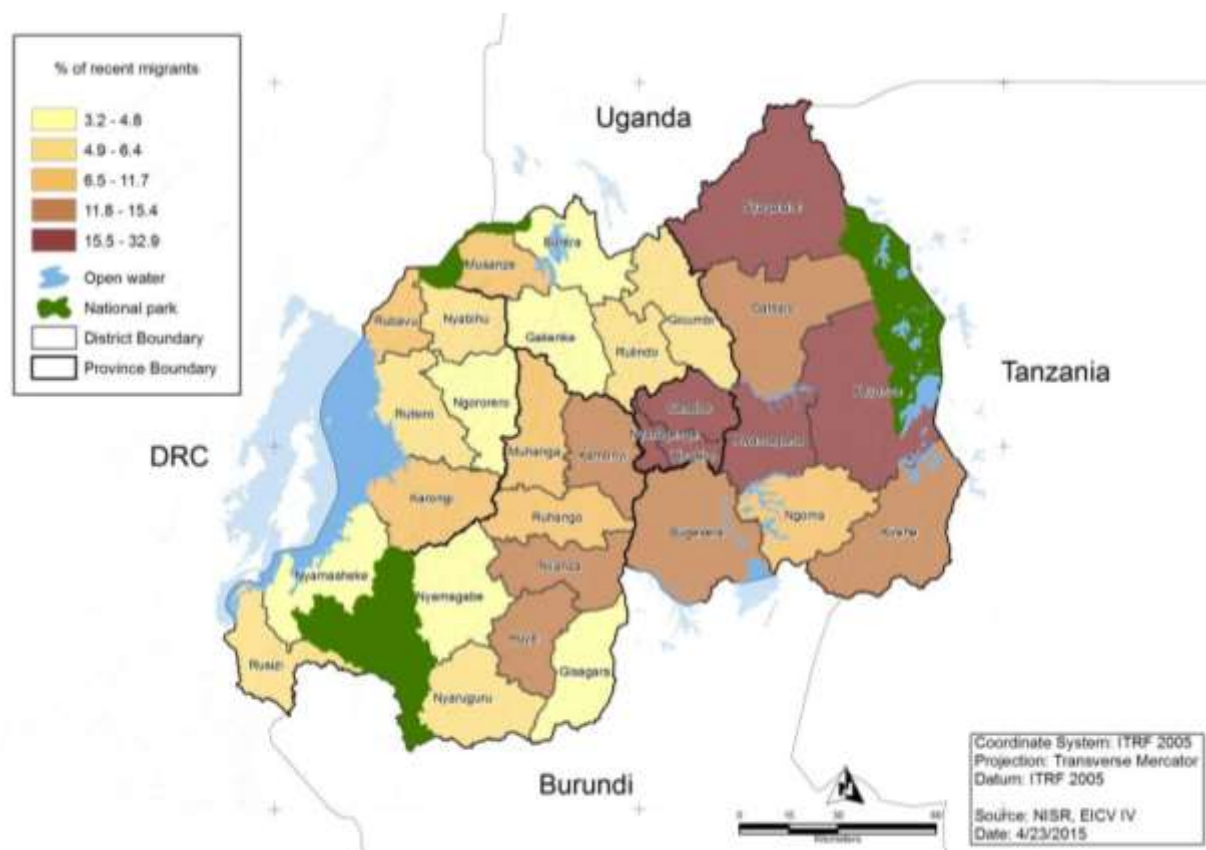


Fig. 2: Percentage (%) of population migrating in the last five years, at district level (Source: EICV4)

a variety of family-related reasons (59.7%). Around 5% of internal migrants stated 'lack of land' as their main reason for migrating. The population aged 20–29 years has the highest percentage of migrants (EICV4).

Vision 2020 aims at achieving an urbanization rate of 35%, correlating urban growth with economic growth, if well managed and if the necessary administrative and development

number of people who require to be provided with off-farm jobs, while especially youth with increasing education levels also increasingly desire off-farm opportunities.

Significant achievements were made during the last decade. Those are in the areas of urban development, neighbourhood development, the creation of an enabling environment for managing development, and in the areas of



sustainable and inclusive development. Below, the achievements are further described.

The EDPRS2 (2013-18) emphasizes the significance of good development management. The strategy formulation process also resulted in the creation of the Urbanization and Rural Settlement Sector, with strategic goals and objectives for a sustainable, well-managed and integrated growth. The priority component of the EDPRS2, economic transformation, emphasises the following three priority objectives in the Urbanization and Rural Settlement sector:

- Integrated development planning and management;
- Development of secondary cities as poles of growth;
- Establishment of financing and supply options for affordable housing.

The Strategic Plan for the Urbanization and Rural Settlement Sector (2013-2018) (SSP) outlines the overarching goals and objectives of urban development with the aim to improve Rwandans' quality of life and develops the objectives of good development management and of spatial distribution of growth. It translates them into two high level priorities:

- To develop the basis for good urban and rural settlement management cross-cutting all development sectors and following clear guidelines and procedures at all levels of governance;

- To create a hierarchical network of urban and urbanizing centers providing services and attracting economic activities countrywide, and to support the development of secondary cities, districts, towns and villages, as well as the capital Kigali.

With the EDPRS2 and the Urbanisation and Rural Settlement SSP, six secondary cities were selected for the promotion of urban development outside of the capital city: Rubavu, Musanze, Huye, Rusizi, Nyagatare, and Muhanga.

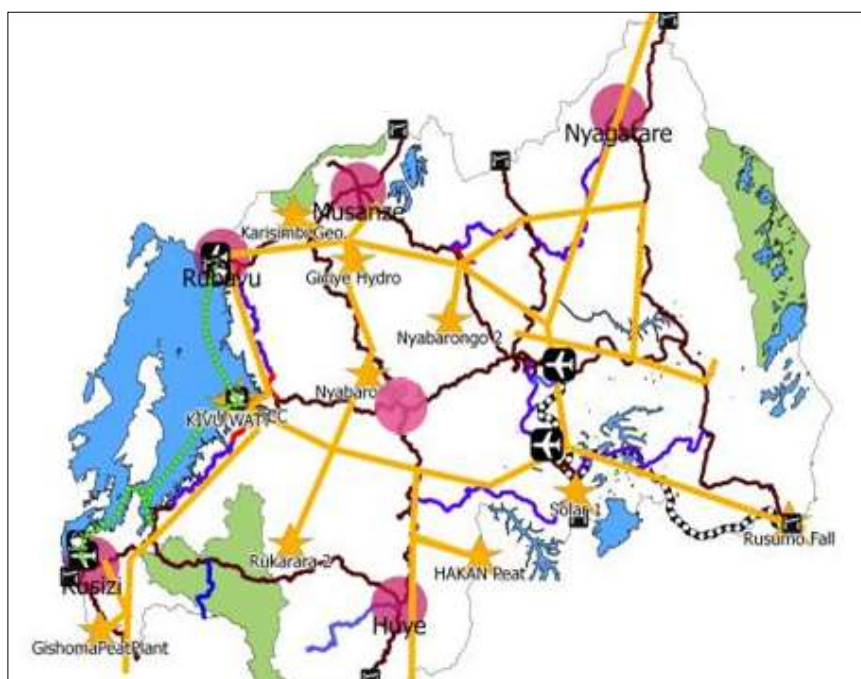


Fig. 3: Strategic Infrastructure Investments and the six Secondary Cities (Source: Urbanization and Rural Settlement SSP)

The decentralisation of development management, with a new supportive legal framework laying out the principles and procedures, a further milestone, was identified as a necessary component for the good management of urbanisation. Similarly, the official approval of One Stop Centers responsible for the management of development at District level is a complementing effort toward



improved development management, including the coping with urbanisation. The administrative structure now distinguishes between urban and rural Districts.

The development of ICT tools in support of improved, transparent and accountable development management completes the efforts from a technical point of view. In Kigali City, a web-based building permitting system adds public usability to the online-Masterplan, and will be rolled out countrywide. A national geo-database to contain all infrastructure and urban planning data is currently under establishment to support informed and coordinated planning and decision-making. The data shall be accessible to the Districts once operational. Other related achievements are described in the following chapters.

2. Managing Rural-Urban Linkages

Urban areas play a significant role in the development of their surroundings. The linkage between rural and urban locations, people and activities is a key component of supporting livelihoods and local economies, and is an engine of economic, social and cultural transformation. Rural-to-urban migration accounts for some of Kigali's population growth. According to the results of the EICV3 survey, between 2006 and 2011, about 19 per cent of the adult population migrated within the country, and 58% of migration has been towards Kigali, a trend virtually unchanged since the EICV2, which records that 57.6% of internal migration to Kigali.

The National Housing Policy of 2015 emphasizes the importance to well integrate a variety of themes with each other, for equilibrium of economic

development and food security. The economic interdependence between rural and urban areas should be in the focus of attention, since “urban areas provide markets for rural products, and centres for processing, distribution and information”, as highlighted by the EDPRS2. Rural-urban inter-linkages in promoting food security has been and will still be addressed going forward. Initiatives in place include; efficient use of land, community planning, collaborative development, suitability of housing typologies, urban agriculture for continued subsistence on transformed land, and protection of rural agricultural resources and the environment.

Rwanda combines urbanisation and rural settlement development as one sector and is therefore well positioned to address the linkage between urban and rural development. It promotes strong economic linkages between urban areas and the rest of a district through its administrative structure, with District governments responsible for both, urban and rural areas. Rwanda further intends to embark on the opportunities of rural-urban linkage, such as response to the urban demand for high value horticultural and livestock produce, and diversification of off-farm employment opportunities.

Simultaneously, it has begun to address urban sprawl, resource depletion and the effects related to environmental degradation in the urban peripheries.

Urbanization shares a number of issues with rural development. The urbanization trend will affect rural transformation, and the transformation of small trading centers into larger urban areas eventually. Rwanda is implementing a strategy whereby rural settlements are developed around economic opportunities with the potential to grow into urbanising areas, by



supporting rural development. Development processes are meant to be triggered through mixed land use development and through rural-urban inter-linkage, integration into a settlement network, and adding the opportunity for processing and trade of agricultural produce. The District Land Use Plans have to reflect this physical link interrelating rural and economic development. Important in the management of such inter-linkage across physical space and development sectors are, according to the National Urbanisation Policy (2015), to embark on the opportunities by responding to the urban demand for high value horticultural and livestock produce, and diversification of off-farm employment opportunities; and mitigate the risk of urban sprawl, resource depletion and the effects related to environmental degradation in the urban peripheries.

There have been implemented Integrated Development Program (IDP) model villages in all Districts, as illustrated in the new rural settlement programs to provide socio-economic opportunities in rural areas, for the increased economic and social benefits of living in a formal settlement over living in a scattered settlement. Interventions include a feeder roads programme and information and communications technologies (ICT) expansion for rural areas with the aim of linking communities to markets, the electrification programme, modern biomass and other cooking methods, and full coverage of quality water and sanitation (EDPRS2). The establishment and strengthening of One Stop Centres in all Districts assists in rural development and provision of services to rural citizens, while incorporating their needs in local plans based on consultations.

3. Addressing Needs of Urban Youth

The future of the country depends on the youth; they are the human capital. Youth represent the majority of the national population. According to the EICV4, 53% of the population is 19 years old or younger. 39% of the population is between 14 and 35 years old and considered youth. 64% of the age group 16-29 is underemployed. The highest levels of economic inactivity are among youth with some primary or secondary education (PMO presentation). Also according to the EDPRS2, “a key emerging challenge in Rwanda is unemployment amongst skilled youth in urban areas”. Furthermore, unemployment is much higher in urban areas with 13% in Kigali, and it is concentrated amongst secondary senior graduates and university graduates (EDPRS2). The numbers of secondary graduates is even expected to increase due to the Education Sector Strategy, and while the number of students increases 5% annually. There is also increase of the numbers of educational institutions, due to the emphasis on the profound relevance to human development in Rwanda (Establishment Census, 2014).

The creation of urban jobs is a central need as part of urbanization in Rwanda. Vision 2020 targets 1.8 Mio new off-farm jobs. The Urbanisation SSP takes up the problem and emphasizes on the need for off-farm employment to provide opportunities for the growing and increasingly educated youth. Following the above strategy, the development of a settlement network shall ensure balanced growth and provide increased access to off-farm employment. A variety of programs are under development which intends to boost the number of local economic activities by supporting employment creation, skills development



and the creation of businesses. Examples of government programs are described below.

A National Employment Program has been created to support employment through approaches which target skills development and the support to the establishment of SME's. The Workforce Development Authority (WDA) created in 2008 organizes its activities around four strategic pillars 1) Skills Development through Vocational Training; 2) Entrepreneurship Development; 3) Industry Standards; and 4) Regulation and Accreditation. Within this framework, WDA manages a Skills Development Fund to finance rapid skills delivery through Technical and Vocational Education and Training (TVET). Integrated Polytechnic Regional Centres (IPRC) offering vocational training were created in all four provinces of the country and its capital. The reformed District structure now integrates Business Development and Employment Units, with the aim to support local economic development.

The City of Kigali is spearheading the Kigali Employment Service Centre, where job openings are bundled and career advice is provided. Under a program called *Agakiriro*, tangible jobs are being created in centres, in the locations of which infrastructure is being facilitated. *Hanga Umurimo* (Create your own job) is a competitive program encouraging the implementation of creative and bankable business ideas through a credit support. It has helped reduce unemployment among the youth and alleviating poverty within communities. According to EICV 3 and 4, an increase of wage non-farm jobs by over 115,000 in urban areas and over 125,000 in rural areas has been recorded between 2011 and 2014. The majority of these waged non-farm main jobs were taken up

by young people. The increase for individuals aged 16-35 years was over 190,000 while it was around 54,000 for persons aged 36 years and above.

Youthconnekt aims at linking youth among themselves, and with public, private, civil society and international organisations that work to promote youth's civic and socio-economic development. Youth centres are also the objectives of initiatives, to build places where young people meet, exchange ideas, get trainings about socio culture and economic aspects and play their favourite sports. Rwanda has also set programs to develop sport infrastructure, and the Government is working on incentives for private sector to engage in the development of sports infrastructure facilities.

4. Responding to the Needs of the Aged

Elderly people above 60 years represent 4.9% of the total population, with a larger proportion of women (NISR 2012). The share of elderly population is higher in rural (5.2%) than in urban areas, where they represent 3.0% of the total urban population (ibid.). The needs of the aged are in particular related to access to healthcare; access to finance through inclusive pension schemes; and subsidised assistance programs to elderly without children and relatives. Even though almost all elderly persons need special care and assistance, some among them such as women, elderly with disabilities, or those who have no source of support, must be given priority whenever assistance is necessary.

The government of Rwanda put in place a unit in charge of local community and social protection. Its daily work and mandate is to ensure the very poor and



vulnerable people as per the poverty levels set by the *Ubudehe* Program. The program guarantees a minimum income and access to core public services, those who can work are provided with the means of escaping poverty. According to the strategic plan of the department, the Government has put in place policies to promote the well-being of the elderly, which includes a restructuring of the Social Security Fund to provide free medical care for the elderly who are poor, construction of homes for the homeless aged people and provision of cash to elderly genocide survivors by the Genocide Survivors Assistance Fund (FARG). In addition, other programs like *Girinka* (“One cow per poor family”) have much benefited the elderly through the harvesting of milk that prevents them from diseases related to malnutrition. In addition to *Girinka*, small animals like goats, sheep, pigs and chicken are provided to the elderly to increase their income generating capacity.

The program *Vision Umurenge*, as outlined by the strategy, provides direct support, with the recipients mostly elderly, female and very often has elders with disabilities (of the beneficiaries, 71% are over the age of 60, 65% are female, and 42% have a disability). Vulnerable elderly receive a financial support of FRW 15,000 every month to cover basic needs (EICV4). About 1% of households received formal social security in the form of a pension from the Rwanda Social Security Board, or another old age grant. This formal social security is more widely found in urban than in rural areas, reflecting the greater proportion of people in formal sector employment in urban areas. A small percentage of households received support through the Rwanda Demobilization and Reintegration commission (RDRC) programme.

Measures related to accessibility of the built environment for people with disabilities and vulnerability are obligatory for public buildings, and are fixed by the urban planning and Building Code. All measures have improved the quality of life and some graduated from the extreme poverty level.

5. Integrating Gender in Urban Development

Rwanda is at the forefront of promoting gender equality and women empowerment. The Rwandan Constitution (2003) commits to ensure equal rights between women and men without prejudice to the principles of gender equality and complementarity in national development. Its articles 9 and 52 respectively state that women are granted 30% of posts in decision making organs and that man and women have equal access to elective offices. Moreover, the Constitution has established a National Women Council with a mandate of empowering women and enhancing their participation in different development programs.

Gender equality and family promotion were firmly entrenched in both PRSP and EDPRS 1 and continue as cross-cutting themes in EDPRS2. The approaches have transformed the socio-economic and political lives of men and women, and have earned the country the highest position in promoting gender equality in the world (EDPRS2). Legal framework such as the National Gender Policy (2010), the National Policy against Gender Based Violence law (2011), and the Girl’s Education Policy (2008) was put in place to eliminate gender disparities in order to ensure equal participation to the socio-economic development. The framework has resulted in a number of initiatives such as:



- *Isange* One Stop Centers, which provide holistic services to victims of Gender Based Violence,
- Rest areas for young girls in secondary schools which help them during their menstruation period;
- Community based Early Childhood Development that support children from 0-3 years, and so many other initiatives that have improved the well-being for citizens.

The Gender Monitoring Office has the mandate to monitor and evaluate the implementation of the principals. Through the recent Land Tenure Regularization Program, the registration of equal rights for women to the immovable property of a family has been formalized and men and women are equally registered in land and property ownership documents in contrast to the previous customs that had let only male children as the sole heir of their parents' land. In the context of urbanisation, Rwanda through the National Urbanisation Policy, adopted in December 2015, strives to integrate programs which support women as part of the urban economic force, and which enable women equal participation in urban planning and design. Urban development and management have direct impact on aspects relating to gender and family. The following objectives, which particularly relate to qualitative planning and urban design, will be further promoted:

- Mixed use development to facilitate women and men to perform their daily activities and responsibilities more efficiently and free up time for economic and social development;
- Neighbourhood design that provides for safe walkability for children, women and elders;
- Neighbourhood design with a variety of spaces that invite different scaled community activities for different

groups, and especially outdoor play spaces for children;

- Improved and sustainable sanitary infrastructure at household and neighbourhood level, especially in densely populated areas;

In the housing sector, the National Housing Policy (2015) supports female participation in construction jobs and creation of housing guarantee fund in support of women. The National Urbanisation Policy (2015) equally anchors programs which support women as full participants of socio-economic spheres of life and strengthen prevention of gender-based violence in urban areas.

The strong will of the Rwandan Government through its various policies, laws and programs in favour of gender equality has led to the following achievements:

- A noticeable increase of women in parliament. Since 2013, 64% of seats have been held by women.
- In terms of education, the EICV4 reports that the percentage of female versus male that have attended school from the past 12 months increased from 55.9/ 58.7 (2010/11) to 58.4/ 59.4 (2013/14).
- Family planning and maternal health is considered as a priority for the Government. According to the Demographic Health Survey, the maternal mortality rate dropped from 1,071 in 2000 to 210 in 2015.
- According to the EICV4, there is a small increase of the percentage of women working in paid off-farm jobs from 18.3% (2010/11) to 18.8% (2013/14).
- Rwanda is ranked 6th and it is the only African Country to be among the top 10 Countries Worldwide in terms



of Global Gender gap index (The Global Gender Gap Report, 2015).

6. Challenges experienced and lessons learnt

Regarding responding to needs for the elderly, the main challenge is that coverage is still low and has to be extended despite financial constraints. There are many vulnerable groups in the population which do not have adequate support coverage. There is no specific national program which supports older people or people with disabilities.

The challenges experienced in relation to demographics are in the areas of planning for growth; triggering economic opportunities especially in view of the growing and increasingly educated youth, while including underprivileged and vulnerable groups in development. The challenge also related to the continued implementation of reforms, the impact of which is just starting to unfold. One of the challenges is the increasing coordination required in public investment prioritisation, in order to match the investment with the increase of residents in the urban areas. Appropriate and proportional strategic investment into public works is required to provide urban services to those urban citizens. There is necessity to appropriately plan for:

- Economic development based on economic potential to provide opportunities to urban dwellers to sustain themselves and their families;
- Increased food production for the urban consumption; and the
- Necessary land resources, for constructed development (housing, public facilities, economic development) as well as increased food production beyond subsistence production.

Coupled with this, and to effectively manage projects, the continued raising of the financial management capacity at District level is needed. Constraints embedded in planning for rural-urban linkages are environmental degradation and enforcement of land use planning documents. The specific areas which require attention in the context of development are natural resource management, especially in a country constrained by scarce land resources and enforcement of national and district land use plans including provision of necessary tools. There are many opportunities which have to be enhanced, such as the increasing urban demand for high value horticultural and livestock produce which may trigger agricultural intensification. Non-farm employment opportunities help households diversify their income sources. The rural population seeks new opportunities which are expected to result in an increased migration. As pointed out by the Rwanda National Land Use and Development Master Plan, this requires efforts creating job opportunities, and facilitating affordable housing production to provide shelter to the increasing urban population.

As identified by the EDPRS2, a key emerging challenge is unemployment among the skilled youth in urban areas. Unemployment represents an important waste of human capital and suggests that graduates may not be obtaining the skills that firms need. The private sector is still young in Rwanda and the necessary skills related to business creation and to its sustaining through good management have to be created. The Government therefore sets up an active labour market policy, assisting job seekers to find vacancies through Employment Service Centres, Career Advisory Services for students, and



providing a social safety net for those below a minimum income (EDPRS2). The government campaigns to improve women's position in the labour market and to change attitudes towards the kind of jobs that men and women can do (EDPRS2). A continued intensity of strategies are now needed which will support individual engagement for the success of entrepreneurship in the national context. A strategic support to Local Economic Development enabling private sector engagement and investment is the main path for Rwanda in view of its Economic Development and Poverty Reduction Strategy.

Despite the effort made by the Government to promote gender, women do not participate fully in socio-economic and political life, and their participation in economic activities is higher in rural than in urban areas. Their role and responsibilities in creating and sustaining development is constrained by the low level of business skills, and access to loan and management of household finance. The National Gender Statistics Report 2013 shows that only 2.7% of women accessed credit through banks compared to 4.1% of men, while 4.4% of women accessed credit through other formal means (e.g. micro-finance institutions) compared to 8.3% of men (ibid). A slight improvement in the percentage of women working in paid off-farm job is noticeable; nevertheless the gap between male and female employment is still considerable with 46.6% versus 18.8% (EICV3). Across all education levels, women are less successful in accessing jobs than men, and the greatest disparities are observed at the upper secondary and university levels. The difference in these education categories is 7 percentage points (ibid.). In regard to the Health Sector, from the National Gender Statistic Report 2014, the HIV prevalent

rate in urban areas is higher among women compare to men 8.7% versus 5.4%. Capacity building programs and awareness campaigns need to be a continued process ensuring gender equality.

7. Future challenges and issues for the New Urban Agenda

Urban-rural interaction is an increasing complex phenomenon. Changing technologies and markets make it essential to review conventional theories. A future model should be sufficiently broad to accommodate a range of ways in which rural residents, businesses and institutions interact within urban and rural areas. Improved must also be the understanding of how changing rural-urban interactions affect the livelihoods of low-income and vulnerable groups in urban and rural settlements, and local governments be supported in their capacity to identify the opportunities and constraints for poverty reduction and economic development provided by rural-urban linkages.

Investments in the upgrading of unplanned urban areas will need to be made. Further, the capacities for private investment have to be raised by programs which can support the lifting of socio-economic levels. Those shall be multi-fold, starting with the enabling of mixed use development and possibly ending with the careful design of a set of subsidy products in form of incentives, which may be proposed to help creating attractive family-friendly conditions, which in the case of Rwanda would also be coupled with the support of migration to secondary cities.

The success of individual entrepreneurship will not only depend on individual skills and finance, but also on the positioning of the urban areas in their context by following a distinguishable vision, their



enabling business environment and quality of life offered. Therefore, skills development has to address local government and private sector individuals.

While some developing countries successfully introduce social security programs and increase enrolment, a transitional period is necessary where there shall be social safety programs even for elderly who are likely to not have benefitted from just establishing social security programs and life-long schemes. The prevention of Gender Based Violence has to receive continued attention to ensure drastic reduction and elimination of all forms of violence and discrimination.

The development of saving schemes appealing to youth shall be pursued. Youth has to be mobilized to take advantage of economic opportunities and including technologies. An intensified collaboration with the private sector is necessary to ensure apprenticeship, mentorship and entrepreneurship.

Addressing the current as well as future needs of the aged population, which among other things include health problems, lack of balanced diet, unsuitable residential area, absence of family and community support, absence of social welfare coverage, limited social security services, absence of training education and training opportunity, limited employment and income generating opportunities will be challenge for the Government.





II. Land and Urban Planning

8. Ensuring Sustainable Urban Planning and Design

For the development of Rwanda, sustainability is fundamental. The period of country rebuilding after 1994 genocide against Tutsi, was characterized by emergency responses to urgent social and economic challenges including the settlement of returnees, infrastructure development and country stabilization. In this period, urban planning was not given much importance rather grouping rural settlement.

In 1998-1999, the Office of the President of the Republic of Rwanda launched national reflection sessions on the future of Rwanda resulting in a broad consensus: The Vision 2020. One of the cross-cutting areas of the Vision 2020 is the protection of environment and sustainable natural resource management, and ensuring development guided by land use planning. This reflects the political will to ensure sustainability in urban development process.

The 7-years Government program 2010-17 guides the principal activities at National level until 2017. It targets infrastructure and utility provision and their maintenance throughout the country. The program acknowledges the importance, which access to infrastructure has for people to enable a dignified life. It further emphasizes on the importance of housing in rural and urban areas, affordability,

environmental friendliness and collaboration with the private sector.

EDPRS2 emphasizes the significance of good development management. The strategy elaboration went hand in hand with the creation of the Urbanisation and Rural Settlement Sector, with strategic goals and objectives for a sustainable, well-managed and integrated growth. It sets the framework of how to guide economic transformation with regards to three priority objectives in the sector, which are 1) Integrated development planning and management; 2) Development of secondary cities as poles of growth; and 3) Establishment of financing and supply options for affordable housing.

The legal and institutional framework was strengthened to ensure sustainability in pursuing the country's development vision. To ensure sustainable and efficient use of land, in 2004, a National Land Policy² was adopted followed by the *Organic Law No 08/2005 of 15/07/2005 determining the use and management of land in Rwanda*, which was repealed in 2013 to adopt the *Law N° 43/2013 of 16/06/2013 governing land in Rwanda*. Land reform converted the majority of land from state land into privately owned or leased land, implemented through the National Land Tenure Regularization Program (LTRP) from 2010 after a preceding trial period 2008-10. The LTRP resulted in the issuance of registered titles to every landholder to unlock the potentialities for sustainable growth based on a clear framework which would be equally valid to all users of land.

In 2011, the National Land Use and Development Master Plan was adopted to

² The National Land Policy is under revision



ensure sustainable land use development at National level. In 2012, the Law N°10/2012 of 02/05/2012 governing urban planning and building in Rwanda was adopted to strengthen sustainable urban planning and building especially through provided further implementation orders of this law. In 2015, an urban planning code was adopted, which provides the principles for the sustainable urban development, urban design and management of urban land. The National Urbanization Policy, which emphasizes the coordination of urbanization and sustainable use of land through densification, was finalised and ready for adoption.

The Urbanisation and Rural Sector Strategic Plan 2013-18 (SSP) develops the objectives of good development management and of spatial distribution of growth, and translates them into two high level priorities (see also Chapter 1). The below priorities from the Sector Strategy are in support of Sustainable Urban Planning and Design:

- Improve the urban and rural settlement development planning and management system;
- Develop secondary cities as poles of growth;
- Develop urban and rural settlements around economic activities;
- Establish financing and supply options for affordable housing;
- Collaborate with the private sector;
- Build institutional and human capacity in the urbanization and rural settlement sector.

Rwanda Housing Authority (RHA), established in 2010, has the mandate to monitor the implementation of policies related to urban planning and management, followed by the operationalization of Kigali City and District One Stop Centre responsible for

ensuring the implementation of urban plans. With the operationalization of *One Stop Centres* in all 30 districts from 2014, which are service centres responsible for all physical development including its permitting and inspection, the elaboration of planning documents for all urban areas and introduction of GIS- and web-based planning and permitting, efficiency and transparency in urban development management have increased.

The *National Investment Strategy* emphasizes the support of the private sector in infrastructure development. Rwanda's *Green Growth and Climate Resilience Strategy* (2011) aims at energy security and a low carbon energy supply, sustainable land use management for food security and appropriate urban development, coupled with a social component for social protection, health and reduced vulnerability to climate change. The *Decentralisation Policy* is directly interrelated to the subject of urban planning, as it provides the framework supporting the devolution of functions for improved local service delivery.

All improvements made by the government of Rwanda aim to ensure sustainable urban planning and design, resulted into harmonisation of the urban planning and design related legal and institutional framework with improved coordination, integrated planning and development management, and good local service delivery.

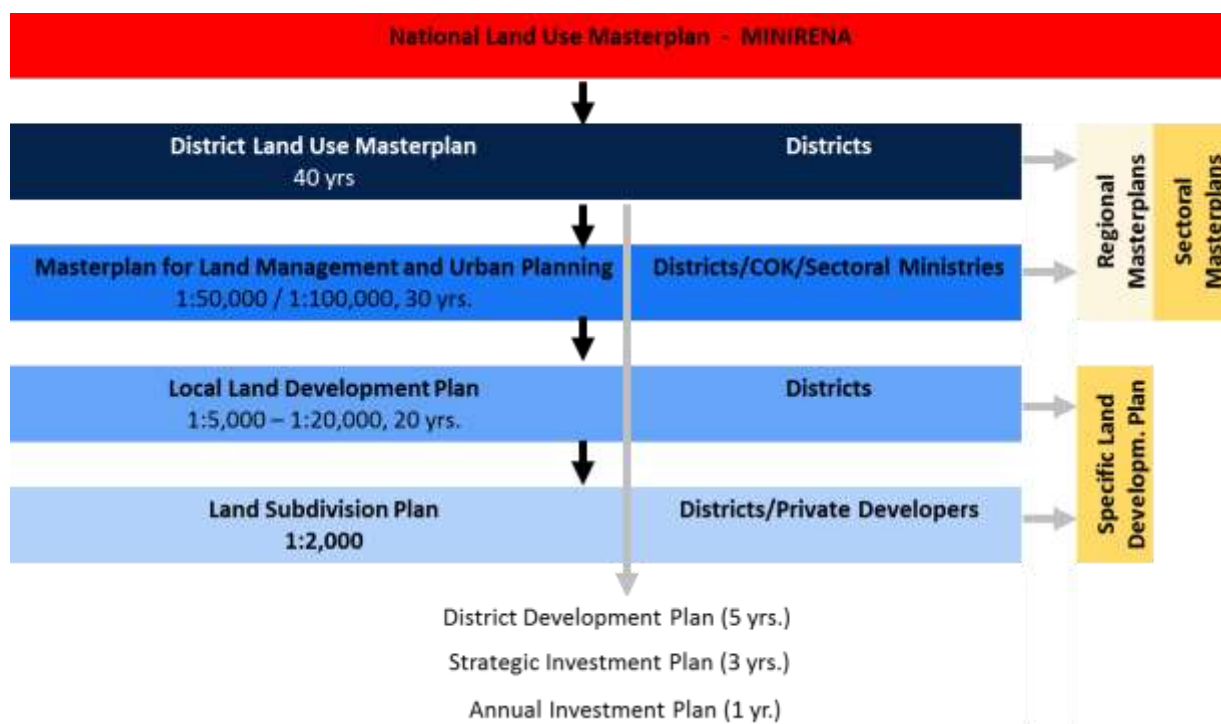


Fig. 4: Planning types and hierarchies (Source: MININFRA)

One of the priorities of the Sector Strategic Plan was to harmonise and complete the urban planning related legal framework and lay the ground for improved coordination, integrated planning and development management in support of the decentralization policy. A set of implementation orders to the Law Governing Urban Planning and Building (2012) now resolve a number of bottlenecks for good urban governance. They establish a planning hierarchy valid in Rwanda, and require the integration of all planning documents and the obligation to refer to the hierarchically higher plan when developing a hierarchically lower but more detailed plan, while also integrating sector planning documents into the system. The 2015 orders determine content, and scale planning documents in Rwanda, determine plan elaboration process with steps which have to be followed independent of who is preparing the plan and provide a legal basis for building and real estate development permitting, i.e. the legal basis for

development management at plot and site level. One order makes provisions about administrative procedures of managing development and specifies details of public inspection of building activities and about auditing of the implementation of urban planning documents.

9. Improving Urban Land Management Including Addressing Urban Sprawl

Since 1962, urban land use management did not receive much attention, and after the 1994 genocide against Tutsi, there was an emergency in resettlement of displaced people and returnees³. This resulted in unplanned urban settlement, uncontrolled urban expansion and inefficient use of

³ According to The Government of Rwanda Poverty Reduction Strategy Paper of 2002, 3.5 million People have resettled (rural-urban migrants, internally displaced and returnees) and this resulted in a widespread development of informal settlement in urban areas.



land. The challenge of urban sprawl is particularly important for Rwanda, which is a country with one of the highest population densities, a challenge which is even more significant due to its small territory. Urban growth has in the past not been sufficiently guided, which in a number of areas has led to unsafe development (landslides, deficiencies in sanitation, etc.), inefficient use of the scarce resources (land, infrastructure finances, building materials), and environmental degradation. Now, with the land tenure regularization and economic growth, building activities and market exchange increase in urban and peri-urban areas, while the reform processes are still under implementation.

Rwanda is exemplary in terms of land management and administration. After adoption of a new Land Policy in 2004, the significant decision was consequently taken and all land ownership regularized, integrating it under one land management system through the implementation of the Land Tenure Regularization Programme (LTRP) (see also 8.). The program was designed to help reduce poverty, increase productive investment, and optimize land use and support gender equality and social harmony. The reforms target the rational use of land resources, and sustainable production, including the sustainable use of wetlands.

The responsibilities between different sectors and sectors have been laid out in a way that cross-sectoral collaboration between land, urban planning, settlement planning, infrastructure planning and economic planning are enhanced through national and local institutional coordination arrangements. The National Land Use and Development Master Plan of 2010, provides the general directives for land use development and presents guiding

principles for the future development of the country in regard to socio-economics, infrastructure, environment and land administration. With the help of the Law governing Urban Planning and Building in Rwanda, 2012 and its implementing orders from 2015, local physical development is regulated based on clear procedures to support sustainable, integral and inclusive development, institutional strengthening and development, decentralization, local economic development, citizen participation and accountability mechanisms. The law and its orders provides for master plan for land management and urban planning, local and specific land development plan and land subdivision plan both aiming at improving the urban land use management and avoiding uncontrolled urban expansion or sprawls. Anchored are now the participatory plan elaboration processes, and the legal basis for development management including at neighbourhood and plot level. Urban upgrading is supported by the Sector Strategy and the National Housing Policy as an important strategy to tap existing and future land and property equity. The upgrading of urban neighbourhoods is seen in support of the opportunity to provide hubs of mixed use economic opportunities for urban dwellers. The Housing Policy highly emphasises on urban upgrading as a means to maintain and expand existing housing stock, which is particularly affordable to people.

Six secondary cities were identified not only to transform the economic geography of the country, but also to avoid pressure on peri-urban land of the Capital city Kigali and urban sprawl, including sprawl of urban functions into rural areas and provide socio-economic opportunities. To guide the implementation of the urbanization policy, a Spatial Development Framework is being



developed including the Spatial Multi Criteria Evaluation to understand the spatial suitability of development and the urban infrastructure geo-data platform is under establishment. The Kigali City Master Plan was adopted in 2013 and it is integrated with the Land Administration Information System (LAIS). At local level, all 30 District have elaborated Local Development Plans. With the operationalization of One Stop Centres in all 30 districts from 2014, and introduction of GIS- and web-based planning and construction permitting, efficiency and transparency in urban development management have increased.

The *Condominium Law No.15/2010 of May 7, 2010* allows for collective ownership of immovable property, which is part of the preconditions for a more efficient use of resources by joint ownership of sites and buildings, which enables higher densities of residential or non-residential units.

10. Enhancing Urban and Peri-Urban Food Production

By 2050 Africa will be home to one-fifth of the world's population, which will put a strain on resources and food security, as pointed out by the commissioner for Rural Economy and Agriculture from the African Union (New Times, 2015). Population growth, coupled with urbanisation trends pose a challenge to meeting food and housing requirements, and the demand for food is estimated to double by 2050 (ibid.).

Interestingly, surveys clearly highlight higher levels of poverty and malnutrition in rural areas compared with urban (NISR, 2012). The province with the highest share of households with acceptable food consumption is by far Kigali, where

between 88% and 96% households have acceptable food consumption (ibid.)

Rwanda is challenged by its land scarcity coupled with population growth. Urban land has to be used efficiently. Therefore, urban farming is especially promoted on undevelopable land within urban areas, which has a high percentage of urban land. Farming within urban plots, or on unoccupied urban land, is quite common practice in Rwanda, where the differences between urban and rural uses and life are still little. However, urban residents need access to basic food commodities produced through an intensified agriculture, to also serve residents who have migrated to urban areas in order to take up off-farm employment, especially in the context of rapid and promoted urbanisation. Despite the positive perception of urbanisation, urban development and expansion shall not exceed the consumption of agricultural land to a degree that would compromise food security.

In the past, agriculture was mainly concentrated in rural areas and in areas surrounding urban areas and the opportunities to formally support urban farming was neglected. The Government is now emphasizing vegetable growing through kitchen gardens, residents are urged to utilize their compounds and participate in the struggle against malnutrition. In support of this, the *Urban Planning Code*, which defines urban land use zones and the permitted activities, allows gardening and tree nurseries within residential areas. It further states that "There may be urban land specifically dedicated to urban agriculture and communal gardens. Vacant urban land may be used for temporary urban agriculture with permission from the land owner and the District." Wetlands, which



characterize the urban areas, are successfully used for agricultural production, and their occupation has been regularized with the LTRP.

As pointed out by the World Food Program (WFP, 2015) high population density and growth have led to deforestation, soil erosion and decreased agricultural productivity. WFP estimates that at least 22% of households (2.2 million people) are food-insecure, and another 24% are highly vulnerable to food insecurity. Food utilization is also a problem, as reflected in high levels of maternal and child malnutrition in many parts of the country. Over 50% of children are chronically malnourished, while one child in four is underweight. According to the EICV4 Poverty Profile, a decline in malnutrition of children has taken place between 2010 and 2014/15. The Government gives high priority to the creation of improved safety nets for the poorest and the most vulnerable people and launched a national school meal programme, which links directly to the Education Sector Strategy. The key initiatives and programs which will make Rwanda achieve urban and peri-urban food security and free from malnutrition are:

- Efficient use of land through land use planning;
- Promoting domestic farming through kitchen gardens for growing vegetables, fruits and other applicable crops;
- Growing fruits in urban green areas;
- To dedicate land for urban agriculture during the elaboration of Master plans.

For value addition on agricultural products, Rwanda continues to encourage its agro-industry which covers mainly tea industry, coffee industry, maize processing, milk, juices, rice, banana wine

and others. And, many of these agro-industries are located either in urban areas or in peri-urban areas mainly because of ease market access.

11. Addressing Urban Mobility Challenges

According to the Public Transport Policy and Strategy for Rwanda, the key principles for public transport services in Rwanda are to ensure 1) Universal public transport services for all citizen; 2) Accessibility; 3) Mobility; 4) Availability for use; 5) Reliability to use; 6) Safety and security; and 7) Monitoring & Evaluation of Level of service and performance, and to satisfy from the user. The total number of motorized vehicles in Rwanda was 140,149 in 2013 (NISR 2014) and about 70% of this number is circulating in Kigali City. The most popular transport system is motorbike taxis. They are about 70 000 taxi motorbikes operating in Kigali City (KTMP 2013).

The local governments - and spearheading is the City of Kigali - successfully improve the public transport system. The Kigali Transportation Master Plan was prepared in 2013 to direct transportation development. Kigali has introduced a public bus service system with busses circulating on predetermined route and provides scheduled services; the routes are equipped with waiting shelter. Road public transport services have especially in Kigali City become more efficient with higher coordination of passenger transport services. While few years back, intercity public transport services was mainly provided by minibuses with 18 seat capacity, a public bus system has been successfully introduced in Kigali. A Quality Bus Service is also introduced as a dedicated service on corridors linking important urban areas and nodes within the



country, and providing a faster and more convenient service to compete with the private car. Road signage and marking has been improved. Traffic safety facilities, such as traffic signs and speed humps have been installed for the prevention of overspeeding. To ensure appropriate planning and management of city roads, a road hierarchy for urban roads has been developed and adopted with the Urban Planning Code.

12. Improving Technical Capacity to Plan and Manage Cities

The building of capacity and enabling of the efficient use of human and technological capacities is a central point of the policies. In 2014, a new structure for local governments was adopted, which included the establishment of One Stop Centres within Districts. A One Stop Center bundles all activities to manage local physical development, i.e. land management and administration, permitting, infrastructure management and public inspection. In support of those activities of development management, a number of tools were prepared. Among those is a national land record database, a National Land Use Management Masterplan available in digital form, and an online building permitting system operational so far in Kigali but under expansion. A geo-database linking all initiatives and containing especially all country-wide settlement and infrastructure data is under establishment. Capacity must be built to enable the best use of the newly available technological tools. There is strong emphasis is on professionalism and the enhancement of skills, both academic and vocational. Promoted are partnerships with universities and the vocational training system for demand orientation in the courses. The Local Government Institute which is under establishment is

currently developing a Masters online course for civil servants. The program intends to address all local governance related themes. The increase of enrolment in TVET programs illustrates the continued enhancement of quality and professionalism, in the construction industry, accounting and social sciences which are skills necessary in local development management. According to EICV4, attendance of tertiary education among individuals aged 16–30 continues to improve and attendance of tertiary education almost doubled between 2011 and 2014. There were 3,088 enrolments in universities 2013/14 (EICV4).

13. Challenges Experienced and Lessons Learned

For the most of Rwanda's territory, urban and land use planning documents were recently developed, are just under development, or do not exist yet. This means that there was no previous formal assignment of land use to most areas. This causes conflict especially when the newly assigned zoning does not suit the capacities of the land holder, or when land use does not match with the originally intended use of land by the land holder. Local urban planning documents are still not sufficiently present, or they require revision and updating in order to align to new policies because in the past, plan elaboration procedures had not been sufficiently guided and may plans were elaborated by foreign firms with people's views not well reflected. A challenge is the lack of qualified staff in District One Stop Centres to prepare, update and monitor urban plans for efficient urban development.

The promotion of mixed use neighbourhoods by the National Housing Policy as well as by the Public Transport



Policy and Strategy is among the promoted measures for reduced traffic through reduced distances and reduced number of vehicular rides. Also, it is proposed to introduce demand responsive real time signal control system, or to change existing signalized intersections in some cases to the traditional roundabout and vice versa. Good rural public transport in Rwanda is a challenge due to the mostly unpaved road network, the inaccessibility of unpaved roads during rainy seasons, and high initial investment costs for bus services in rural areas. This reduces the interest for private operators to provide bus services in remote areas. Required is the improvement of the rural road infrastructure and PPP in rural transport services. Inter-city public transport network is planned to be improved with the objective to reduce the number of minibus passengers at a rate of 3% per annum, and increase bus passengers at a rate of 20%, reduce the number of vehicles by 2% yearly and reduce average travel time by 10% until 2020 by improving connectivity. Private car ownership is increasing rapidly with urbanisation, and this is expected to increase congestion and pollution. The City of Kigali has responded with the reform of its public transport system. There are general transport problems related to planning and management and land use pattern which consist in a lack of traffic and transport engineering, data, and proper transport planning and design. The Public Transport Policy and Strategy identified as the main problems for urban public transport operation planning: coordination and standardization aspects for road network and transport operations improvement including bus and taxi services, dedicated bus lanes and well-designed pedestrian movement and bus terminals which are currently congested. Above problems are in a context of rapid population growth

and traffic increase, but inadequate bus service.

Rwanda shifts to implementing competency-based curricula in education to support creativity and innovation skills. This will help overcoming information gaps and enforce self-driven learning and professional engagement. With increasing numbers of training institutions, it is also essential to monitor the accuracy and relevance of training content provided in the local context.

14. Future Challenges and Issues for the New Urban Agenda

Globally, an understanding shall be developed about the meaning of an urban planning document, the nature of which shall be guiding during transformations, rather than conditional. This is especially necessary in situations where land ownership registration or acquisition preceded planning. Simultaneously, planning documents must be strategic and forward looking, and flexible enough to react on differences to market behaviour. It is still the priority to ensure sustainable and rational land use through comprehensive land use plans. Studies are proposed which will enable a conclusion about the most resource efficient and effective public investment models combined with models of spatial growth. The preliminary assumption is, that decentralized nodal investment with trunks might be the most resource-efficient and effective. The fast growth of emerging centres, where rural centres are emerging into urban areas by growing naturally pose a serious challenge to local governments.

Good and integrated planning has to be closely interlinked with technologies, which requires an increasing focus on such diverse skills in the sector. It is firstly



important to support the planning, implementation and monitoring of an integrated multimodal transport system, and further promote mixed use neighbourhood design. Secondly, modern technologies shall be applied to facilitate public transport systems and their user-friendliness. An example would be the use of smart cards (including mobile telephones) for their use for multiple modes, multiple routes and multiple public transport operators, supported by a range of points of sale, as suggested by the International Transport Smart Cards Organization (ITSO) based in the U.K., and promoted by the Public Transport Policy and Strategy. Human resource, skills and tools development shall continue to go hand in hand with improvements to the management of cities. An orientation toward competence based capacity development is essential.

In urban farming, the link between environmental protection and agricultural production should be enhanced and policy makers and implementers be trained in this regard.





III. Environment and Urbanization

15. Addressing Climate Change

The Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development emphasises a temperature increase measured in Rwanda of 1.4°C since 1970. This is higher than the global average.

The Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development (2011) outlines the strategy taken against the negative impacts of climate change. The strategy had identified high vulnerability to climate change because the reliance on rain-fed agriculture, both for rural livelihoods and exports of tea and coffee, and on hydropower for half of its electricity generation. As the three largest sources of GHG emissions, agriculture, energy and transport are all addressed in the mitigation, targeting low carbon development, increasing food and energy security, and reducing vulnerability to oil price spikes and reducing payments abroad. According to the Green Growth and Climate Resilience National Strategy, Rwanda has one of the lowest GHG emissions per capita in the world, estimated at 0.6 tCO₂e/person compared to a global average of 6.7 t CO₂e/person including land use change, in 2005. GHG emissions have shown an upward trend, from 2,896Gg in 2003 to 5,793Gg in 2006 and are likely to continue to rise. Rwanda's GHG emissions baseline was set in 2005 in preparation for the Second

National Communication (SNC) to the UNFCCC, amounting to 5,010Gg. The aggregate GHG emissions or total CO₂ equivalent (used for measuring global warming potential) were dominated by agriculture while four key sources contribute 91% of aggregate emissions (Figure 10a): N₂O from agricultural soils (57%), CH₄ from enteric fermentation in domestic livestock (19%), CH₄ from residential energy from fuel combustion (8%) and CO₂ from road vehicles (5%).

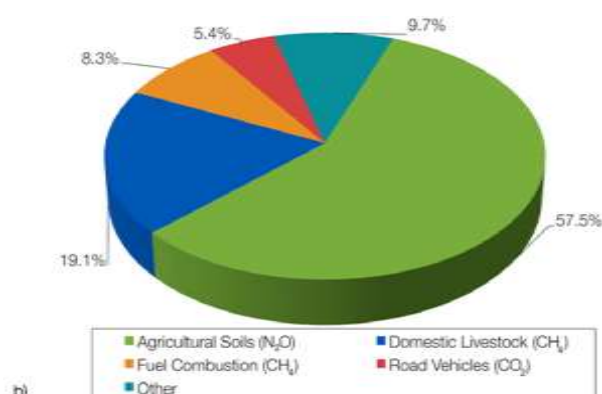


Fig. 5: Key sources for GHG emissions sectors
(Source: Green Growth and Climate Resilience National Strategy, 2011)

CO₂ emissions were dominated by transport and industrial processes though CO₂ sequestration made Rwanda a net carbon sink. There are uncertainties in the GHG inventory due to inadequate representation, lack of basic data and application of emissions factors for different conditions. Owing to the rapid development in energy and industry in Rwanda, these figures need to be revisited to account for uncertainties in growth projections, energy intensity and the energy supply mix (Green Growth and Climate Resilience National Strategy).

Progress included the fact that *Environmental Impact Assessments* are now mandatory for all projects, and environmental indicators mainstreamed



into financial budgeting and planning. The *Organic Law No.04/2005 of April 8, 2005 determining the modalities of protection, conservation and promotion of environment in Rwanda* is a milestone for the commitment to environmental protection. It protects wetlands, forests, water bodies and fragile ecosystems and requires environmental impact assessment before any major construction or industrial activity.

There is emphasis on the sustainable management of natural resources, mainly land, water, wetlands and reduced deforestation and adequate rural and urban settlements planning, illustrated especially by the National Land Use Master Plan, District Land Use Plans and Master Plans for the urban areas and emerging centres. Rwanda further embarks on the use of renewable energies toward a low carbon economy, as laid out by the Rwanda Energy Policy, 2015, and already implemented in various projects, mainly focusing on the use of solar and rain water harvesting, but also biogas. Country-wide, the use of renewable energies and local materials is already being promoted and implemented. This is the case for private or non-governmental construction initiatives, and governmental programs in urban areas and remote areas, including during the upgrading of rural settlements. A number of companies explore establishment of factories and/or production operations in Rwanda that will help achieve the dual goal of economic development through urbanization, or have already started production. Fonerwa is an environment and climate change fund, founded 2012, which supports the implementation of innovative ideas and projects proposed by the public and private sector. A part of research agenda, an Environment and Climate Change Research strategy has been developed and

studies are undertaken to inform policy decision and projects development.

A number of subsidiary legislations have been enacted for the *Organic Law determining the modalities of protection, conservation and promotion of environment in Rwanda*, and different guidelines developed to guide sound environmental management. Practical interventions varied according to the nature of ecosystem, i.e. wetlands, forests. As an example, 2,098 ha of lakeshores and river banks have been rehabilitated, along with 1,106 ha of related watersheds.

To mainstream environmental education, Sectors and Districts technical staff and NGOs are being trained in environmental management and sustainable development; also media is being addressed by trainings and environmental clubs set up in primary and secondary schools, and environmental school project implemented. Internship program support all Districts and key ministries and their thematic sectors in integrating national environment and climate change priorities and commitments into sector planning and budgeting.

16. Disaster Risk Reduction

In Rwanda, the most frequent hazards are fire, landslides, floods, lightning strikes and storms that destroy houses. Natural hazards themselves do not cause disasters, but it is the unpreparedness of population and its exposure. If not well-managed, such natural disasters would potentially also contribute to malnutrition, and epidemics of diseases.

Between December 2010 and September 2011, Rwanda registered 43 losses of lives, and 73 people were seriously injured. Besides, 1,854 houses were destroyed by heavy rains in rural areas;



2,989 hectares of crops damaged and 100 classrooms were completely destroyed in different parts of the country (MININFRA, 2012). The Disasters recorded in Rwanda between 1996 and 2013 are three draughts, one mass movement of population due to the eruption of a volcano in Goma in the DRC, one flood and an additional mass movement in 2012. Rwanda experiences heavy rains and storms on a regular basis. These events trigger landslides and flash floods but also directly affect communities by destroying habitation and infrastructures all across the country. Storms and heavy rains are common, according to available data for two recent years. Floods are common and have increased in frequency over the past decade (MIDIMAR, 2013). According to MINDIMAR, 2013, heavy rains associated with storms are among the most recurrent disasters. They affect especially the most vulnerable communities and cause the destruction of roads and transportation infrastructure and of communication networks. Strong winds are a danger

MIDIMAR is conducting a countrywide vulnerability and risk assessment, and developing an early warning system for hydro meteorological hazards. At policy and community levels, MIDIMAR is mainstreaming disaster risk reduction in other sectors and enhancing awareness about the risk of disasters, as public awareness and education is a large component against disaster vulnerability. In 2012, MIDIMAR published a document on Disaster High Risk Zones on Floods and Landslides, and in 2013 the National Disaster Risk Management Plan with the objective to guide the disaster risk management capacities. An early warning system and a monitoring system are under development and implementation based on the recommendations from the National Disaster Risk Management Plan. The

relocation of households vulnerable to disaster risk due to the characteristics of their housing sites is a process resettling especially households from steep slopes and flood prone zones. Concerned are mainly vulnerable households, who receive assistance to financially manage the relocation and reinstallation in safe sites, which are provided by the government at no cost. 40,435 HHs which reside in risky locations prone to disaster were identified. So far, 5,000 were assisted to relocate.

The Urban Planning Code adopted 2015 regulating planning, including urban infrastructure planning, with the purpose of disaster risk reduction. It addresses especially storm water and erosion control as a big contributor to risk mitigation in Rwanda's settlements. Regulations on environmental infrastructure from the regulatory authority equally address proper infrastructure design which is environmentally friendly and resilient. The newly started national informal settlement upgrading program promoted by the National Housing Policy also targets disaster resilience by concentrating on the necessary basic infrastructure, for better accessibility while controlling storm water and grey water evacuation and erosion. Those measures do not only target the management of natural hazard but also of their potential consequences on public health.

17. Reducing Traffic Congestion

The City of Kigali is well connected by a network of National Roads. The City's road network consists of 1,017 km of which only 153 km (15%) is paved. The paved roads are mainly concentrated within the core urban area. The road network outside of the urban core area is not extensive. Many of the major roads



outside the main urban area follow the topography and are located primarily on ridges or in valleys. The unpaved roads are mostly of single carriageway without uniform side table and road furniture. These unpaved roads become water-logged during the wet season and dusty during the dry season. They are also vulnerable to water damage from surface runoff. The steep gradient, which does not meet international standards, helps worsen the damage from surface runoff. Roads in Kigali are typically steep as they crisscross hilly terrain.

In 2013, RURA estimated 250,000 commuters daily in Kigali, but the demand has doubled to 500,000, which still makes the fleet is insufficient. Rwanda's policies encourage the use of non-motorised transport and its facilitation, as well as a coordinated transport and traffic control, in order to mitigate the escalation of traffic jams.

As part of the Vision to become a City of Green Transport, Kigali City identified in its Land Use and Transportation Master Plan (2012) several areas for improvement in terms of transport: an extensive new road network; a comprehensive Public Transport Network, and inclusion of non-motorised transport.

A modern city should not focus on designing for the maximization of the movement of vehicles in a road network, and planning should focus on facilitating mobility, connectivity and access for people and goods. This can be achieved by adopting a Transit Oriented Development (TOD) with proper integration with non-motorized transport (NMT) and pedestrian facilities, supported by mixed and compact land use. The key guiding

principles of developing infrastructure and soft solutions for Kigali City for the planning period 2015 to 2034 are reiterated below:

- TOD within compact and mixed land use development;
- Integrating NMT and pedestrians with public transport system, giving pedestrian the highest priority for movement;
- Providing a variety of transport choices within relatively self-sufficient neighbourhoods;
- Integrated demand and supply management approach to resolve transport and air pollution problems.

18. Air Pollution



Fig. 6: Kigali ring roads as planned Land use and Transportation Master Plan (2012) of Kigali City



The main cause of air pollution is the economic growth, and mainly caused by the transport and energy sectors. Air pollution is becoming a reality in Rwanda, especially in Kigali City. The current state of air pollution in Kigali City indicates overall emissions levels in relation to WHO and EAC standards as follows: suspended particulate matter, PM₁₀, exceeds significantly the recommended WHO allowable limit (50 µg m⁻³) and SO_x and the average temperature of the city have been increasing gradually. Major causes of air pollution include rapid urbanization, increasing industrial activities and increasing number vehicles. There is need to act on this increasing problem.

A study conducted by REMA in 2012 identified vehicular emissions as the main driver of increasing pollution, coupled with a rising rate of motorization. Most of the vehicles imported do not meet the emission requirements. Also other economic activities contribute to pollution, such as industrial processes, pollution caused by cooking, and open burning. All these lead to degradation of air quality. It is against this background that the Government establishes strategies to address the problem of air pollution, manifested by the *Ministerial Order N°003/16.01 of 15/07/2010 preventing activities that pollute the atmosphere* and the *Prime Minister's Instructions preventing air pollution caused by vehicular emissions and machines using petroleum products in Rwanda*. In the following, a Motor vehicle emissions inspection was officially launched in 2014 (REMA, 2015). However, for an effective preservation of air quality, vehicular emissions control is not sufficient and it was observed that there is a need to have an integrated and inclusive control of all sources of air pollution (ibid.).

Different pollutants apart from a high-usage rate of mopeds are open fireplaces, burning woods for cooking and household chores can be detected. Industries emit a wide variety of process-specific pollutants gaseous organic and inorganic compounds, complex vapors that undergo phase transformation after emission into the atmosphere, with process-specific composition such as heavy metals. As industries are consuming lots of fossil fuels, the consumption of these fuels eliminates in the atmosphere pollutant substances containing carbon, sulphur and nitrogen (NUR, 2011). A large number of small scale industrial plants makes pollution control more difficult because small-scale operations are more financially strapped and less technologically capable than large scale ones, and their numbers make the already lax monitoring and enforcement of pollution control laws even more difficult (ibid.). The major source of air pollution is the transport sector with 52% of imported petroleum product and used vehicles, manufacturing industries such cement, and steel mills, agriculture and livestock activities including pesticides, machinery and manure; and mining activities which are contributing to the emission of dusty. The increase of population in Kigali City is accompanied by an increase of the number of vehicles, which could adversely affect the quality of air in the city. Other factors that may contribute to worsen the air quality include pollution from industries, domestic cooking, soil blown dust and waste combustion. During the dry season, the concentration of ground-level ozone is beyond environmental standards, and the problem of air pollution is present. While most industries are located in urban areas and about 63% of industries in and around Kigali, inadequate pollution control is among the biggest challenges. Kigali



provides a large proportion of the city's industrial employment but consequently a larger portion of the urban environmental problems.

There has been progress made in air pollution control and reduction in Rwanda. Rwanda is part of several agreements that are of relevance to mitigation of air pollution. These include: The Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer; The United Nations Framework Convention on Climate Change and its related Protocols Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal and the Stockholm Convention on Persistent Organic Pollutants Enforcement. The Rwanda Bureau of Standards (RBS) has the primary mandate to develop National Standards to meet industry, governmental, and other customer needs in a bid to promote competitiveness of Rwandan products and services, to protect health and environment (ibid.). While inventories for specific chemicals are a resource-intensive and difficult activity, the determination of the levels of specific toxic substances released into the environment requires specific data for each toxic compound.

Government programs promote the use of alternative types of stoves that require less charcoal or wood to produce heat. While reducing the amount of fuel is the main goal, the cook stoves also produce less smoke than charcoal, which causes less pollution of air. The policy environment also foresees continued research effort, and incentives for green energy and technologies. The strategies taken furthermore include the strengthening of Vehicle Inspection Regime.

19. Challenges Experienced and Lessons Learnt

Temperature increase measured in Rwanda is higher than the global average. Predicted is also an increase of average annual rainfall by up to 20% by the 2050s from 1970, based on the increasing trend in rainfall intensity for both rainy seasons, which may likely cause floods and storms, which can result in landslides, crop losses, health risks and damage to infrastructure. Temperature rise may increase the spread of vector-borne diseases, air-borne and water-borne diseases, impacting on animal and human health, and could negatively affect crop yields, impacting food security and export earnings. Higher temperatures result in higher altitudes at which tea and coffee can be grown, which may significantly impact the land available for tea and coffee, and may result in land use conflict. Extreme weather already negatively impacts the economy and climate change could result in annual economic costs of just below 1% GDP by 2030. As pointed out by the National Disaster Risk Management Plan, water and sanitation as well as health and nutrition are among the important areas which require disaster risk mitigation. It is not a hazard itself, but the vulnerability against it and exposure are the aspects which cause disaster. Measures which have to be integrated as part of physical planning are the mitigation of effects of floods and landslide, and storm water management and erosion control.

Key challenges are, to also integrate environmental consciousness within productive sectors and increase human resources and capacities in the domain of environmental management. Practical measures in particular should target improvement of solid and liquid waste



management in urban areas, continued promotion of the use of renewable energy, efficient use of resources, and pollution management.

20. Future Challenges and Issues for the New Urban Agenda

Population growth is expected to impact on pressure on food, water and energy resources, and as the population grows, the amount of productive agricultural land per capita will reduce. The challenge is to properly and in “green” manner manage the demand for off-farm employment opportunities and by increasing industry and services establishment, which may be instrument for wealth creation.

A future challenge will also continue to be the necessity to reduce the impact of disasters on vulnerable communities. The level of public awareness on pollution problems and associated adverse effect to human health and environment shall be raised. As highlighted by the University of Rwanda (NUR, 2012), topographical conditions could have a very strong influence on spatial climatic modifications and the spatial distribution of air quality, which shall be better integrated in urban planning and zoning. Among the most important challenges for the future is the improvement of Traffic Safety. The strengthening of capacities for improved road maintenance, and agreed Standards for Public Transport Vehicles and Operators shall complement the objectives in the transport sector.





IV. Urban Governance and Legislation

21. Improving Urban Legislation

Rwanda has achieved tremendous treads in regards to urban legislation through the enactment of important laws, policies, decrees and instructions related to urban land use, urban planning and development, urban environment management, all aimed at achieving a well oriented urban future for the country. By completing its policy and legal framework, Rwanda addresses the management side of urban development in response to the new development pressures coming with the implementation of the Decentralisation Reform and Land Reform. The full operationalization and capacity enhancement of the Districts to adopt the framework in the daily work is in the foreground of further work.

The *Law No.10/2012 of 02/05/2012 governing Urban Planning and Building in Rwanda*; *Law No.20/2011 of 21/06/2011 governing human habitation in Rwanda*; *Law No.43/2013 of 16/6/2013 governing Land in Rwanda*; *Law no.31/2010 of 30/07/2010 relating to the planning of land use and development in Rwanda*; *Law No.15/2010, of 14/05/2010, creating and organising condominiums and setting up procedures for their registration*; are among the legal tools so far enacted to govern land use; urban planning, development and management framework in Rwanda.

In 2011, the *Law No.20/2011 of 21/06/2011 governing human habitation in Rwanda* was gazetted. It governs land occupation and construction on lands reserved for human habitation. It makes way for the establishment of group settlement sites on already occupied land, and requires minimum infrastructure provision.

The *Law No.10/2012 of 02/05/2012 governing Urban Planning and Building in Rwanda* provides the basic conditions around planning and building, and the management of it. Among those it mentions the different planning documents and levels for Rwanda. It refers to a number of implementing orders for details.

A *Ministerial Order determining urban planning and building regulations* specifies the principles of urban planning and a number of development management tasks, including inspection, and planning audits. The document also enacts the Urban Planning Code and Building Code in its annex.

The *Law relating to the planning of land use and development in Rwanda*, gazetted in 2012, regards land use plans and contains preparation and adoption processes for District land use plans in particular. The law enforces planning authority for the District Council.

The *Condominium law*, adopted in 2010, regulates joint ownership in real estate where portions of the property are commonly owned and other portions are individually owned. The law reflects recent developments supporting urban growth, densification and global trends, and is in line with the land reform. It allows for traditional, as well as more contemporary forms of real estate



ownership, and contributes to a plurality of possible ownership forms in the country.

The *Law governing land in Rwanda (2013)* amends the land law from 2005 and determines the management of land in Rwanda, including allocation, acquisition, transfer and use.

The Ministerial Order Determining the Requirements and Procedures for Land Lease (2008) subsequent to the original Organic Land Law determines the conditions for leasing land, including registration, transactions, termination, and rights and obligations for the lessee. Above order is complemented by the *Presidential Order Determining the Exact Number of Years of Land Lease*.

The *Procedures to Obtain a Freehold Land Title*, gazetted in 2009, spells out the procedures of how to obtain a freehold title for a plot based on the existence of a lease contract, a building permit and an occupation permit. It will require its updating following the amended Organic Land Law from 2006.

With the support of the District or city governance structures that include an elected Mayor and Deputies including a respective Council which has a mandate to develop an extended legislation upon demand, urban development challenges can be managed at decentralized level. In the organizational structure of a District, there is a technical bureau called District One Stop Centre, which is responsible for managing local development within the District administrative boundaries.

22. Decentralization and Strengthening of Local Authorities

The country is composed of two layers of government - central and local. There are six administrative entities - the Central Government, the Province (*Intara*), the District (*Akarere*), the Sector (*Umurenge*), the Cell (*Akagari*), and the Village (*Umudugudu*). The statutory administration units are the central government, provinces together with the City of Kigali, and the Districts.

The Central Government agencies' roles and responsibilities are policy formulation, regulation and, support to Local Governments through capacity building, financing, and monitoring and evaluation, while Local Governments are in charge of implementation of government policies and service delivery, and provide an avenue for citizen voice and accountability. The Province is by law responsible for coordinating district development planning, in line with national policies and programs. It is also concerned with supervising implementation of the national policy in its Districts, coordinating governance issues in the Province, and carrying out monitoring and evaluation. The Local Administration Reform Policy, adopted in 2005 has the objectives to promote and enhance effectiveness in service delivery; streamline and strengthen the coordination of public services and local economic development at district level; and establish coherent monitoring and evaluation systems, and institutionalize accountability tools and systems.

To empower District capacities and ensure ownership of government-led interventions, the 2014 Public Institutional Reform strengthened the human resource capacity of local government entities by



increasing the number of staff to almost double the previous while that of the central government institutions was considerably trimmed. The technical structures of the decentralised entities were particularly enhanced, with the District One Stop Centres to comprehensively manage urban planning and development. Since this reform, Central Government funding support to execute urban planning and development related projects at the local level is earmarked to Districts.

The establishment of Rwanda Local Government Institute to support the comprehensive capacity development of decentralised entities in regard to required managerial, professional, technical, mid-carrier and sandwiched courses related to urban settlements planning and management, among other strategic tailor-made skills to meet national staffing needs is another achievement complementary to the need for standardized and needs-responsive capacity building.

Decentralization is implemented in three phases. The Rwanda Decentralization Strategic Framework published in 2007 spells out that in the current and third implementation phase of decentralization (2011-2015) “multi-sectoral decentralization at local level will be reinforced, and mechanisms for partnerships between public sector and non-state organizations will be operational”. The overall goal is effective and efficient government responsive to people’s needs and preferences. The Five-year Decentralization Implementation Programme (DIP) considers as key for further development institutional strengthening and development, sectoral, fiscal and financial decentralization, local economic development, citizen participation and accountability mechanisms, and capacity building. A

specific strategy relevant to the Urbanization and Rural Settlement Sector aims at increasing local revenue generation and collection, as well as broadening of local revenue base through local economic growth and the diversification of local sources of revenue. The fiscal decentralization strategy proposes to strengthen the planning and management capacity at local government level, and a participatory approach to planning. The strategy also suggests developing a clear planning and budgeting cycle for local governments. It demands the strengthening of local capacity in planning, financial management and financial control at all levels, and the integration of the sectoral decentralization policy in local governance. The strategy goes along with the identified necessity to link local economic planning and local physical planning in local development planning processes.

In 2010, the Kigali One Stop Centre was established by Cabinet Resolution held on 14 April, 2010. In 2014, District One Stop Centres were integrated in the newly revised structures of all other Districts across the country. A One Stop Centres comprises all technical subjects related to physical development and its management, including land management, building authorization, inspection, and public infrastructure development. The legal framework has been designed in a way to support the decentralisation goals, and enhance the responsibility and autonomy of the Districts in development management within their territory. There is high commitment for continued implementation of decentralization with focus on improved local urban management. Cross-sectoral partnership agreements become increasingly relevant and stronger and will result in higher resource efficiency.



23. Improving Participation and Human Rights in Urban Development

Rwanda's policies related to participation are best practice and home-grown. This provides the basis for feasible solutions, drawing on aspects of Rwandan culture and traditional practices to enrich and adapt its development programs to the country's needs and context, as part of efforts to reconstruct Rwanda and nurture a shared national identity. The "home-grown solutions are a testimony that local ownership of development programmes, citizen involvement and national unity always yield results" (President P. Kagame).

The EDPRS2 in its section on accountable governance promotes citizen participation and mobilisation for delivery of development, strengthening public accountability and improving service delivery with the objective to develop sustainably and reduce poverty (EDPRS2). The mission of the Community Development Policy, first adopted in 2001 and revised 2008, aims to ensure effective and sustainable participation of the community in its own development, in order to achieve poverty reduction and self-reliance based on the sustainable exploitation of available resources. Its principle objective is to foster public participation in policy and decision-making processes. The policy focuses on economic and social development and on good governance. It promotes to define and tackle individual and collective problems, potentials and plans.

The Joint Action Development Forum (JADF) was established in 2007 to serve as a consultative forum for District Development Stakeholders, including CSOs, NGOs, Development Partners, Private and Public Sectors and Local Government. JADF operates in all

Districts with a permanent officer being in charge of daily operation. JADF is now chaired by an elected, competent member. The goal of the JADF program is to improve and create sustainable economic development, service delivery and domestic accountability, and to build development management capacity.

One other achievement and an example of a home-grown solution that has enhanced public participation is Community Works Day locally called *Umuganda*. *Umuganda* can be translated as 'coming together in common purpose to achieve an outcome'. In traditional culture, members of the community would call upon their family, friends and neighbours to help them complete a difficult task. (RGB website, last accessed 25.10.2015). The benefits of *Umuganda* are not merely economic. The day builds community involvement and strengthens cohesion between persons of different background and levels. People can access authorities to articulate their needs, and voice opinions. By reaping the rewards of the volunteer labour and by having more capital to invest in the country, *Umuganda* contributes to growth and development. Successful projects include the building of schools, medical centres and hydroelectric plants as well as rehabilitating wetlands and creating highly productive agricultural plots. The value of *Umuganda* to the country's development since 2007 has been estimated at more than US \$60 million (ibid.).

Every year, a citizen participation scorecard report is released and an accountability day where citizens meet and engage with their respective local leaders on socio-economic related matters is held on quarterly basis. Achievements were also registered in access to justice, legal aid and resolving the case backlog by use of traditional tools such as Gacaca courts



and *Abunzi*, traditional Rwandan ways of resolving disputes through locally applied reconciliation methods (EDPRS2).

In the land reform implementation process, CSO involved strongly and added value to the process by helping identify and address arising disputes, and develop unconventional dispute resolution and mitigation mechanisms based on Rwandan culture. The earlier discussed urban planning legal framework details the elaboration process of an urban planning document, within which public participation is included. The urban planning process is transparent in laid out plan elaboration processes, and respectful of existing rights.

24. Enhancing Urban Safety

For millions of people around the world, violence, or the fear of violence, is a daily reality. Much of this concentrates in urban centres. Rwanda not only strongly emphasise on inducing urbanisation based on economic progress, but also counteracts urban poverty and urban violence by developing integration through support networks, and enhancing the self-help potential for sustainability of social security. According to the Rwanda Women Network, sexual violence and harassment is a common characteristic of living in cities, affecting the quality of life. The problem is heightened for women and girls, and high proportions of them experience different types of sexual harassment and violence, or fear violence in urban public spaces (Rwanda Women Network). The Safe Cities Kigali Project aims to develop, test and offer for upscale by local authorities, models to prevent sexual violence in urban public spaces. The project is being piloted in the Kimisagara Sector in Kigali. The built environment has an important relationship

with urban violence. This relationship is more complex than is often assumed.

Community policing is a way adopted in Rwanda to encourage citizens to participate in crime prevention and disorder. Partnering with the public, police visibility is increased in all communities to solve, prevent and reduce crime. The strategy established Community Policing Committees, and youth volunteers in crime prevention. There is a unit in the National Police responsible for fire safety precautions, rescue in fire emergencies, and rescue from pit holes. The police are also sensitizing citizens on fire safety precautions measures, and trains public workers on emergencies (RNP, 2015). Fire safety and flood risk reduction, being aspects of urban safety, are further addressed in Chapter 16 on disaster risk mitigation. Public lighting is continuously being improved and public lights being installed in almost every city of the country especially in places identified as very dangerous. This has added value to the safeness of the cities contributing to conducting business till mid-night and enabling vulnerable people especially women, girls to travel in the night without fear of being raped. 107.87 km of pedestrian walkways have been constructed to reduce accidents. The Urban Planning Code provides a section with guidelines in support of neighbourhood safety through site planning, and includes road traffic safety.

25. Improving Social Inclusion and Equity

Rwanda suffered from ethnic conflict and regionalism for more than four decades, culminating to the genocide against Tutsi in 1994. The Government successfully promotes national unity and reconciliation, and disallows any form of social discrimination based on gender, religion,



ethnicity or race. A National Commission for Unity and Reconciliation was created after the genocide against Tutsi of 1994, with the main objective of reunifying Rwandan population deeply affected by the genocide aftermaths. Among the strategies undertaken is the organization of solidarity camps for education about Rwandan cultural values, pre-colonial history, patriotism and self-defence. The National Commission of Unity and Reconciliation declares that not a single case of injustice based on ethnicity in urbanization processes was reported since its establishment. Rwanda intends to achieve social inclusion with its policies. Its development vision is expressed by the Vision 2020 and EDPRS2, aiming to reach the status of a middle-income country by 2020. Rwanda is one of the few countries which, according to preliminary assessment, achieved many of the Millennium Development Goals.

Households considered poor are at 39.1% in 2014, a figure which has fallen from 56.7% in 2006, with households being extremely poor being at a level of 16.3% in 2014, which has reduced from 35.8% in 2006. The greatest concentrations of poverty in Rwanda are in the South and the West, with higher poverty levels in rural areas (EICV4). Considered poor are households that cannot afford to buy a basic basket of goods. For identification and monitoring of economic conditions of households, households are classified in six vulnerability categories to identify people in need of help, to provide them free medical insurance and free education for their children. The poverty level is lowest in the City of Kigali (EICV4).

The Government of Rwanda considers that social protection measures can make an essential contribution to the achievement of its development goals (EICV4). The

flagship social protection programme is the *Vision Umurenge Program* (VUP) with its three components, the Direct Support Programme, the Public Works Programme and the Financial Services Programme. Other initiatives include the Genocide Survivors Support and Assistance Fund (FARG), the Rwanda Demobilisation and Reintegration Commission (RDRC), the *Girinka 'One Cow per Poor Family' programme*, and the Rural Sector Support Project, as well as subsidised subscriptions for mutual health insurance and in-kind social care services (ibid.). *Ubudehe* is one of the country's core development programs, launched in 2001 as way to better involve communities by setting up participatory problem solving mechanisms and to work for development. In 2008, the program won the United Nations Public Service Award for excellence in service delivery (cited from RGB website, last accessed 25.10.2015). *Ubudehe* also serves as a pro-poor credit channel; since finance institutes find it risky and costly to transact with the poor, *Ubudehe* offers an opportunity to mitigate the risk and lower costs through community collective action. In the *Ubudehe* Credit Scheme, each beneficiary/client will sign a contract with the community and will be informed of his obligation and commitment to pay back so that the next beneficiary designated for credit can be able to get it from cumulative reimbursed amounts (ibid.).

The evolution of the two commonly used measures of inequality at national level shows constant progress over the last decade since EICV2, 2005/06, with reducing ratios of the 90th percentile of consumption to the 10th, as well as reducing Gini coefficient (EICV4).



26. Challenges Experienced and Lessons Learnt

The District structure has recently been revised to accommodate all aspects of local development management, and the number of staff accommodated in the District structure has significantly increased. The structure further distinguishes between Urban and Rural Districts, and this way make may for higher adequacy of administrative capacities of Secondary City Districts. One Stop Centres are newly integrated departments in the District structure which are responsible for all development related services, including land use management, land administration, planning, development authorization and inspection. The District One Stop Centres are not yet fully staffed according to the new structure, but measures to facilitate staffing are being taken at National government level and the responsible institutions.

The land use planning and land related framework has been in a completion since EDPRS2. The dissemination of new policies and frameworks is lengthy and sometimes trainings may not even be fully updated in their content. It is highest priority to capacitate the local governments to better coordinate between the different infrastructures subjects, and to develop strategic implementation plans based on well-established priorities. Districts are responsible for the management and administration of land resources. It is in this respect that the focus on the strengthening of the District One Stop Centers is important. Rwanda focuses on improving service delivery, decentralising services closer to citizens, participating citizens in planning and delivery of development for improved citizen centeredness of development.

Citizen empowerment and participation in decision making at the grass roots level require frequent and interactive engagement between local leadership and citizens, supported by non-governmental key players and communities. Needed are enhanced mechanisms to build community capacity, to allow them to identify, assess and assert their priorities in local development planning, and to hold their leaders accountable (EDPRS2).

Poverty and unemployment are among the root causes of crime and particularly affect the youth. Without assuming a simple correlation between poverty and crime, the response is economic growth and job creation with a strong focus on the youth. It is recognised that the police and the criminal justice system are key contributors to the fight against crime and violence. Other approaches include enhancement of urban safety and security through effective urban planning, design and governance and the development of community-based. The focus on groups which are most vulnerable to crime will reduce key risk factors. Initiatives which strengthen the social capital, and the ability of individuals and communities to respond to problems of crime and violence, must be included into governance.

Poverty is a rural phenomenon in Rwanda. The most vulnerable rural people are landless people and small-scale farmers, with a large share of elders (EICV4, EDPRS2). Financial products and support schemes that cater to the needs of rural clients shall increase inclusion.



27. Future Challenges and Issues for the New Urban Agenda

The challenge for the future is to achieve and sustain policies and legislations which are inclusive and enable participation, including in contexts of development pressure. The progress in devolution of governance tasks while facing resource and capacity shortage must be sustained. In the new urban agenda, there shall be emphasis on the need to collaborate with CSO's. Also, cross-sectoral approaches to any policy development and program design have to be ensured for their completeness, comprehensiveness, harmony and sustainability. In this way, the adequate addressing of human rights can be embedded across different sector priorities.

High rates of crime and violence also negatively impact economic life. While socio-economic frustration is a predominant cause of domestic and gender violence, the social life in Sub-Saharan Africa cities is at risk, with extreme vulnerability and the erosion of family and other social relations being the dramatic consequences. This includes consequences related to trust and effective collective action. For the era of the New Urban Agenda, emphasis should be on the maintenance of social cohesion and conviviality, and enabling through coherent, inclusive policies, and early dispute management offered by in-built and unconventional mechanisms. Social protection programmes shall enable the poor to stabilise their incomes and assets and accumulate savings. Rwanda proposes (EDPRS2) to enhance viable pathways out of poverty, and enable people access complementary social development programme that build skills and resilience, as well as access socio-economic opportunities by promoting mixed use human settlement, both urban and rural.



V. Urban Economy

28. Improving Local Finance

The Fiscal and Financial Decentralization Policy (2011) identifies conditions in need of reform to support fiscal decentralisation, based on the constraints of financial capacity and low resources availability at local level and the capacity to carry out service delivery operations. Those are a narrow tax base at Local Government level; the mismatch between devolved responsibility for service delivery and fund availability at local level; and the need for improvement regarding local financial management capacities and human resource gaps.

Rwanda adopted a process of decentralization, pursuing gradual devolution of functions to Local Governments to the extent considered the highest possible. The implementation of a new organizational structure is underway, and it is expected that this will raise both, financial and administrative capacities of Districts. To optimize local revenue in support of local economic development, a study was conducted in 2013 to assess local government revenue potential, which has identified other source of revenue to be collected by local governments.

The taxes currently forming local revenue include property tax, trading license tax, and rental income tax. Other sources of revenue are available to districts, such as fees levied on services rendered, investments returns and donations and bequests. Those are in particular market fees, building permits, notary fees, bill board tax, land revenue, fines and

penalties, communication tower tax, and other revenues depending on socio-economic activities of each district (Musharraf, 2013). Central government revenue sources include Value Added Tax, personal income tax, profit tax, payroll tax, corporate income tax, as well as customs, and excise duty on whole sales and retail sales (Garzón, 2015).

The Government transfers every year to decentralized entities at least 10 % of its domestic revenue of the previous fiscal year (*Law no 59/2011 Of 31/12/2011 establishing the resources of revenue and property of decentralized entities and Governing their management*). Earmarked national transfers are used for local service delivery, and block grants are used for local administrative costs. The specificity of earmarks is intended to decrease as local capacities increase. As of 2011, financial resources channelled through the local governments have increased to 33% of the previous year's central government domestic revenue from 1.4% in 2002. The own revenues of Districts are equivalent to about 10-12% of total revenues (ibid.). In 2015 in the annex of the Ministerial Order determining urban planning and building regulations, the fees and penalties related to urban development management were determined. The Property tax law is under revision in order to make it more comprehensive, easier to administer, and pro-poor, while incorporating the need to address resource-efficiency and especially efficient use of the resource land (RRA, 2015).

In 2013, the Local Administrative Entities Development Agency (LODA) inherited responsibilities and properties of the Rwanda Local Development Support Fund (GoR, 2013). The RLDSF was a result of merge of responsibilities and properties of Common Development Fund for Districts



and the City of Kigali, *Vision 2020 Umurenge Programme* (VUP) and *Ubudehe Programme* (GoR 2010). In addition to this platform, a Local Authority Budget Support Fund (LABSF) was established to support in local staff salaries (GoR, 2002). LODA supports the availability of local finance for development activities initiated at local level and serves as an intermediary between local administration and development partners involved in financing development activities at local level. It further distributes central financial support allocated to local administrative entities, and monitors the use of funds allocated to development activities in the local administrative entities.

In 2014, the Government initiated a process of supporting local government to optimize local finance opportunities by assigning the Rwanda Revenue Authority (RRA) to collect decentralized taxes on behalf of Districts (RRA, 2015). Taxes and fees collected will not be the property of RRA but remain the income of districts. Apart from building on the RRA's experience to collect decentralized taxes, the move also aims at establishing a "Tax One Stop Centre" where a taxpayer, public institution or any other partner can get any information about any tax (RRA, 2015).

Since March 2014, preparations have begun toward a plan to issue district municipal bonds to help local authorities raise development finance and reduce reliance on central government funds. The Rwanda Capital Market Authority and Ministry of Local Government will guide districts on how to raise funds through the issuance of municipal bonds⁴ (Office of the Prime Minister, 2014), which shall be

used for capital investments in infrastructure (CMA, 2014).

29. Strengthening and Improving Access to Housing Finance

While Kigali hosts about half of the urban population in Rwanda, the total housing needs (2012-22) for Kigali is estimated to reach about 458,256 units, of which 344,068 are newly to be constructed (Housing Market Study for Kigali (2012-22)). Broken down to different purchase powers, this was translated to 43,436 units for social housing (12.6%); 186,163 units for affordable housing (54.1%); 112,867 units for mid-range housing (32.8%), and 1,601 units for premium housing (0.5%). According to the same study, the annual volume of supply in the formal market in Kigali is estimated to remain below 1,000 units per year, which covers around 3.3% of the annual demand only. It has until now concentrated on the supply for upper income segments. The Government intensely works on creating a widely enabling environment to improve housing finance and production through a framework in favour of private investment in housing, housing finance mechanisms to enable access to affordable housing for all.

In the context of accelerated urban development it is high priority for the Government to ensure access to formal housing for all households independent of income level. With the ongoing reforms (BRD, 2015) the Government is establishing a framework which facilitates private-sector-led housing construction. Part of creating the enabling base conditions was a land reform, which, with the regularization of land tenure paved the way into an open real estate market, and enabled the enhancement of the private construction industry sector. All new strategies build on this basis. In the foreground of the 2015 adopted National

⁴ Official Gazette n 12 of 24 March 2014, regulation and guidelines no 18 for issue of municipal bonds in Rwanda



Housing Policy is the issue of how to enable access to housing for all. Besides the policy paper discussing sustainability for future urban and settlement development, it discusses a variety of access models addressing all population strata. The policy and its implementation strategy are well under implementation. In the area relating to housing finance, the enabling components under implementation are according to policy briefs from MININFRA:

- A *Prime Minister Instruction No. 004/03 of 13/11/2015 Determining the Conditions and Procedures for Obtaining Government Support for Affordable Housing Projects* is a significant step toward the collaboration with the private sector in housing delivery and contains a commitment to financing inner-neighbourhood infrastructure from the side of the Government under set conditions. The conditions relate to the profiles of beneficiaries of housing units, to the affordability of housing access schemes which may either look at the sales prices or affordability of financing schemes, and to resource-efficiency and local skills enhancement through collaboration with local SME's.
- The *Law No 26/2005 of 17/12/2005 Relating to Investment Promotion and Facilitation*, which is an additional component incentivizing investment in affordable housing. It offers tax incentives to investment in affordable housing, such as preferential corporate income tax rate, and accelerated depreciation for investments in construction projects worth at least 1.8 Mio USD.

Currently, the Government engages in a housing development through PPP, similar to a pilot institutional setting tested in

2007/08) for a sustainable, mixed-use housing neighbourhood development. Detailed designs for the project called Batsinda 2 with above 530 housing units for low income earners are completed and the construction is about to kick off. More development sites are open for investment with high density and mixed use objectives, which is envisioned to assist residents in increasing their socio-economic conditions due to the proximity to local economic opportunities.

Many initiatives in progress focus on the housing financing side to enable large-scale construction and simultaneously facilitate households to access finance. Under establishment are the modalities for an Urban Development Fund to, 1) fund affordable housing neighbourhood infrastructure and, 2) to assist through carefully designed housing subsidies targeting households with low and very low incomes, to create affordable housing finance programs. The fund will make the Government more flexible in approving and implementing its infrastructure commitments in a timely manner for any approved development proposal independent of the budgeting cycle (MININFRA, 2015).

The Rwandan Development Bank (BRD) simultaneously prepares the introduction of mortgage backed securities to deliver affordable finance and achieve higher variety of financing products available to households. The business plan of the Rwandan Development Bank also includes investment into a Real Estate Investment Trust a major shareholder, to be created to trigger and facilitate large scale housing construction. The BRD further prepares the introduction of a Residential Credit Line Facility (RCLF), enforced by the sourcing of 200 Mio USD in RWF for on-lending to qualified mortgage originators,



as well as a Construction Finance Facility in support of developers.

The Housing Policy also intends to trigger and facilitate medium- to small-scale investment into affordable housing through collaborative development schemes for the future sustainability of development projects. The new legal framework contains large opportunities for local economic development through collaboration among land holders forming cooperatives, or land holders interacting with investors as shareholders in new, efficient and well-planned development.

30. Supporting Local Economic Development

Successful cities have three overarching characteristics in common: 1) vision, leadership and commitment, 2) a competitive business environment, and 3) high quality of life (Miller, 2015). Rwanda strongly emphasizes on enhancing the potentials for Local Economic Development under the above vision. Below are the strategic points of how to implement this vision, drawn from a report by Miller, 2015, which was prepared with focus on the development of the local economy in the six secondary cities (MININFRA, 2015).

The first, “vision, leadership and commitment,” means that each city shall have a unique “personality.” It shall have a vision, as well as a “positioning” and “brand” that is exciting and differentiated from other cities, which shall be widely known and reflect the region’s history, reputation, and unique characteristics. Active mayors will play a key role in articulating and promoting each city’s unique positioning, and a supporting team of committed, effective officials will reinforce these efforts. Citizens will also

be engaged in building, reinforcing and promoting each city’s “brand” through public-private dialogue and strategic public-private partnerships. Infrastructure shall support the vision and brand, and specific types of investors targeted whose businesses can both benefit from a region’s unique assets, and strengthen its brand (ibid.). The second characteristic of successful cities, “a competitive business environment,” means that each shall be host to a diverse array of competitive clusters, and have strong economic linkages with the rest of the district, with Kigali, other urban areas, and internationally. Each city shall provide excellent basic and specialized infrastructure, consistent with the city’s positioning to support business development, and shall provide support for businesses including SMEs (ibid.). The third characteristic, “high quality of life,” means that each city shall offer residents and potential residents a high quality place to live and raise families. Each city will be able to attract new residents, including investors and their families, by offering 1) high quality social services such as schools, health care facilities and public safety, as well as basic services such as electricity, water and waste management; 2) quality, affordable housing; 3) public transportation with domestic and international links, 4) ample recreational opportunities including stadiums and recreational centres; 5) vibrant cultural options; and 6) an attractive, welcoming environment consistent with the “personality” and positioning of the city, including green space, quality roads and pedestrian walkways, and attractive building and public space designs (ibid.).

To illustrate the current situation of local economic establishment, the Establishment Census from 2014 shows that the total number of establishments amount to



154,236, the overwhelming majority of which (94.8%) are in the private sector category; and nearly 80% of establishments belong to two major economic activities wholesale and retail trade (50.9%) and accommodation and food services (28.9%). Rwanda is the second most competitive place of doing business in Sub-Saharan Africa, with rank 62 globally (Doing Business 2016). The improvements to the business environment between 2015 and 2016 especially relate to starting a business; getting credit; protecting minority investors and resolving insolvency (ibid.). Some cities have demonstrated that proactive approach combined with effective physical planning and opportunistic external engagement can lead to useful development. The six secondary cities in particular have taken steps over the last several years to engage a broad cross-section of public, private and civil society leaders in productive dialogue about each city's development strategy. Specific strategies, infrastructure investments, and programs have been identified.

The Local Development Authority (LODA) collaborates with a variety of partners and donors to establish local development programs and strengthen the capacities of the local governments to plan for and implement such. Among LODA's mission is to finance development activities in local administrative entities with legal personality; to establish strategies for job creation for the benefit of a large number of people and assistance to those unable to perform such jobs and who are approved by decentralized entities; and to contribute to sensitizing population to participate in development activities meant for them. Its division responsible for LED is in charge of the coordination of such activities in local governments for the creation of a conducive environment for

business development at local government level, to contribute to the building of a coherent partnership between public and private sectors in decentralized entities, and to support implementation of LED programs.

31. Creating Decent Jobs and Livelihoods

With population growth and urbanisation, more jobs are required especially for young people, as discussed in different sections of this document, including local economic development, and urban safety. According to EICV4, about 87% of the working age population in Rwanda is usually employed, only about 1% of the population is usually unemployed, and about 12% are usually inactive. Of these, the large majority are students. The disaggregation by Urban/Rural shows that unemployment and inactivity is generally larger in urban areas compared to rural areas. This reflects the fact that the Rwandan economy is largely agricultural, i.e. that many people have jobs in agriculture, and that there are relatively more students in urban areas. According to the Establishment Census 2014, the total number of in-establishment workers reaches 493,302 persons of which 36% are females. Around 60% of all workers are employed in only the following three economic activities: Trade (24.4%), Accommodation and food service activities (17%) and education (17%). Some economic activities are male-dominated with the proportion of males higher than 80%; those are mining and quarrying; construction, transport and storage and administrative and support service activities.

The EDPRS2 highly emphasises job creation and the stimulation of entrepreneurship, along with access to



finance and business development. It targets the increase of off-farm employment, productivity and new job creation, driven by the private sector. The activities to achieve this focus on reducing barriers to entry for micro enterprise, access to finance for small enterprises, and mentoring, entrepreneurial awareness and market information (EDPRS2).

The government expands business support programs and has initiated the Integrated Employment Programme to boost entrepreneurship and job creation. The EDPRS2 further addresses the challenge of unemployment among skilled youth in urban areas. The Government works on improving the efficiency of labour markets by assisting job seekers to find vacancies through Employment Service and Career Advisory Centres, and by providing a social safety net for those below a minimum income (ibid.).

The EDPRS2 targets the creation of 200,000 off-farm jobs annually. According to EICV4, 2014, the population of working age was estimated about 6,400,000, which is an increase by about 510,000 individuals compared to 2011. The rate of economic activity has increased by 2% from 85% in 2011 (EICV 2010/11) to 87% in 2014. The increase in total jobs recorded between 2011 and 2014 was of about 530,000, just slightly more than the estimated increase in the population aged 16 years and above of 510,000 (EICV4). A large part of this change resulted from an increase in wage non-farm jobs. The majority of persons in Rwanda work in more than one job, which explains why there are over 9,900,000 jobs registered, which is about 1.8 times as many jobs as employed individuals of working age. An increase in total recorded wage non-farm jobs can be recorded between the 2011 and 2014 surveys, which is relatively equally distributed across urban and rural areas (over 115,000 in

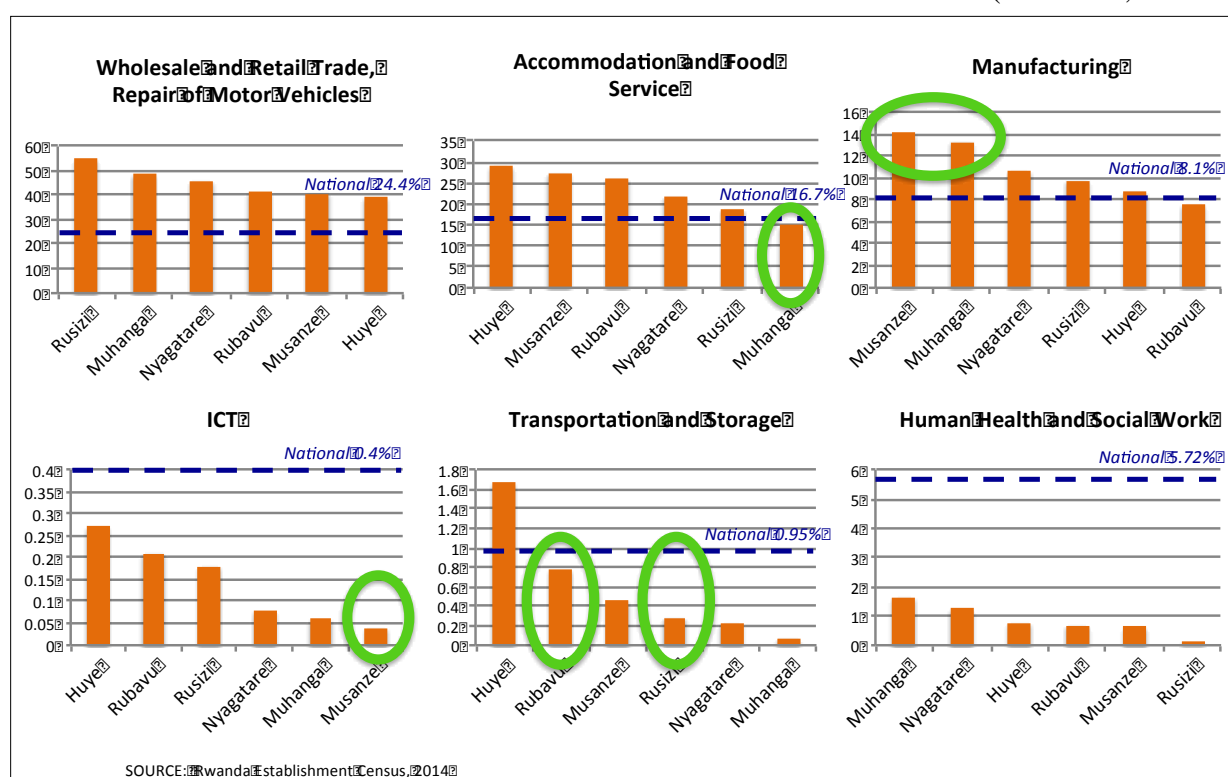


Fig. 7: Jobs in secondary cities, 2014 (extracted from Miller, 2015)



urban areas and over 125,000 in rural areas). The majority of these waged non-farm main jobs were taken up by young people. The increase for individuals aged 16-35 years was over 190,000 while it was around 54,000 for persons aged 36 years and above. There is evidence of an increase of non-farm jobs between 2011 and 2014, absolute and relative to farm jobs. The percentage of employed individuals with a waged, off-farm main job has increased from about 17% in 2011 to about 20% 2014 (EICV4). The percentage of persons whose main job is in wage farming has also increased from about 10% to 11%. The percentage of independent farmers has declined in proportion to those employed, while the self-employed independent non-farmers have remained almost static. A comparison of 2011 and 2014 establishment censuses shows growth of 24.4% in the total number of private and business oriented mixed establishments in this period (Establishment Census, 2014). The increase was observed for establishment involved in mining and quarrying, with a growth of 473.5%, construction (42%), accommodation and food service activities (34.1%), human health and social work activities (33.1%) and arts, entertainment and recreation (31%). There is increase in all categories of size of establishments, with profound increase of large establishments (103.8%).

32. Integration of the Urban Economy into National Development Policy

Rwanda's overarching Vision 2020 seeks an exit from low-income status with an emphasis on urbanization as a key driver for economic growth. It targets 35% urban population and 1.8 million new off-farm jobs by 2020 to reach middle-income status. The EDPRS2 specifies the importance of developing secondary cities

and urban areas in general as a means to unlock transformative economic opportunities. Economic transformation is the overriding theme in the EDPRS2, backed by other key thematic areas. Public investment and regulation is meant to leverage private investment and stimulating private sector activity, and the economy is meant to become a competitive supplier of goods and services to free and expanded markets. Rwanda has also undertaken actions to enhance the national development policy through facilitation of the urban economy, which include competitive tender process, increasing use of PPP and other financing models, basic infrastructure provision to facilitate project development, effective utilisation of finance, and identification of priority projects, with 4 subsectors of EDPRS2 falling within the infrastructure sector. Emphasis is given to facilitate local economic development and increase of urban employment, while helping urban areas to become attractive locations to reside in, where services can be easily accessible to all, and the quality of life enhanced. Sustainable urbanisation is a key priority area in the EDPRS2. 16.5% of the population live in urban areas currently (Population Census, 2012).

Many public services that are available in Kigali, such as inner-city public transport, business registration services, specialised healthcare services, and multiple schooling options, are not available in other urban areas. Yet, opportunities for investment and potential for viable social life exist outside of the capital. While Kigali City needs support to improve service provision to the growing population, the Government intends to simultaneously support the development of secondary cities (EDPRS2). The six secondary cities were chosen based on strategic location, growth trends, unique assets and potential



to become economic hubs, for prioritised public investment to help distribute socio-economic opportunities. The economic transformation strategy of the EDPRS2 also elaborates on green urbanisation and the promotion of green innovation in the private sector, to open up new 'transformative' economic opportunities such as markets for environmental goods and services. The Government gears its efforts to ensure a type of urbanization which is well-managed. All secondary cities will implement an investment package tailor made by them to address the needed improvements to infrastructure to be able to accommodate the increasing urban population, and to provide an environment favourable to local economic development. Preliminary findings of feasibility studies are available, comprising a list of investments to improve infrastructure and service conditions, which reflect the cities' needs. The prioritised projects are under preparation to be implemented from 2016.

An urbanization secretariat has been established in the responsible Ministry to coordinate the sector and prepare technical reports to the National Steering Committee on Human Settlements established by the Prime Minister. The Steering Committee may take decisions and guide programs and projects of National importance which require cross-sectoral integration.

33. Challenges Experienced and Lessons learnt

There is still strong fiscal dependency of the local governments on transfers from the central government. Local government administrators also have to increase capacity over the resources they receive and mobilize locally, to plan and spend prudently. Downwards accountability to the population served with public services could be improved. The local tax revenue sources are not fully exploited due to lack of reliable information on taxpayers and taxable properties information, the mind-set on tax paying, and unawareness of taxpayers leading to resistance.

According to a recently published study by the World Bank, Rwanda is the country with the highest discrepancy between the Gross National Income (GNI) per capita and the cheapest newly constructed (formal) house (World Bank, 2015). Access to housing finance is constrained by a number of factors, mainly by a low



Fig. 8: House price affordability with changing interest rates (Source: National Housing Policy, 2015)



household income structure respective to high formal house construction and sales costs, and large household sizes requiring rather large unit sizes. Access to individual housing mortgage is currently not possible for more than three quarters of households (National Housing Policy, 2015). Housing finance schemes which are accessible to most people are still limited. Usually, available schemes are characterized by high down payment rates, high minimum loan rates and high income ceilings to be eligible for a loan. Therefore, few currently benefit from conventional home-ownership financing through housing mortgage (ibid.). Interest rate margins are high at about 18%, meaning that the real cost of borrowing is very expensive. In addition, according to the share of wage earners who are in the social security system, less than 10% of the labor force is employed in the formal sector and such employment is a necessary condition for affordable formal borrowing sufficient for house construction. Most housing is built without formal bank credit (Buckley, R., Ilberg, A., Murray, S., 2015). Despite high interest rates, the however bigger challenge is the value of household income and its regularity. Hypothetical calculations demonstrate that lowering the interest rate for home owner mortgage would not significantly benefit the lowest income population and cannot cause much change for the largest target group, but would rather be beneficial for the higher income segments (National Housing Policy).

The majority of formal urban housing built using government funds so far does not provide assistance to the poor. The price at which new housing units are produced and sold still mismatches income distribution. Currently offered units would require acquisitions at a cost 3.5 times the average annual income. An extraordinary level of

subsidy would be required to make units accessible to the poor and families with the median income (Buckley, R., Ilberg, A., Murray, S., 2015.). The National Housing Policy (2015) identifies this discrepancy between incomes and formal sales costs. Therefore, the government in collaboration with the banking sector addresses accessibility of finance products, while it also incentivises large scale private investment into affordable housing.

Several assessments on LED have been completed. Implementation and financing of activities is still limited and inconsistent with infrastructure prioritisation, and without a marketing strategy. LED strategies must be consistently included in city-wide feasibility studies and then be marketed. The District One Stop Centres may play a key role in providing an enabling environment for local enterprises. Local and international investors should be able to see distinct advantages in each of the cities, which can benefit from leveraging national government investments with private sector interests, and provide the facilitating infrastructure as well as create a recurrent revenue stream.

RDB incentives exist to encourage investors to invest outside Kigali. These include 50% accelerated depreciation as well as other incentives based on size and employment projections. Close coordination between local government officials and the RDB is required to ensure that the RDB is promoting the differentiated business environments of the six secondary cities to potential investors in a way that supports their unique visions. Unique positioning of the six secondary cities has begun to be articulated. Also, urban infrastructure must facilitate economic activities, which requires a good road and transport network for high



accessibility of central, nodal and commercial areas, reliable power supply, waste water treatment options and solid waste management with collection points, a city centre attractive for customers in terms of public realm but also services offered, including parking and delivery zones, among other. Additional jobs, training and trade opportunities will continue to pull people toward urban areas. Challenges lie in making urban locations outside of the capital more attractive. This requires a diversification of services, and specialisation as to attract investors particularly for the advantages of the specialisation, which again is dependent on good planning based on detailed analysis. Even the 515 residents interviewed during the writing of this report, have ranked better job opportunities highest, followed by good education, and better health care.

34. Future Challenges and Issues for the New Urban Agenda

Local governments must enhance their efforts to mobilize taxpayers through tax education and efficient tax administration. As a global recommendation, collaboration between National governments, finance sector and civil society has to be intensified when setting up housing programs, with the objective to carry financing risks collectively and to integrate population groups with low and irregular incomes. The transparency of administration and decision making processes for housing support programs complement such in regard to maintaining the public interest (Ilberg, 2015). While global or regional housing support programs may be strategically improved, those should target the provision of especially services, which cannot be offered locally. In this sense, a regional, country-cross-cutting institution could

specialise in providing specific functions for its member countries, which they usually could not offer in the context of development, such as for example provision of investment guarantees to investors under clearly determined conditions, or even offering household mortgage programs. The aspects of planning and implementation should remain local responsibilities while intending to preserve and enhance local culture. All in all, the focus should be on a strategic and coordinated distinction between different levels of intervention (ibid.). Continued focus must be on technical support for improved investment environment, and for Rwanda this would especially be in physical terms based on economic feasibility, because administrative bottlenecks are continuously being resolved. There is strong evidence of a causal relationship between skills and growth in incomes (EDPRS2). Besides the years of education, its quality and the skills that people acquire should be in the centre of attention, besides the quality of jobs and their quantity. Local industries are an important source of employment. They provide goods and services primarily to the local market. Employment growth in local industries tends to be roughly proportional to population growth. However, it is the traded industries that are fundamental to prosperity creation, which tend to have higher wages, higher productivity, and higher rates of innovation. Competitive success creates demand for local industries, and has a positive influence on local wages. Efforts to develop conditions to support high wages in traded clusters will be critical in achieving poverty reduction (Miller, 2015). Primary focus should be on creating opportunities for the population who are currently active in the farming or informal sector to advance, and for the students who



are currently in education, for them to find a good job when they graduate. The economic dynamism still needs a boost through governance measures and customer orientation. There shall be focus on enhanced collaboration with financial institutions and other private investor's entities through Public Private Partnership to enable the necessary support to offer various housing and housing finance products. A variety of schemes must co-exist to ensure reaching the full variety of access groups characterized by different socio-economic situations. Saving schemes particularly for home ownership shall be part of the products promoted.





VI. Housing and Basic Services

35. Slum Upgrading and Prevention

Almost exclusively, it is the informal housing sector which allows access to housing units for households which can only afford to make a monthly payment of below the formal rates, and which offers the required quantities of housing units (National Housing Policy, 2015). According to EICV4, 62.6% of all urban households country-wide live in unplanned urban settlements. The reason for this is the accessibility to housing units corresponding to the quantitative demand and to most households' financial capacities. Generally, the living conditions in Rwanda's informal settlements are better than those in slums in many other African, Asian or Latin American cities challenged by the problem. Rwanda does not have slum areas as such, and most houses have a fair standard. The worst living conditions are found in relatively small portions in inner-urban centres, where population densities are the highest while infrastructure is insufficiently available. The largest prevalence of informal settlements, and presumably also the oldest remaining informal settlements are found in Kigali. The percentage of people living in informal settlements in Kigali has significantly dropped to 79% in 2014 compared to the 2007 estimate of 90% (Ilberg et al., 2008), even though an increase within the last three years since 2011 from 62.6% (EICV3) is alerting. The decrease between 2007 and 2011 is particularly the result of the Land Tenure

Regularization process, which had been implemented from 2010 and which legalized and boosted a private land and real estate market, combined with the adoption and enforcement of urban planning documents.

The Government intensifies efforts to ensure a type of urbanization which is well-planned and well-managed. The framework for sustainable growth for the prevention of further informal growth has been developed since EDPRS2 and already been successfully adopted. Part of the country's achievements in the sector is an inclusive National Housing Policy, adopted in 2015. It clearly emphasizes in a dedicated policy statement that "Existing informal housing units shall be upgraded and integrated into the formal housing stock to the highest degree feasible", and it acknowledges that the stock of informal housing bundles large investment previously made by people. The policy guides, that investment into maintenance and upgrading of already existing and adequate housing shall complement investment in new housing stock for maximum resource efficiency. Urban upgrading shall be a measure helping achieve a situation of basic living standards, with defined standards of minimum liveability.

The Urbanisation and Rural Settlement SSP supports urban upgrading as an important strategy to tap existing and future land and property equity, and supports upgrading of urban neighbourhoods in support of their role in providing decentralized hubs of mixed use economic opportunities for urban residents. The improved framework for development management focuses on inclusiveness, with the intention to make it achievable and in turn reduce informal activity in building. The facilitation of the



upgrading of informal settlements will contribute to achieving the vision of Rwanda's transformation into a middle income country with prosperity for all. The ultimate goal is that basic infrastructure servicing will eventually address all neighbourhoods, so that the efforts of the highly demanded formal housing development will impact on the improvement of living conditions including low income groups, who shall not be driven out of serviced neighbourhoods as a result of market economic principles. A draft National Informal Settlement Upgrading Strategy underlines the principles and prioritization measures to be applied for the benefit of the highest possibly number of households from improved living conditions with the limited resources we all have. Its objective is to comprehensively guide the implementation process for urban upgrading and to underline the principles and prioritization criteria to be applied. The government agency in charge of urban development and human settlement RHA has a technical supervising, monitoring and auditing responsibility in the urban upgrading process, while the local governments carry the responsibility for project implementation and community liaison. High on the list of RHA together with the local governments is the continued servicing of sites with basic infrastructure, based on participatory urban planning documents.

RHA has commissioned countrywide studies in 2013/2014 with one study done for every Province and the City of Kigali, assessing the status and inventorise informal housing development. RHA is also a participant in the UN-Habitat PSUP process and in conjunction, the profiling of informal settlements showing the status and proposing mechanisms for their upgrading is being undertaken with the

City of Kigali, Muhanga and Musanze. The secondary cities Muhanga and Musanze are also undertaking detailed feasibility studies in their informal settlements to determine the priority improvements and costs for infrastructure upgrading. The implementation of urban upgrading has already started in chosen neighbourhoods in the City of Kigali, Huye, and Musanze. RHA in partnership with UN-HABITAT and UNDP has in the recent past completed settlement upgrading in Rwanda's Western Province. The project aimed at improving the lives of people living in informal settlements in the urban areas of Karongi and Rusizi Districts, by making the dwellings better accessible and providing drainage, water and sanitation. Under the project, blocs of toilets, water access points, storm water canals, bridges as well as storage facilities for fish and vegetables were constructed, in a bid to empower local women cooperatives.

36. Improving Access to Adequate Housing

The quantity of housing production is still low and its cost does not match the purchase power of the majority. Most urban residents still access housing through informal practices, because the formal sector cannot offer housing access schemes which cater to all. A number of circumstances result in the situation where most housing developments address only a minority of customers, among whom demand has not even been saturated yet. Currently, while Kigali hosts about half of the urban population in Rwanda, the Housing Market Study for Kigali (2012-22) estimates⁵ that total housing needs (2012-22) reach 458,256 units, of which 344,068 are newly to be constructed.

⁵ Kigali Housing Market Study, 2012



Broken down to different purchase powers, this was translated to:

- 43,436 units for social housing (12.6%);
- **186,163 units for affordable housing (54.1%);**
- 112,867 units for mid-range housing (32.8%); and
- 1,601 units for premium housing (0.5%), for Kigali alone.

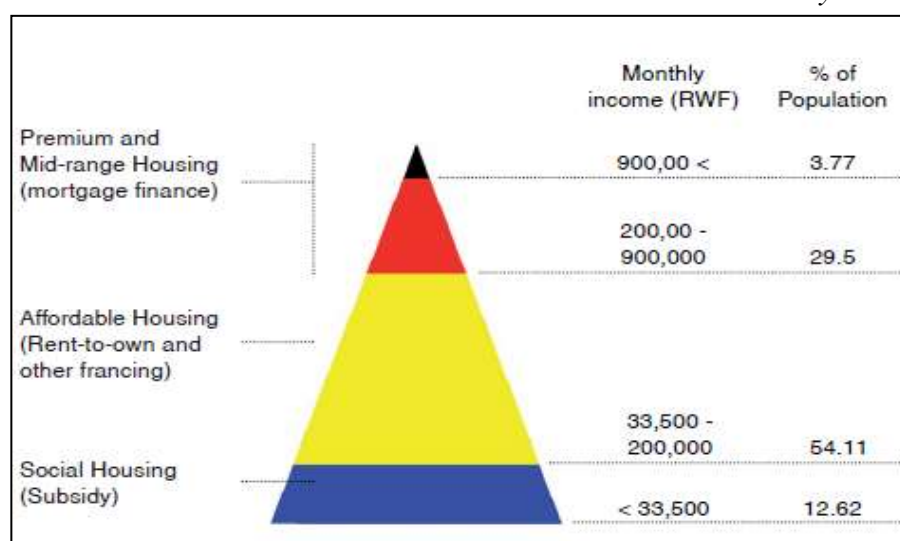


Fig. 9: Housing Demand Strata (Planet Consortium, 2012)

The countrywide demand has not been thoroughly researched yet and studies are in preparation; it is estimated double of the total need in Kigali.

The achievements of the recent years relate to improved participation in planning, openness to the use of local materials in construction, and the equal acknowledgement of tenure rights. Risen awareness, small scale research, and project trials in the housing sector have contributed to this. The improvement of neighbourhood planning and of the general urban planning framework is underway, which provides for consistency in planning and development management. Despite the constraints which still exist in housing finance, lending conditions have improved

through the introduction of longer credit terms, slightly reducing interest rates, a larger and more accessible variety in terms of down-payment options, and improvements in the accessibility of the building permitting system in relation to mortgage rules (National Housing Policy).

In March 2015, the National Housing Policy was adopted, with its vision being: *“Everyone independent of income, base of subsistence, and location shall be able to access adequate housing in sustainably planned and developed areas reserved for habitation in Rwanda”.*

The National Housing Policy strategizes in a holistic approach the way toward a positive impact on increasing employment rates, skills transfer, and quality enhancement in the local construction industry –

all seen as factors contributing to a vision of increasing wealth for all. A wide approach to make housing affordable is needed. In 3 policy pillars, the document covers the aspects of access to housing, resource efficiency, land, infrastructure, skills development, enhancement of the local construction industry, construction materials and technology, townscape and liveability, and public responsibility. The Policy Pillars are: 1) Public Benefit, 2) Resource-Efficient Planning, Green Technology, and Professionalism and 3) Governance and Partnership. The Policy provides a framework which (Source: MININFRA brief, 2015):

- Enables the private sector to satisfy the current and growing demand for housing in terms of quantities and access costs offered to clients;



- Supports the purchase power among population through saving for housing, and pooling of individual resources;
- Supports financing models accessible to the full range of residents including low income levels;
- Emphasizes principles of quality and professionalism in both, planning and construction of neighbourhoods and housing; and
- Combines land, land use, urban planning and housing policy directions in order to achieve the efficient use of land and resources when developing housing.

A Prime Minister Instructions No 004/03 of 13/11/2015 Determining the Conditions and Procedures for Obtaining Government Support for Affordable Housing Projects is a significant step toward the collaboration with the private sector in housing delivery. It is a commitment to the financing of inner-neighbourhood infrastructure from the side of the Government under set conditions. The conditions relate particularly to the profiles of beneficiaries of the housing units, to the affordability of access schemes to housing which may either look at the sales prices or affordability of financing schemes, and to resource-efficiency and local skills enhancement through collaboration with local SME's. An Urban Development Fund, which is in design phase, is expected to facilitate the financial commitment to public infrastructure and project approvals.

The *Law N° 06/2015 OF 28/03/2015 Relating to Investment Promotion and Facilitation* is an additional component which includes the objective of incentivizing investment in affordable housing. It offers tax incentives to investment in affordable housing, such as preferential corporate income tax rate, and

accelerated depreciation for investments in construction projects.

The Government engages in partnerships for housing development for a sustainable, mixed-use housing neighbourhood development based on a PPP model first tested in 2008 when 250 low cost houses were built, which among other innovations made local materials bankable. An estimated 22,000 housing units are currently in different stages of preparation, to be developed by the private sector with government support. There is a 2-fold strategy to 1) trigger large scale investment into affordable housing and create competition by using the identified and available land, and 2) trigger and facilitate medium- to small-scale investment into affordable housing through collaborative development schemes, which would enable small landholders, participate in development in form of cooperatives or as investment shareholders. The local production of construction material is gradually being increased, e.g. local production of cement, of improved and environmentally friendlier bricks, and new, innovative and home-made solutions for structural and non-structural walling materials.

37. Ensuring Sustainable Access to Safe Drinking Water

Water supply services shall ensure safe, reliable and affordable access to water for all 100% by 2017. The accompanying goal is the financial viability of water supply, functionality of infrastructure, and effective management and well-regulated public private partnership (PPP) arrangements (MININFRA website). The water tariff guidelines are also essential to reconcile the interest of cost recovery, affordability for the rural poor, and attractiveness for private operators (ibid.).



Rwanda is fortunate to have abundant renewable water supplies that are sufficient to meet the country's growing water needs (UNEP 2011). The sector targets both, the improvement of urban water supply through the construction, rehabilitation, reinforcement and extension of water supply distribution network in urban areas, as well as the increase of water access above 70% in rural areas through the construction of large scale rural water supply schemes. Part of the strategy is to empower districts to implement management and maintenance of rural water supply projects. According to the EICV4, 2014, 84.8% households access improved sources of drinking water. This is an increase by more than 11% compared to 2011. The increase is observed across the country and particularly in rural areas where it is 12%. In urban areas, 9 out of 10 households use an improved drinking water source⁶. In urban areas, about 60% of households live within 200 m to an improved drinking water source and in rural areas, almost half of households live within a distance of 500 m to an improved drinking water source; the distances of accessing improved water sources within 200 m in urban areas, and within 500 m in rural areas respectively are the two standards targeted in Rwanda. In urban areas, the access to piped water to the yard/or house, or at a public standpipe is at roughly similar proportions – 39.4% and 42.6% respectively. In rural areas, most households access water through public standpipes (32.3%) or protected springs (44.8%). In 2013/14, 17% of the households took measures to harvest

⁶ 'Improved water sources' include pipe-borne water inside the dwelling or in the compound, public taps/standpipes, boreholes, protected springs or wells, and rainwater. 'Unimproved sources' include unprotected springs/ wells, and all surface waters from rivers and lakes/streams/ponds .

rainwater. Rainwater management is relatively common in Kigali City, where rainwater is managed by 35% of households.

One of the priorities in the sector has been given to the water quality surveillance. Water quality monitoring systems were put in place to protect the water from contamination that may be caused by damaged spring protection, lacking protection of the catchment area, lack of drainage, reservoirs, broken pipe, etc. There is regular field inspection of the local conditions and water sampling at different points of the water systems. The Urban Planning Code, 2015, addresses for planning reference the area of *water sources planning for water supply to human settlements*, for the purpose of water protection and water safety for human consumption.

38. Ensuring Sustainable Access to Basic Sanitation and Drainage

To date, only few hotels, hospitals and few small residential areas in Kigali have constructed sewers and waste treatment plants. There is prevalence of low-cost and low-tech sanitation solutions including treatment options. Rwanda also faces challenges in relation to solid waste management. The generation of waste increases, and a sizeable portion of it is disposed on improperly located and operated dumpsites, resulting in adverse impacts on environment and health.

According to the EICV4 (2014), 83.4% of Rwandan households access improved sanitation, which is an increase of almost 9 percentage points between 2011 and 2014. 64% of all households use an improved type of sanitation that is not shared with other households. The percentage of households in Kigali City with the



exclusive use of an improved sanitation facility is below the national average (EICV4). Across the country, the majority of the households use a pit latrine with solid slab. Flush toilets are rare outside Kigali City, where 8.5% use this type of sanitation. Open defecation has practically been eradicated and most households have already financed and built their on-site private sanitation premises (EICV4). The prevailing practice remains that water is used for cooking and washing, with grey water mostly discharged on surface, while the excreta are disposed with waterless latrines, which is a rational solution considering the scarcity of the average water supply (National Policy and Strategy for Water Supply and Sanitation Services, 2010).

Sanitation master plans for the secondary cities are under development; a Kigali Central Sewerage Project for the central business district is in preparation. Kigali and other towns undertake considerable efforts to maintain the urban environment clean and plastic bags are forbidden within the country. Problems arise at all stages of waste collection and disposal. Kigali's waste contains still 70% of organic, biodegradable waste and in rural areas this

portion of waste may reach more than 95%. However, waste sorting; composting and recycling activities are at the beginning and household waste management does usually not yet include separation, recycling and reuse. In urban areas, 35.8% of households are serviced by organised waste collection. For Kigali, the rate in the use of waste collection services has increased between 2011 and 2014 from 43% to 46.5% (EICV4).

There is a backlog in waste legislation enforcement as well as in coordination and promotion of existing efforts to recycle and dispose waste properly. The Urban Planning Code, 2015, addresses the planning principles for *waste water management and treatment*, as well as *planning of solid waste management and location of facilities*, both for reference in urban and human settlement planning.

39. Improving Access to Clean Domestic Energy

The energy sector in Rwanda consists of four components: electricity, biomass, gas and petroleum, with each playing a key role in Rwanda's transition to a middle income country by the end of the decade (Rwanda Energy Policy, 2015). According to EICV4, the main type of fuel that households use for cooking is still firewood (83.3% for all of Rwanda, and especially outside Kigali). 67% of urban households use charcoal. Electricity use for lighting has almost doubled since 2011. Almost one in five households uses electricity as main source of lighting (EICV4, 2014). In rural areas, despite an increase

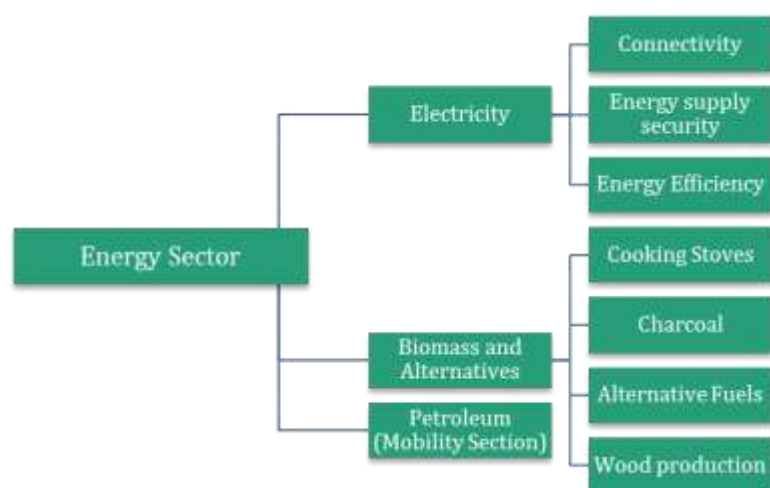


Fig. 10: Composition of current Rwanda energy sector (Source: GGGI)



of the use of electricity, about half the households use batteries as their main source of lighting, followed by lanterns. The largest decreases in use at national level since the last round can be observed for lanterns, oil lamps and firewood. The percentage of households using electricity as the main source of lighting remains low in the bottom quintiles. The largest increase has been experienced by the wealthiest quintile, among which 57% use electricity compared to 39% in 2011. Batteries have become more popular among all households and in particular among the lower quintiles.

Power supply has stabilized for some time. 65% of on-grid energy comes from renewable sources, particularly hydropower and solar (Energy Division, MININFRA, 2015).

Although Rwanda has had considerable success over recent years addressing environmental issues to the extent, that it is one of few countries in Africa where there is not a major link between biomass and the negative effects of deforestation, and social and health problems emanating from the use of biomass. The Government is promotes the use of alternative fuels such as biogas from organic waste, which will not only save lives but also free up the time spent by women and children to collect firewood, giving them more time to study and undertake productive commercial activities (ibid.).

Electricity is required for both low consumption devices and large consumers. Rwanda's priority is to extend the network to allow productive and heavy users of electricity across the country to connect to the grid. For lighter users of electricity, grid connections are unlikely to be economically viable in the short term and off-grid will be preferred (ibid.). The Government intends to provide 70% of the

population with access to electricity both on-grid and off-grid by the end of EDPRS2, which is now at 23% (ibid.). It is the goal to diversify energy generation away from diesel generation and many efforts are in the area of exploration of alternative sources of energy, and renewable energies. Two of the overarching policy goals are to ensure the sustainability of energy exploration, extraction, supply, and consumption so as to prevent damage to the environment and habitats; and to promote safe, efficient, and competitive production, procurement, transportation, and distribution of energy.

While solar and hydro power already successfully used, the resource potential for geothermal power is 47MW and 90MW at 80% and 50% confidence levels respectively. It has been found that Rwanda has low wind resource potential. However, further studies are to be undertaken to provide a more detailed resource assessment. The use of peat is being explored in support of diversification of energy sources, but reliance on peat, which is non-renewable, will be kept minimal. Lake Kivu has an estimated 55 Mio m³ of methane gas and accumulates approximately 150 to 250 Mio m³ of methane a year. The energy potential for methane from the lake is estimated at 700MW over 50 years in total, and 350MW for Rwanda due to its sharing agreement with neighbouring DRC. The largest constraint is the associated technical risk, where in case of an accident the gas itself can combust all living organisms within a 10 km radius.

There is the risk of droughts reducing the generating capacity of hydroelectric dams, and floods increase soil erosion and siltation which can damage dams. An example of this is the drought in 2004 in Rwanda which reduced hydropower



capacity so much so that the Government was forced to rent diesel power plants to meet domestic demand” (The NCCLCD on Rwanda’s energy production, extracted from GGGI, 2015).

The energy sector is undergoing vast changes, which is resulting in increased private sector involvement and reducing perceived risk. Part of the changes was the corporatization of the Energy, Water and Sanitation Authority to increase performance and reduce perceived risk of the utility and the development unit. Rwanda calls for an unprecedented degree of investment in emerging energy systems and markets from the private sector and independent power producers where government involvement is not needed (Rwanda Energy Policy, 2015). Created are an Investment Management Unit and an Energy Development Fund that carries out initial investments and allowing the private sector to only engage in the project cycle at a later stage when perceived risk is lower. Power purchase agreements are being offered as standard for periods of up to 25 year and the renewable energy feed-in-tariffs offer the likelihood of positive return on investment.

The institutional structure is being made fit also on regulatory level. The Rwanda Utilities Regulatory Authority (RURA) is mandated to regulate public utilities involved in renewable and non-renewable energy, electricity, industrial gases, pipelines and storage facilities, and conventional gas extraction and distribution. RURA ensures consumer protection and quality of service standards for power, energy tariff structures, licenses for power generation, transmission, and distribution companies as well as retail petroleum filling stations and related storage facilities (Rwanda Energy Policy, 2015). Among the achievements are the

Rwanda Energy Policy and the Sector Strategic Plan, which target the diversification of energy sources and increase of a power mix by exploiting indigenous resources (i.e. geothermal, methane gas) and the share of renewable energy (hydropower, solar).

Renewable Energy	
Hydropower	91.97 MW (59%)
Solar	8.75 MW (6%)
Geothermal	0 MW (0%)
Non-renewable Energy	
Diesel/Heavy	51.8 MW (33%)
Fuel Oil	3.6 MW (2%)
Methane	0 MW (0%)

Table 1: Electricity generation mix in Rwanda (Source: MININFRA, 2015, extracted from GGGI, 2015)

Evidences for the progressive use of clean energy are:

- Hydropower is the main source of electricity in Rwanda;
- 3,065 HH’s have access to electricity through hydro mini grids;
- *Kigali Solaire* (2007) is Rwanda’s first grid-linked solar power plant; at the time of construction Africa’s largest, with peak output of 250 kW and estimated annual output of 325,000 kWh;
- *Agahozo* solar plant (2014) is now the largest solar power plant in East Africa and produces 8.5 MW, which is about 7% of Rwanda’s total power supply;
- A number of private suppliers offer small solar PV kits for domestic solar power generation and solar hot water systems, incentivised by the Government; about 7,900 HHs, 335 schools and 50 health centres access electricity through Solar PV government/ donor support;
- A National Domestic Biogas Program started in 2007 and develops the



commercial and domestic biogas sector to substitute firewood with biogas for cooking, and increase bio-slurry as fertilizer especially in rural areas and public facilities.

40. Improving Access to Sustainable Means of Transport

Rwanda made significant achievements in developing transport infrastructure. Modernisation of the transport sector is pursued by ensuring provision of adequate transport services to ensure mobility and accessibility of people and goods, which is seen as a key to economic growth. In 2012, the Public Transport Policy and Strategy was adopted, which aims at ensuring mobility, connectivity and opening up to ease the country's land-locked status. The key principles for public transport services are to ensure public transport services for all citizens, accessibility, mobility, availability responsive to demand and reliability as per standard time schedules or on demand. Further principles are to promote safety and security for passengers, and to monitor service and performance, and satisfy the user. Almost one tenth of Rwanda's annual budget is committed to transport and other infrastructure. To develop a vibrant private sector, Rwanda is investing in roads, rail and water transport infrastructure with the intent of reducing the cost of transport to businesses and individuals (RDB, 2015). Rwanda's intra-road system makes all major urban areas accessible through asphalted roads, which are serviced by public transport operators. With the help of the Road Maintenance Fund established in 2007 under MNINFRA, the road network is maintained. Road transport will be complemented by a railway through the multinational "Dar Es Salaam–Isaka–Kigali/Keza–Gitega–Musongati Railway Project", which is under implementation

(MININFRA website). Rwanda further intends to develop a new modern international airport at Bugesera to provide extra capacity for passenger transport and develop the cargo freight. The New Bugesera International Airport is meant to become an East African and international hub. Also planned is to develop inland water transport for transportation of goods and passengers on the Kivu Lake. A waterway will connect Rubavu, Karongi and Rusizi with the construction of new terminals and equipment of new ships.

Kigali City is spearheading improvements to the inner urban public transport management and had introduced reforms, aiming at redesigning public transport routes in order to reduce distances walked by passengers to the nearest bus stop within the City of Kigali and connecting city suburbs and neighbourhoods to the public transport network. Put in place was a clear and favourable regulatory framework that encourages investment in public transport in the City of Kigali, and the use of modern, smart, bigger and comfortable buses appropriate for public transport. Kigali Bus Services, Rwanda Federation of Transport Co-operatives and Royal Express were in 2013 awarded five-year contracts to provide public city transport, improve city transport and ease movements in and around the city. The number of buses has drastically increased and 90% of the public transport fleet in Kigali are modern, 'smart' and bigger buses. The routes connected to the public transport network also increased, and more locations in the city including its outskirts are serviced (New Times, 2014). Inner urban public transport in Kigali shall in the future be organized around a new Bus Rapid Transit System with 43 km dedicated bus lanes.



41. Challenges Experienced and Lessons Learnt

The challenges that the urbanization and housing sector is facing in the context of urban renewal, generally relate to resource availability at macro and household level; technology, quality insurance and private sector capacity; and governance and public sector capacity. To tackling those challenges shall increase the quantities of formal housing which is accessible to people. The success of an Informal Settlement Upgrading Program will largely depend on community-driven initiatives and processes, for the highest efficient and effective use of public resources. Civil Society Based Organizations are invited to accompany the process for the smoothest results in the transitions coming with urban renewal. Rwanda is one of the smallest countries in the world, with, however, one of the highest population densities in Sub-Saharan Africa. Land and developable land are a scarce resource. As addressed by the EDPRS2, “with an increasing urban population, rising rural and urban consumption, and food shortages in neighbouring countries, food security takes on increasing relevance.” The increasing demand for land for development and economic growth has to be well-balanced with its use, and its efficient use is therefore a key concern for Rwanda. Because of a major challenge of scattered private resources in Rwanda, where a high number of low scale resources exist especially in terms of developable land but also finances, the most feasible strategy for Rwanda in summary is seen in the support to collaborative finance and investment, saving for housing, collaborative development and land pooling, and the strengthening of the local construction industry through emphasis on professionalism, skills development and

increase of local material production and SME’s (MININFRA policy brief, 2015).

Land has become a transferable asset with reform, and small individual plots are the target of market pressure especially in urban areas. The Housing Policy therefore strongly emphasises on solutions which would enable private individual land holders to participate in development to maximize the positive impact of land tenure regularization in the context of the need for efficient use of land (National Housing Policy). The housing demand study conducted in 2012 in the City of Kigali articulated the demand at different income strata and shows the low income levels among the target groups. The highest demand is for housing which is affordable to households with a monthly income below 400 USD, which concerns about 78% of Kigali’s population alone.

Emphasis is on a shift toward innovative forms of housing development with the highest possible benefit for the public. A principle shift to the pooling of land, without involving expropriation of land holders to implement development projects is pursued and promoted to ensure sustainability of housing development. All Master Plans were elaborated before there was a guiding framework concerning plan elaboration, planning and zoning principles; this is a constraint to a high density mixed use housing neighbourhood approach which is part of the new policy followed for the efficient use of resources and to trigger socio-economic improvement for people by living in locations which provide economic opportunities.

The main challenges in urban water supply are cost recovery and improved planning in collaboration between the implementing agency and local governments. The



collection of geo-data in a shared infrastructure data platform will support integrated planning for improved demand oriented service delivery. Large centralized sewage and treatment facilities do not only require high financial, material and human resources, but also planning prior to urban growth. Further challenges are the availability of regular water and electricity supply, depending on the design of the sewage and treatment systems. Disposal of waste directly into the environment is still practiced at a country-wide rate of 40.2%, and with a higher rate in rural areas (42.4%). 0.1% of rural households use organised waste collection services (EICV4).

With respect to the energy value chain, energy contributes to green growth if (a) the energy supply is from non-polluting sources, is secured in the levels of availability and upholds the protection of the environment, (b) energy enables green innovations that contribute to lifting economic prosperity and sustainability of development in the country, and (c) if energy is consumed efficiently. In turn, the green growth that arises from these three areas creates opportunities for new green industries, jobs and technologies during the economic transition to a green economy (GGGI, 2015). The challenges relating to energy efficiency and demand side management to achieve clean domestic energy include the low level of awareness among energy end users about energy conservation practices, options and benefits; Insufficient incentives, to invest in modern efficient technologies, and dominance of energy-inefficient technologies, including traditional stoves; lights and other appliances. The policy objective of the energy efficiency and demand-side management is to constrain uncontrolled future energy consumption growth and to support realizing Rwanda's

Green Economy vision. Given the growing demand for electricity among households and industries and the limited natural resources, actions to manage demand for electricity are important. It is also cheaper to use energy more efficiently than to just look at meeting the demand by expanding energy production (Rwanda Energy Policy, 2015). In the household sector, essential energy services for cooking, lighting, heating, brewing, firing, boiling, ironing, and operating electric appliances are expected to continue growing with the growth of population and economy. Rwanda currently has low levels of access to modern energy carriers such as electricity and liquid petroleum gas. This marked energy poverty constrains the efforts to achieve medium-term thematic and macroeconomic objectives (Rwanda Energy Policy, 2015). On the supply side, the electricity tariff is relatively high compared to other countries in the region and heavily subsidized. High relative energy costs and unreliable power supply dis-incentivize stronger industrial growth and business expansion. This challenge is perceived as most critical in the manufacturing, mining, and agro-processing sectors. Power cuts, unstable power supply conditions, and uneven power quality are additional constraints to the growth of the industrial sector growth (ibid). A clearer picture is still needed through energy resource mapping, pre-feasibility studies, upstream exploration, and piloting of projects, and of the extent to which domestic hydropower, peat, solar and wind resources can generate power on viable, competitive terms; such studies are in progress. Autonomous small scale power generation activities shall be further encouraged through simplification of licensing for mini-grids or small-scale power distributors. The current dependency on carbon intense energy sources is still high due to the lack of



reliability, capacity and amount of renewable energies generated, along with the high national demand. A Renewable Energy Law is being developed.

42. Future Challenges and Issues for the New Urban Agenda

Without the collaboration of residents in informal settlement upgrading, urban renewal will be challenging and cost-intensive to be rolled out country-wide. Rwanda promotes collaborative development schemes which would not require high costs for expropriation and compensation in urban renewal projects, which are usual involved in government or donor-initiated upgrading schemes. Rwanda wants to promote bottom-up and people driven processes and facilitate those, and complement with the provision of basics infrastructure services according to servicing requirements, while residents shall be the beneficiaries of land value increase. While striving toward higher quantities of housing units produced, it is an urgent matter to ensure high-quality, liveability and cultural identity in housing neighbourhood design. As part of this, the raising of quality and skill levels in design, engineering and construction must be a highly prioritised area. The promotion of collaborative schemes is a result of identifying that bundling capacities may be a vehicle to overcome shortage of finance and other resources; it now serves as a promoted opportunity not only in housing development and urban upgrading, but also in commercial development. It is for the civil society to understand and take this opportunity, and processes must be well reflected and monitored for their positive results and success.

A major necessity when ensuring access to safe water is the prevention of its contamination, either in the ground or

during transmission. Furthermore, losses during transmission must be minimised for the efficiency of water supply. The role of sanitation in promoting health and by extension, economic and social development has to be understood more widely, including the impact of costs of sickness and missed work/school days on economic development.

Even with clean energy generation, low levels of connectivity of electricity, along with low energy capacity means that the majority of the population continues to depend on fossil fuels through independent generators, kerosene lamps, and other. Energy takes years to develop, and for change to occur. Efforts should focus on the use of renewable sources of energy on- and off-grid, and on environmental management for long-term benefits, to decrease dependency of the fossil fuel consumption. Future challenges largely lay in the required increase of investment in the context of growth, to develop electricity generation, transmission and distribution projects including the interconnection projects that can facilitate and enhance the energy trade. It should be the intention that this investment will follow criteria of green economic growth from the start I view of future sustainability. The energy sector also requires support to its increased proficiency in commercial operations, which should include the use of information technology.

There is continued need to promote integrated transport systems, which give priorities to public transport and non-motorized means of transport. This requires continued transport planning proficiency. The objectives shall be to improve public transport in support of adequate mass mobility, to make better use of urban space, reduce the dependence on



more polluting modes of transport, and to enhance affordable means of transport for urban residents. Also integrated shall be cycling as a mode of transport. Taking planning measures which support safety for cyclists and pedestrians are a high priority.



Indicators

Table 2: Indicators Habitat III Report

Indicators	1996	2006	2016
Percentage of people living in slums	89.5 (1991)	91.7 (2002)	62.6 (2014)
Percentage of urban population with access to adequate housing	10.5 (1991)	8.3 (2002)	8.6 (2014)
Percentage of households in urban areas with access to safe drinking water	74.0 (1991)	79.3 (2002)	90.0 (2014)
Percentage of people residing in urban areas with access to adequate sanitation			93.5 (2014)
Percentage of households in urban areas with flush toilets	8.1 (1991)	2.2 (2002)	8.6 (2014)
Percentage of households in urban areas with access to regular waste collection	8.6	30.2	35.8 (2014)
Percentage of households in urban areas with access to clean domestic energy	30.5 (1991)	23.3 (2002)	79.1 (2014)
Percentage of people residing in urban areas with access to public transport			87.2% (2014)
Percentage of policies and laws on urban issues which the local communities and decentralized services have participated in their making		100	100
Share of budget allocated to decentralized services in the national budget (%)			>10 (2014)
Number of cities, regional and national authorities that have implemented urban policies supportive of local economic development and creation of decent jobs and livelihoods	None	All	All
Number of cities, regional and national authorities that have implemented plans and designs for sustainable and resilient cities that are inclusive and respond to urban population growth adequately	None	All	All





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