

NDC support for green urban development in Rwanda

A case study

January 2022



Rwanda- Street Imbuga City Walk (Kigali city centre)



Rwanda Ambitious Climate and Urbanization Agenda

In its run for an ambitious and prosperous future, Rwanda has established medium to long-term objectives through its Vision 2020, Vision 2050, and the National Strategy for Transformation (NST1). These guiding policies aim for Rwanda to become an upper middle-income country by 2035 and attain high-income status by 2050, improving the quality of life and livelihood. One of the strategic programme sector focusses on urbanization aims to have 35% of the population living in urban areas by 2024¹, compared to just 18,3% in 2020.

Recently, Rwanda adopted the National Land Use and Development Master Plan (NLUDMP). It is a

guiding document for sustainable management of land, for economic development, and green growth. So far, six Secondary Cities have approved the updated Master Plans, aligned with the NULDM. The newly approved Districts Plans provide the opportunity to sustain a spatially balanced form of national development, supporting the growing of the capital Kigali with a system of secondary cities. They are geographically distributed in the country and assume different specialized functions to contribute to the economic growth of Rwanda.

The Government has also adopted a strong climate agenda through the Green Growth and Climate

Facts & Figures

Population / Land area
12.7 Mil (2020) / 26,338 Km²

GDP per capita
816 USD (2020)

Government Structure
Republic

Total Greenhouse Gas Emissions
6,170 kt of CO₂ equivalent (2018)

Human Development Index
0.543 (2019) Global Ranking 160/189

Percentage of Urban Population
18.3% (2020)

¹ Republic of Rwanda, Vision 2050

Resilience Strategy – GGCRS (2011), now under review, and the National Environment and Climate Change Policy – NECCP (2019). The GGCRS aims at sustaining Rwanda growth “to be a developed climate-resilient, low-carbon economy by 2050”. One of the strategic objective explicitly mentions the achievement of Sustainable Land Use, through appropriate Urban Development.

The NECCP provides strategic direction and responses to the emerging issues and critical challenges in environmental management and climate change adaptation and mitigation. The policy goal is for “Rwanda to have a clean and healthy environment resilient to climate variability and change that supports a high quality of life for its society”. Among the seven objectives, the greening economic transformation includes a policy statement to promote green urbanization.

Further, in May 2020, the Ministry of Environment submitted Rwanda’s

Updated Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC). The NDC represents the country’s commitment towards the implementation of the Paris Agreement. The updated NDC features a 38% reduction of Greenhouse Gas (GHG) emissions compared to business as usual by 2030. The Rwanda updated NDC includes mitigation and adaption measures to climate change and aims to build resilience across all sectors, including land and human settlements management.

The impacts of the COVID-19 pandemic have not only affected health, society, the economy, and environment, but also prolonged the achievement of the aforementioned targets. Rwanda has developed an Economic Recovery Plan to mitigate the economic and social impacts of the COVID-19 crisis. The Economic Recovery Plan (ERP) approved in April 2020 sets out five priorities sectors for economic recovery: agriculture,

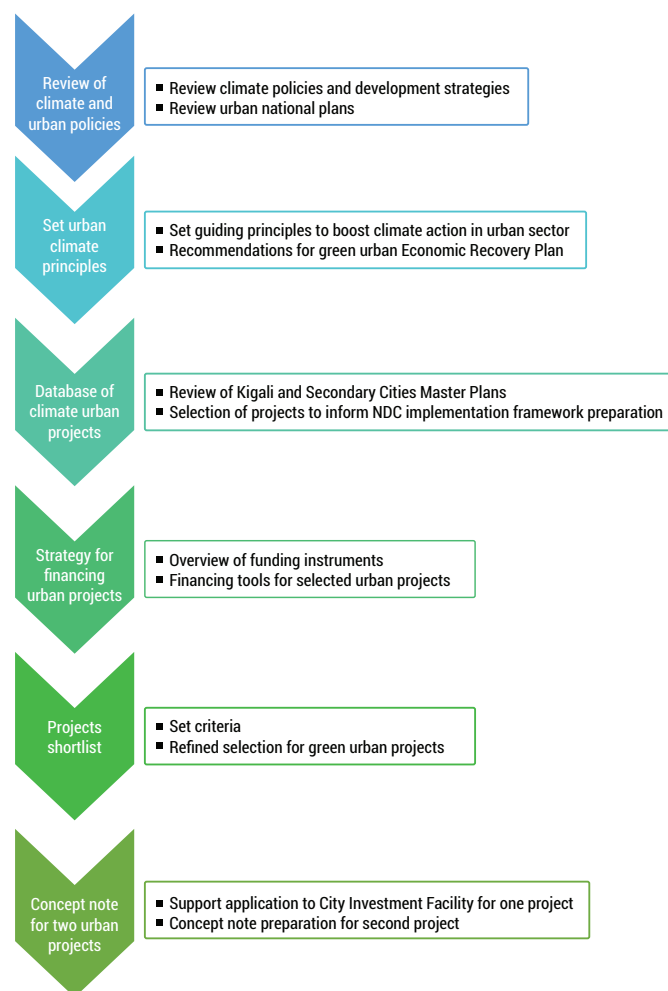
private sector, mining, infrastructure, and technology and innovation. Besides, it enhances the social protections measures to targeted households and improves the health system. Transforming the crisis into an opportunity to “build back better”, the ERP should deliver an inclusive, integrated, and sustainable stimulus package to sustain the achievement of urban and green agendas. In the infrastructure sector, it creates the room to boost greener infrastructure development projects, as well to integrate Nature-Based Solutions and greener transportation measures in road construction and improve the Non-Motorised-Transport system. In the urbanization, housing and human settlements sector, the ERP could promote the implementation of the Green Building Minimum Compliance System regulations, compact urban development, and increased provision of green public spaces and multi-functions buildings.

Urban-LEDS in Rwanda

The Urban-LEDS II Project, implemented by UN-Habitat in partnership with ICLEI and funded by the European Commission, addresses integrated low emission and resilient development in more than 65 cities across 8 countries from Rwanda, to South Africa, Brazil, Colombia, Indonesia, Lao PDR, India, Bangladesh, and Europe. In Rwanda, the project was implemented in three cities (Muhanga, Rubavu and City of Kigali) and provided support to strengthen multi-level governance for ambitious urban climate action. Find out more about the Urban-LEDS project here: <https://urban-leds.org>. The Multi-level governance advisory work summarised in this case study was carried out in partnership with the NDC Partnership’s (NDCP) Economic Advisory initiative. Find out more here: <https://ndcpartnership.org/economic-advisory-support>



Rwanda- installation of solar panels



In the framework of the NDC Partnership support to its country members, UN-Habitat provided technical assistance to strengthen the linkages between the updated NDC and the National Urban Agenda. The technical advisor has been embedded under the National Development Planning & Research Department in the Rwanda Ministry of Finance and Economic Planning (MINECOFIN).

A synopsis of the national climate change and urban planning policies and strategies outlined the gaps and opportunities at hand that informed the revision of the updated NDC. Aligned with the selected sectors, such as Building and Infrastructure, Transport, Waste and Multi-Sector, the advisor suggested a set of urban guiding principles aiming to accelerate the achievements of urban climate action.

The support to MINECOFIN further explored the opportunity to enhancing

the nexus between the recent updated NDC and the Districts urban plans. Rwanda has recently adopted the District Master Plans for the secondary cities which gives the chance to streamline the cities spatial planning framework with the national climate agenda. The review of the Kigali and Secondary Cities master plans and related implementation strategies led to the identification of a list of projects that can sustain the climate urban solutions in the cities and are aligned with the NDC's mitigation and adaptation measures.

The selection focused on rapidly implementable, bankable, and transformative green city projects, prioritized at District and national level. For this, a database of urban initiatives that contribute to NDC mitigation and adaptation targets, has been developed. The database has been taken into consideration for the NDC's Implementation Framework

preparation and more than 100 projects have been included in the NDC implementation matrix.

To further sustain the government in implementing the NDC, a brief strategy for financing urban opportunities has been prepared. It aims to present key public and private mechanisms for financing urban infrastructure projects and outline different financing tools available. It focuses on project preparation facilities offered by different development banks and partners, to build stronger project proposals and improve the bankable status.

In addition, UN-Habitat suggested recommendations for green urban recovery measures, especially in the Infrastructure, Transport, Urbanization, Housing and Humans Settlements sectors, to implement greener and climate-resilient urban measures.

Urban content in the Rwanda NDC Implementation Framework

Between May and October 2021, the Government of Rwanda prepared the NDC Implementation Framework. The Framework was developed through a robust multi-level and multi-stakeholder consultation process, including government institutions, private sector, civil society organizations, and development partners. The consultations were followed by a project prioritization process, led by the Ministry of Environment and Rwanda Green Fund (FONERWA).

In October 2021, the Government of Rwanda has launched the NDC Implementation Framework (2021 – 2025). The Framework identified the prioritized NDC actions by mapping existing work underway and prioritizing projects for implementation, in respect to national planning and budgeting processes.

The NDC implementation Framework will be available online and will be continually updated. For effective monitoring, the Framework will be linked to the NDC MRV to effectively support the tracking of the implementation plan.

Rwanda's NDC Implementation Framework enables a results-based approach for coordinating action. It is composed of 15 outcomes with a corresponding list of 56 outputs.

One of the outcomes has a strong direct urban content: #4 "Integrated human settlement planning and coordination". Others are related to urban development, although in other sectors: #3 "Integrated and sustainable land management to maximize reliable, efficient and productive investments in a gender-responsive and climate resilient manner" and #10 "Improved rural and urban transportation services", among others.

In total, there are 557 projects or activities mapped to the NDC and categorized by status of implementation (planned, ongoing, concluded in 2020, indicative, without support). Out of those, 278 projects are mapped in the Implementation Framework as ongoing or planned, with a consolidated budget of USD 5.9 billion from across multiple sectors. The sector Urbanization and Rural Settlement contributes 4,4% of the total budget. The majority of the new projects (indicative and without support) will require additional technical and financial resources and are in the sectors of urbanization, environmental management, energy, transport, and agriculture.

Throughout the consultation process, sectors also prioritized projects, ready for implementation, applying 5

criteria: i) project that increases the readiness of the country for resource mobilization; ii) project has a project documents (concept note, project preparation document); iii) project is categorized as development priority according to the national strategies; iv) project KPIs contribute to global level reporting; v) project impact contributes to job creation, economic growth, or improvement to local livelihoods. These criteria define the high-medium-or-low priority of the project, and thus, the start date for implementation in the 1st, 2nd or 3rd year.

In the 40 projects identified with high-priority, 3 are in the Urbanization and Rural Settlements sector, namely: i) Green buildings and retrofits for affordable housing; ii) Operationalization of Green City Kigali Project; iii) Climate proofing for Integrated rural settlement in Kirehe and Kayanza Districts of Eastern Province. 14 of the 168 medium-priority projects are related to the Infrastructure and Building sector, as are 17 of the 56 low-priority projects.

It is to note, that other projects have strong or medium urban dimension, but are categorized under different sectors, such as water and environmental management, transport, or energy.

NDC Implementation Coordination and Monitoring Mechanisms

The NDC monitoring has been embedded in the national monitoring system and the Government chairs the coordination mechanisms to operationalize the NDC Implementation Framework. Rwanda has a robust national planning process coordinated by the Ministry of Finance Economic Planning (MINECOFIN) through sector working groups (SWGs) that track implementation of sector priorities. The SWGs hold semi-annual meetings and progress reporting workshops through Joint Sector Review consultative sessions.

The Urbanization and Rural Settlements SWG is chaired by the Ministry of Infrastructure, while the Ministry of Environment (MoE) chairs the Environment and Natural Resources SWG (ENR SWG). The ENR SWG has the responsibility to monitor and evaluate the implementation of the NDCs through regular stakeholder consultative engagement. REMA, the Rwanda Environment Management Authority, chairs the Environment and Climate Change Thematic Working Group (E&CC TWG), that has the technical oversight over the

implementation of climate change priorities.

The NDC Monitoring Reporting and Verification (MRV) Technical Working Committee will be established as a sub-body of the E&CC TWG. The tasks and the operationalization of the MRV Technical Working Group are yet to be set up.

Each line ministry has – or will appoint – a NDC MRV focal person to regularly report on NDC, climate change progress and achievements.



Rwanda- Cultivated hills near Musanze, in the Northern Province

The Joint Action Development Forum (JADF) at District level involves multiple stakeholders including NGOs, the private sector, and development partners, working in development programs, including climate change. As per the MRV framework, the JADF should support the implementation of NDC MRV relevant action within the District Development Strategies (DDSs), under the coordination of MINALOC (Ministry of Local Government).

The Development Partners Coordination Group (DPCG) discusses achievements and measures to

implement NST1 and will provide support to track finance as part of the NDC MRV.

At the present, the operationalization of the MRV system has just begun and its effectiveness will be evaluated after the first period of implementation, which might require further adjustments and improved flexibility. As well, the NDC MRV Technical Working Committee has yet to be established and members identified.

The strong integration with the national planning and monitoring platform is commendable and should ensure a strong coordinated national

effort towards the implementation of the NDC. The MRV framework tries to clearly identify the data to collect, the indicators, and the Ministries and agencies which should provide the relevant data. However, the actors involved in the NDC implementation are multiple, ranging from national institutions, sub-national governments, NGOs, the private sector, and development partners. Pulling together the contributions and tracking the NDC achievements from all the parties will not be simple. The MRV system suggests to start with the line-ministries and the existing annual reporting system, leaving the involvement of other stakeholders (NGOs, JADF, etc.) for the future, once the system is tested. It further tries to standardize the data sources, the indicators to use, the collection process, and timing for reporting.

Another challenge is the NDC reporting requests at international level, to comply to UNFCCC requirements. The UNFCCC reporting mechanisms need to align with the NDC national monitoring and verification system. Luckily, Rwanda is actively involved in the NDC Support Programme and receives support from the NDC-Partnership. A NDC-P in country facilitator is fully operative under the Ministry of Environment, and two technical advisors were recently engaged under the MINECOFIN to support in urbanization and climate finance sectors.

Advancing NDC implementation in the urban sector

Within the technical assistance provided by UN-Habitat, a refined selection of the urban climate projects has been identified to further support with concept note writing. The shortlisted projects have been drawn by the database compiled in the earlier stage of work, which informed the preparation of the NDC Implementation framework.

The criteria for the selection considered the alignment with the NDC measures and the National

Land Use and Development Master Plan, prioritised in the District Master Plans, example of transformative green urban development solutions, adopting Nature Based Solutions, opportunity to create new (green) jobs, the integration with other ongoing activities and projects supported by other development partners, among others. Most of the shortlisted projects are already included in the NDC implementation matrix.

The selection of the two projects to

support with concept note writing have been discussed with the representatives of MINECOFIN, and criteria agreed. The government representatives requested to ensure the selected projects can create job opportunities, especially in the green sector, to comply with recovery measures.

SELECTED PROJECTS, ALIGNMENT WITH NDC

NDC SECTOR	MEASURE	NDC OUTCOMES	GREEN URBAN SOLUTIONS	PROJECTS
Transport	Mitigation	Public Transport Infrastructure Wide range of measures including bus rapid transport (BRT) project, bus lanes, non-motorised transport lanes, and other modal shift projects contained in the Transport Sector Strategic Plan as part of the NST1. (NDC Mitigation Measures, table 5.3 p.38)	Sustainable Mobility Non-Motorised Transport	Green, Vibrant and Prosperous Streets in Rwanda Secondary Cities
	Adaptation	Improved transport infrastructure and services Indicator: Reduction of length roads vulnerable to flood and landslides (NDC Adaptation Measures, table 6.1, SN #19)	Nature-Based Solutions Sustainable Urban Drainage Green Space development	
Building & Infrastructure	Adaptation	High density buildings and informal settlements upgrading enhanced. Indicator: Percentage of (1) urban population living in informal settlements, (2) rural population living in clustered settlements. (NDC Adaptation Measures, table 6.1, SN #16) Indicator: Average share of the built-up area of cities that is open and green space for public use for all (SDG) (NDC Adaptation Measures, table 6.1, SN #16) Storm water management Indicator: Percentage of urban population in areas covered by master plans with storm water considerations (NDC Adaptation Measures, table 6.1, SN #17)	Integrated urban development Green building construction and use of local materials Green Space development Green infrastructure	Urban Upgrading and Rehousing project (Kigali)

One project selected is an urban upgrading and rehousing strategy in Kigali. The project is an example of in-situ redevelopment, promoting healthy and well-planned neighbourhoods, with efficient land use to reduce land consumption, preventing land-slides, improving the waste water management, and reducing flooding risks. The building construction is adopting low carbon construction techniques, using innovative construction system, with reduced use of cement and using local bricks promoting the local production of materials. Adopting green technologies in residential buildings, the building implemented water harvesting and efficient electricity systems and can create quickly labour-intensive jobs. The project has been selected by the City of Kigali to apply to the 'City Investment Facility' call launched by UN-Habitat at the beginning of September 2021.

A second project proposal focuses on promoting urban

climate-resilient recovery, by developing and upgrading central and market streets in the Secondary and Satellite cities of Rwanda to become green, vibrant, and inclusive streets and boost local economic development. The project supports climate resilient urbanization, proposing NMT solutions and development of green multi-functional public spaces, integrating sustainable water management and Nature-based Solutions in the design. The project will contribute to reducing the GHG emissions from mobility, improve air quality, increase the green coverage, reduce the impact of heat islands and temperature raise in the city centers. It will promote a green urban recovery, by creating a conducive environment and space for local economic and commercial activities, shifting to more active ground floors and integrated urban design solutions, providing safe spaces for small retail activities, shops, and restaurants, as well as creating new green jobs.

Lessons Learnt

- The Updated NDC shows a solid policy coherence streamlining all the major policies and strategies in the different sectors which contribute to the development of the country and is aligned with the Vision 2050 the NST1, and the development and climate agendas. This helps integrating and harmonizing the national objectives and sectoral policies with the measures, targets, and outcomes in the NDC to ensure horizontal integration.
- The NDC Monitoring and Verification system is likely to operationalise efficiently, as it relies on the already existing national planning and monitoring platforms. This will allow the engagement of the relevant ministries in a coordinated manner to support and monitor the implementation of the NDC. Also, the NDC reporting system is embedded in the national structure and will sustain the regular evaluation of the achievements of the adaptation and mitigation targets, and facilitate the reporting at the global level.
- The preparation of the NDC Implementation Framework has involved a strong coordination effort to streamline the ongoing, planned, and pipeline projects in all main development sectors of the country. The process entailed the engagement of multiple stakeholders through a multi-level governance approach to provide a comprehensive picture of the planned activities for a climate-resilient response at the country level. Private, Non-Governmental and Development sectors have been consulted, however dialogue with MINALOC and Districts could have been strengthened, to harness their contribution to the NDC implementation framework.
- The NDC Implementation Framework is built to be an online, user-friendly, and flexible tool to guide the climate planning at national level as well as the resource mobilization for NDC implementation. The tool will be useful to improve the communication and raise awareness of the NDC goals and implementation framework to all national and local actors, including the development partners, and assess its implementation in a transparent manner.

Recommendations

- An initial prioritization process has been conducted to identify the NDC projects ready to be implemented in the short term, or that need further support with technical assistance and financial resources. The prioritization criteria could in future take a stronger urban lens, which can drive further emission reductions. The spatial approach can identify mitigation and adaptation measures associated with integrated urban systems.
- Out of 527 projects, less than 5% of projects in the urbanization sector has a consolidated budget available, which raises urgently the issue of resource mobilization, identification of urban climate finance mechanisms and integrated investments planning to support implementation of NDC projects. The identified projects in the urbanization and related sectors (waste, energy, transport, etc.) are numerous, although are classified as low priority, because lacking of further support in technical assistance or financial. Technical and funding gaps are still substantial and should be addressed collectively to ensure urban projects are prioritized in the national budget planning exercise and adequate resources are allocated to the Districts for implementing their climate and masterplans. Development partners support should also be guided to provide technical and financial assistance into the urban sector.
- The projects in the urbanization sector represent less than 7% of the total, although there are several which are related to other sectors, like transport, land management, and waste and water management which impact on urban development. Developing a broader cross-cutting urban climate framework to support and integrate the NDC Implementation Framework could provide the opportunity to support mid- to long-term urban climate development strategies and identify the actions to achieve NDC goals in the cities.
- The Urban Climate Framework could coordinate and guide the efforts in implementing the NDC through the District plans and their urban projects to effectively support the achievements of adaptation and mitigations targets in the cities. It will streamline the activities in the urban sector and at the District level, ensuring an effective support of local governments to the achievement of NDC's goals.
- It is not clear how the distribution of the urban projects across the country is prioritized. It is recommended to add information on the location and prioritization criteria at District level. This will ensure balanced contribution to the NDCs goals by Kigali, the Secondary Cities and Satellite Cities, in alignment with National Land Use Master Plan and Districts Master Plans. The engagement of the Districts and MINALOC should be strengthened, including them in the monitoring and update process of the implementation framework, and

facilitating the piloting of urban climate initiatives at the cities level, which can be replicated nationwide.

- The Urban and City Climate Action Plans (where available) should be monitored and implemented in an integrated fashion and should feed the NDC Implementation framework, reporting on the mitigation and adaptation indicators established in the updated NDC. Where not available, City Climate Action Plans, aligned with DDSs and

District Urban Master Plans should be developed to clearly set the objectives, actions and time-framework to achieve NDC targets in the cities.

- Data collection, management and reporting on achievements are issued by line ministries and related agencies and should be integrated by data collected at Districts levels, benchmarking District Development Strategies and District Master Plans.
- Through the online NDC Implementation Framework, a

strong NDC communication and awareness campaign should be launched at all levels, to ensure that the NDC goals, and implementation projects are presented to all actors involved in the development sectors. A tailored communication to the urban stakeholders, including the Districts should be established to share all urban relevant commitment and actions.

Conclusions

It is recognized that national governments need cities to realize the full urban mitigation and adaptation potential. Therefore, involvement of the Districts in the NDC implementation framework and MRV mechanisms should be strengthened.

There is a need for a coordinated effort to integrate the contribution from all cities to the NDC goals. An Urban Climate NDC Framework could be developed to monitor and support achievement of national climate targets through the efforts at cities level.

Urban climate actions cannot be a new or separate item in the Government planning framework but should be taken as an overarching guide to help prioritizing comprehensive actions across the sectors and establish finance mechanisms and allocate appropriate budget.

UN-Habitat will continue advocating on the urban and climate nexus and further support strengthening the integration of urban content in the Rwanda NDC, as well in advancing NDC implementation through green

urban development projects.

It will also continue support the Rwanda government and cities in peer regional and international exchanges like the Urban-LEDS II project, sharing and networking opportunities through international fora and partnerships, and apply to international Cities Climate Challenges.



Rwanda has a bold vision to be a carbon neutral economy by 2050, and is one of the best places in the world for green investment. Achieving our NDC requires an estimated investment of around 11 billion dollars, for which 5.3 billion is for adaptation initiatives and 5.7 billion is for mitigation actions. Let's dare to dream big for a net zero Rwanda and achieve our #ClimateAction goals."

Dr. Jeanne d'Arc Mujawamariya,
Minister of Environment, Republic of Rwanda at COP26

(Source: rema.gov.rw)



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