



CASE STUDY

Rwanda | Prioritising the Environment

A Green Renewal

In a little over two decades, Rwanda has risen from a genocide to become one of the fastest-growing and cleanest African nations. *Urban Solutions* looks at how they put the environment at the heart of inclusive and sustainable regeneration.

The Challenge

In the wake of Rwanda's 1994 genocide, which killed an estimated 800,000 people in just 100 days, the east-central African country faced an arduous task to rebuild itself. Beyond pressing socioeconomic concerns such as reducing poverty, mending divides and boosting the economy, Rwanda had another big challenge: a deteriorating environment with strained natural resources and ecosystems.

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The small country relies heavily on its natural resources to drive its economy. But Rwanda's previous environmental protection efforts stalled during the 1990s civil war.

After the war, Rwanda faced environmental degradation not just from the conflict but also due to increasing pressure from a growing population and climate change. The government found from studies that environmental degradation and unsustainable depletion of natural resources in Rwanda exacerbated poverty and increased economic costs. For instance, rampant soil erosion in the 1990s caused an estimated 2% GDP loss—affecting the nation's capacity to feed 40,000 people annually.

So while Rwanda and its capital Kigali had to be redeveloped urgently, there was a need to ensure inclusive and sustainable growth by protecting, rehabilitating and conserving the environment for the future.



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The civil war caused extensive damage to infrastructure and the environment.



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The Solution

Through a range of legislation, policies and programmes, the Rwandan government actively put the environment at the heart of redevelopment.

First, to guide policies, environmental protection and management is a key cross-cutting concern in Rwanda's Vision 2020, a long-term strategy adopted in 2000 to guide the country's transformation into a sustainable, knowledge-based economy within two decades. Policies and strategies for all development areas, from reducing poverty and transforming the economy to strengthening infrastructure, must also be eco-friendly.

A national environmental policy was developed in 2003, detailing measures such as the need for environmental impact analyses for development projects, as well as the conservation and management of ecosystems. In 2004, the Rwanda Environment Management Authority was set up to oversee the integration of environmental aims with national development.

Reversing deforestation is also a crucial factor in reducing poverty. The 2004 National Forest Policy introduced measures such as sustainable management of forest resources, and national reforestation and tree planting. Every year, in Kigali and other districts nationwide, Rwandans plant millions of trees during the National Forest Planting Day and Season. From 2004 to 2010, the funds for reforestation and afforestation projects increased by almost US\$1 million (S\$1.33 million). Several forests were also restored and conserved as national parks.

“The country is now looking at promoting green innovations in the industrial and private sectors, as part of its aim to pursue a ‘green economy’.”

Similarly, Rwanda's wetlands, which cover over 10% of its area, are being restored. For example, the Rugezi wetland in northern Rwanda had been drying up since 2003 due to declining rainfall and overcultivation. Its rehabilitation in 2005 not only restored water levels, creating food, water and jobs for the community, but also increased hydropower production and boosted Rwanda's fishing sector.

To reduce waste and the impact of plastic on the environment, the government has also been unafraid to implement tough measures such as a ban on plastic bags in 2008. It is now illegal to manufacture, import, use or sell polyethene bags. Violators will be fined, jailed or forced to make public confessions.

Kigali, the nation's economic hub and largest city, has led the way in green growth. Its redevelopment master plan prioritises environmental sustainability, requiring a mixed-use urban design tailored for Kigali's hilly landscape, ample green open spaces, sustainable transport and resource management, as well as the protection of nature and biodiversity. Plans are underway for a new wetland park near the city centre that will provide green spaces for recreation, boost tourism and environmental awareness, and create more green jobs.

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- 01 Locals participate in the annual National Tree Planting Day.
 - 02 Local women in Kigali gain employment while contributing to their city's reputation as one of Africa's cleanest.
 - 03 Well-paved roads in the central business district of Kigali city are lined with trees.



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The country is now looking at promoting green innovations in the industrial and private sectors, as part of its aim to pursue a “green economy”. This includes a green city pilot for Kigali that will guide the future development of other sustainable cities and villages nationwide.

Rwanda’s first upcoming green neighbourhood in Kigali, Cactus Green Park, is set to feature low carbon construction materials and ample green spaces. This private-sector project is supported by a national green fund, known locally as FONERWA. Started in 2013, it aims to drive Rwanda’s green growth by funding environmental and climate change-related projects from the public and private sector, such as green villages and e-waste management.

01 An artist’s impression of the completed Cactus Green Park.

02 Kigali leads the charge in establishing Rwanda as one of the fastest-growing countries in the region.



“Rwanda’s green projects go beyond environmental benefits. For example, the restoration of ecosystems ... has boosted the country’s tourism, a main driver of economic growth.”



The Outcome

Today, Rwanda is one of the fastest-growing African countries, with an average annual GDP growth of 7.6% in the past 10 years. It has also gained a reputation as a leader in sustainable green growth.

These days, trash is nowhere to be found on Kigali's streets. The capital has even been dubbed "one of the cleanest cities in Africa" by the UN Habitat. The Kigali city master plan, developed by urban planning firm Surbana Jurong, won the Best Planning Project at the Singapore Institute of Planners Awards (2013) for its innovative and sustainable planning. Rwanda's successful plastic bag ban has also received praise and is often cited as an example for other cities, not just in Africa but worldwide.

The country's national forest policy has increased the forest cover by over 80% from 2005 to 2017. This is a feat considering that for many developing

central and western African countries, forest cover has been declining due to population and land pressures.

Citizens and the private sector continue to play a part in Rwanda's green growth. FONERWA has funded over 33 projects, both private-led and government. It has also created 90,000 green jobs, and protected over 35,000 ha of forests and 12,800 ha of watersheds.

Rwanda's green projects go beyond environmental benefits. For example, the restoration of ecosystems such as wetlands and national parks has boosted the country's tourism, a main driver of economic growth.

The transformation into a cleaner and greener Rwanda remains a work in progress, as the country grapples with an increasing population and climate change. But with the continued emphasis on the environment, the country could very well achieve its vision of a climate-resilient, low-carbon economy by 2050. 



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- 01 Green jobs generated by FONERWA investments include those at the national e-waste recycling facility.
 - 02 Kigali's master plan envisions high-rise towers alongside green spaces and hills..

