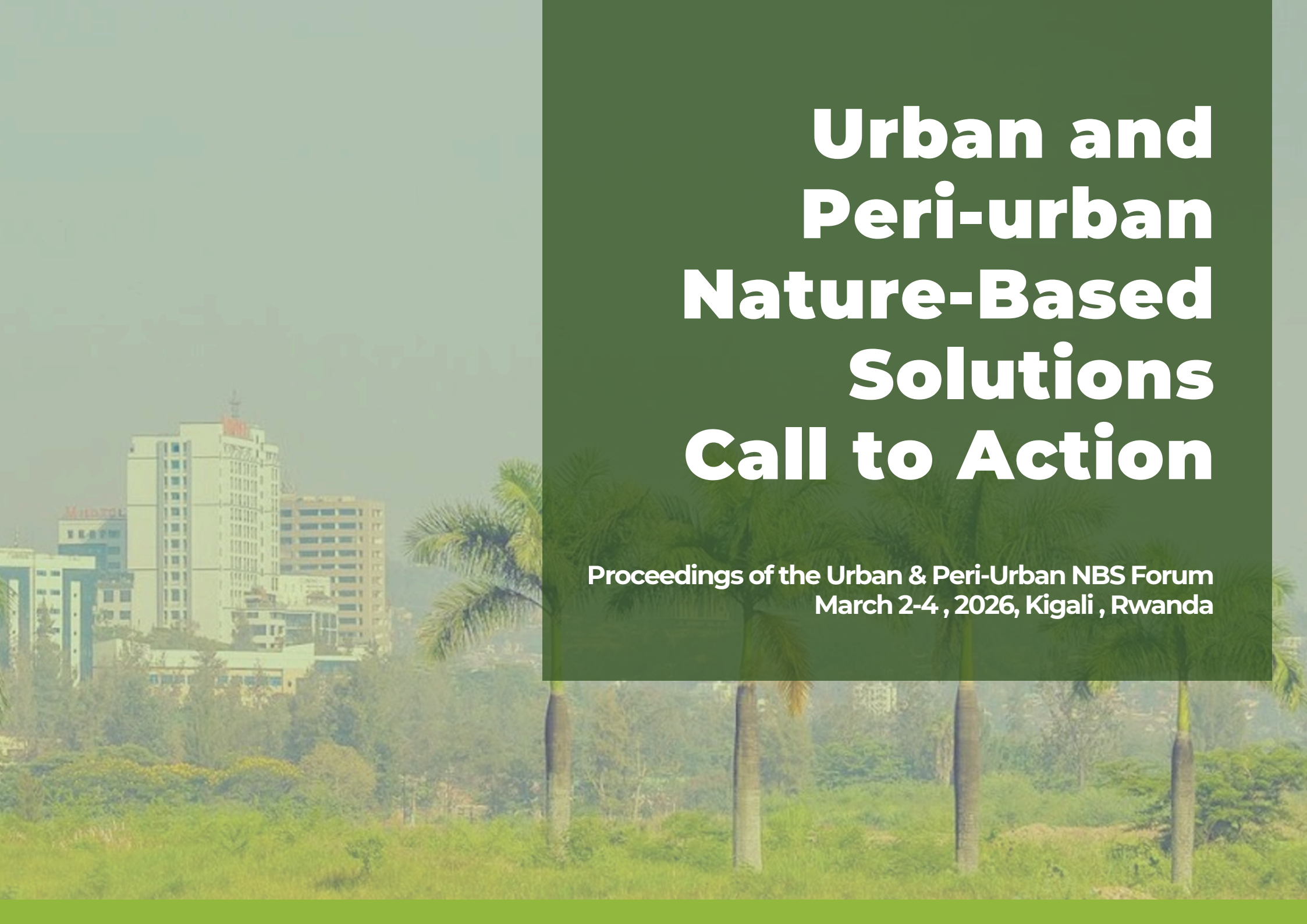




Urban and Peri-urban Nature-Based Solutions Call to Action

**Proceedings of the Urban & Peri-Urban NBS Forum
March 2-4 , 2026, Kigali , Rwanda**

Urban and Peri-urban Nature-Based Solutions Call to Action



Introduction

The Strategic Case for Urban Nature-Based Solutions

Africa's cities are growing fast — and Rwanda's are no exception. Urbanisation brings opportunity: jobs, innovation, improved living standards. But it also brings pressure: on infrastructure, on natural ecosystems, on the services that communities depend on. Add climate change to the equation — flooding, heat, water stress, environmental degradation — and the stakes become clear.

In this context, cities must rethink how infrastructure is planned, designed and managed. Traditional infrastructure alone is not enough. Cities need a smarter approach, one that works *with* nature rather than against it.

That is precisely what Urban and Peri-Urban Nature-Based Solutions (NbS) offer. Green corridors, restored wetlands, urban forests, nature-sensitive drainage — these are not simply environmental add-ons. They are infrastructure. They build climate resilience, restore biodiversity, improve water management and create healthier, more liveable cities.

Nature-Based Solutions also generate jobs, support local livelihoods and create new economic opportunities. They contribute to improved public health, provide recreational spaces and support local livelihoods.

Across Africa, NbS are becoming a cornerstone of sustainable urban development. Governments, cities and development partners are increasingly exploring how NbS can be integrated into infrastructure investment, urban planning frameworks and climate adaptation strategies.

Yet scaling them requires stronger governance frameworks, improved financing mechanisms and enhanced technical capacities. Moving from pilot projects to systemic implementation remains a challenge for many cities.

Rwanda is already showing the way. A decade of forward-looking policies has positioned the country as a regional leader — and its rapidly growing cities offer a unique window to integrate NbS into urban systems early, before patterns become locked in. By combining green and grey infrastructure, Rwanda is proving that economic development and environmental stewardship can go hand in hand.

It was in this spirit that **the Ministry of Infrastructure of Rwanda (MININFRA) convened the Urban and Peri-Urban Nature-Based Solutions Forum** - in collaboration with the World Resources Institute (WRI), the European Union, GIZ, the World Bank, the Global Green Growth Institute (GGGI) and the International Institute for Sustainable Development (IISD).

Governments, cities, development partners, technical experts, civil society and the private sector came together to share knowledge, compare experiences and chart pathways for scaling NbS across the region.

The Forum made one thing clear: Urban and Peri-Urban Nature-Based Solutions are not simply environmental interventions — they are integral components of infrastructure systems, capable of delivering multiple benefits across climate resilience, economic development and social well-being.

This Call to Action captures the Forum's core insights and translates them into shared priorities and directions for advancing urban and peri-urban Nature-Based Solutions — an invitation to act together, at scale and with urgency.

The choices made today will shape our cities for generations to come.

01

Strategic Themes Emerging from the Forum

Governance and Institutional Alignment
Financing and Investment Readiness
Integrating Nature-Based Solutions into Urban Planning
Inclusive Participation and Gender-Responsive Approaches (GESI)
Green Jobs and Local Economic Development
Monitoring, Data and Learning Systems for Nature-Based Solutions

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Nature-Based Solutions in Practice : Lessons from Rwanda and Beyond

Governance and Institutional Alignment
Financing and Investment Readiness
Integrating Nature-Based Solutions into Urban Planning
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Green Jobs and Local Economic Development
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Twelve priority actions

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Phase 2 : Scaling Implementation (2027-2028)
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The Forum on Urban and Peri-Urban Nature Based Solution
Capitalizing Knowledge from the Forum
From Forum Discussions to Call to Action Development
Acknowledgments

01

Strategic Themes Emerging from the Forum

Governance and Institutional Alignment

Nature provides the solutions. Governance unlocks them.

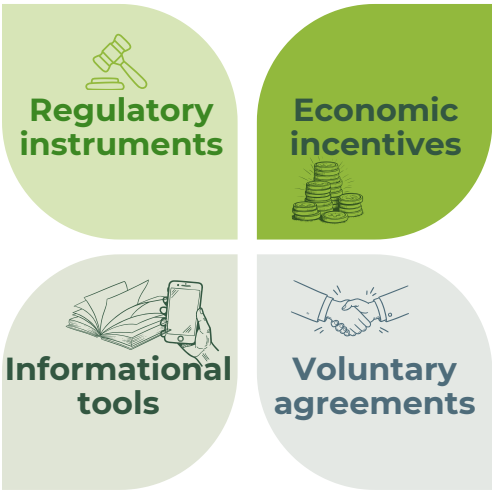
NbS are increasingly recognized for their environmental and technical value — but their large-scale integration depends on the governance frameworks that make implementation possible.

Across rapidly urbanizing regions, NbS are too often implemented as isolated projects. Fragmented institutions, siloed sectors and weak integration of ecological considerations into planning all slow the transition from pilots to systemic change.

Rwanda is different. The country has built a policy environment that provides a strong foundation for mainstreaming NbS — from national frameworks to city-level planning instruments.

Rwanda's enabling policy frameworks:	
Framework	Key NbS relevance
Green Growth & Climate Resilience Strategy (GGCRS)	Ecosystem restoration as core climate strategy
NDC 3.0	Watershed protection and sustainable land management
National Land Use & Development Master Plan (2020–2050)	Spatial planning aligned with ecological systems
National Strategy for Transformation (NST2) 2024–2029	Environmental sustainability at the centre of development
National Urbanization Policy	Environmental integration in city planning from the outset

Yet frameworks alone are not enough. Scaling NbS depends on the right combination of implementation instruments:



Regulatory — embedding NbS into master plans, land-use regulations and district development plans.

Economic — subsidies, tax incentives and grants that align financial flows with environmental objectives (e.g. **eco-roof incentives in Portland, watershed financing in Ecuador**).

Informational — technical guidelines, planning standards and design manuals (e.g. Tanzania's urban greening guidelines offer a relevant regional model).

Voluntary — community stewardship initiatives and watershed partnerships.

Global experience confirms that governance can transform NbS from exception to norm. The **Netherlands' Room for the River, China's Sponge City policies and Germany's blue-green urban infrastructure** all demonstrate what policy reform and institutional coordination can achieve at scale.

In Rwanda, coordination across **MININFRA**, the **Ministry of Environment, REMA** and the **City of Kigali** is essential to ensure NbS are consistently integrated into infrastructure investment and urban planning decisions. District authorities are equally critical — as frontline actors managing land use and local development. Their capacity to identify NbS opportunities and prepare viable projects will determine implementation on the ground.

Key insight

Rwanda's policy environment already provides a strong basis for advancing Urban and Peri-Urban Nature-Based Solutions. The priority now is to strengthen institutional coordination, develop practical implementation tools and translate national commitments into concrete projects — aligning governance across all levels, from ministries to districts.

Financing and Investment Readiness

Financing Urban and Peri-Urban Nature-Based Solutions : from promising concepts to bankable projects.

Investment in NbS is growing — but unlocking it at scale requires moving beyond good ideas to investment-ready projects.

>300 NbS projects

have been initiated across the region since 2012, representing an estimated USD **12.5 billion in investments, with average annual growth of 15%.***

The challenge is not the absence of financing sources, but the limited supply of projects ready to attract them. Many NbS initiatives stall at early conceptual stages, lacking the feasibility studies, financial structuring and impact assessments that investors require.

Strengthening technical capacities for project preparation is a top priority — particularly for local governments and district authorities, who are best placed to identify NbS opportunities but often lack the resources to develop them into viable proposals.

Beyond climate adaptation, NbS projects deliver co-benefits across:



water management



enhanced biodiversity



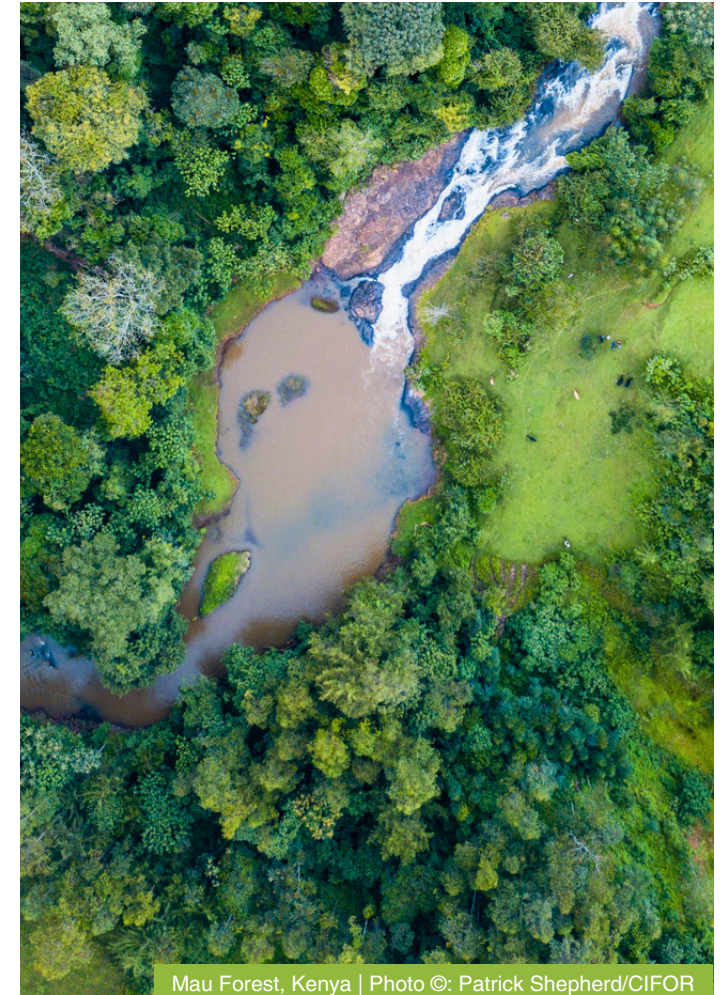
reduced disaster risks



local economic opportunities

When these multiple benefits are clearly articulated, NbS can be positioned as strategic infrastructure investments.

In Rwanda, **FONERWA** provides an important financing instrument for climate and environmental investments. Yet national mechanisms alone will not be sufficient. Blended financing — combining public investment, international climate finance, development partner support and private capital — offers the most viable pathway to mobilize resources at the required scale. Emerging instruments such as carbon credit markets and ecosystem-based financing, could further expand the funding landscape.



Mau Forest, Kenya | Photo ©: Patrick Shepherd/CIFOR

Key insight

The financing gap for NbS is real — but it is a gap in project preparation as much as in funding. By strengthening investment readiness, articulating the full value of NbS co-benefits and mobilizing blended financing models, Rwanda can build a robust pipeline of NbS projects capable of attracting the investment needed to deliver at scale.



(*) World Resources Institute (WRI) & World Bank | Nature-Based Solutions in Sub-Saharan Africa – Investment and Implementation Trends. Presentation delivered during **Session S3.3: Financing Nature-Based Solutions**.

Integrating Nature-Based Solutions into Urban Planning

Planning with nature, not around it.

The decisions made in urban planning offices today will shape the resilience of cities for decades.

NbS must be embedded within urban planning systems from the start — not treated as isolated add-ons. This requires a fundamental shift: from extractive infrastructure that degrades ecosystems, to regenerative urban systems where infrastructure actively restores ecological functions over time.

Unlike conventional infrastructure that deteriorates, well-designed NbS improve as ecosystems mature — delivering growing benefits in biodiversity, water quality and climate resilience. Their benefits are multidimensional:

Dimension Contribution

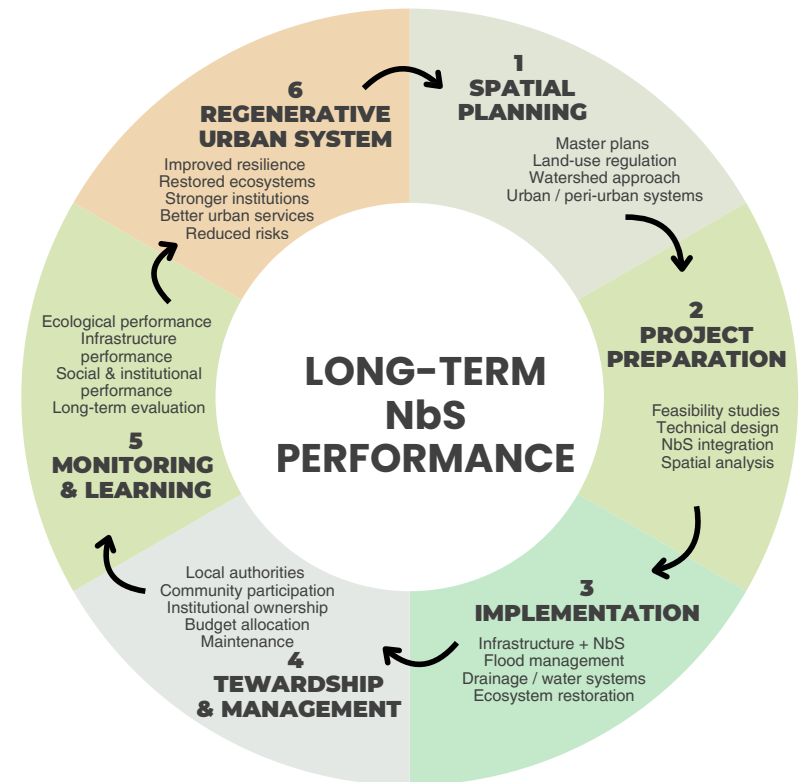
Ecological	Biodiversity restoration, improved water management
Social	Public spaces, community engagement, local stewardship
Economic	Reduced disaster costs, green employment
Institutional	Sustained governance and long-term management

Scale also matters. NbS frequently extend beyond project sites, operating across watersheds and landscape systems connecting urban and peri-urban environments. Planning frameworks must recognize these broader ecological dynamics to effectively manage flood risks, protect water resources and maintain ecosystem services.



In Rwanda, existing policies and frameworks already provide a foundation. As Kigali and secondary cities expand, incorporating NbS into spatial planning instruments — master plans, district development plans, land-use regulations — is key.

The priority now is practical tools: technical guidance, design standards and planning guidelines to help engineers and planners integrate NbS systematically — and strengthened local capacities for project preparation.



Key insight

Rwanda's urban expansion is an opportunity. By embedding NbS in spatial planning, linking planning to project development and fostering community stewardship, Rwanda can move toward cities that are genuinely regenerative.



(*) World Resources Institute (WRI) & World Bank | Nature-Based Solutions in Sub-Saharan Africa – Investment and Implementation Trends. Presentation delivered during Session S3.3: Financing Nature-Based Solutions.

Inclusive Participation and Gender-Responsive Approaches (GESI)

People make NbS work.

NbS are not just infrastructure — they are social processes. Their long-term success depends on the meaningful involvement of the communities who live with them, maintain them and protect them.

Meaningful involvement of local communities — including women, youth and vulnerable groups — throughout the entire project cycle is not optional. It is a **fundamental enabling condition**.

Start early — or lose ownership. Communities consulted only after implementation begins cannot shape design. When communities help define problems and co-design solutions — mapping risk hotspots, selecting interventions — better respond to local needs and earn lasting support.

Kigali's wetland restoration initiatives demonstrate this directly: by involving nearby residents in ecosystem monitoring, tree planting and public space management, these projects have strengthened both environmental outcomes and long-term stewardship.



Holding seeds | Photo ©: Serrah Galos

Youth are assets, not beneficiaries. The **Rwanda Young Water Professionals (RYWP)** network exemplifies how young practitioners drive ecosystem monitoring, GIS mapping, geolocation and climate data collection — combining stewardship with technical skill development (e.g. **SUNCASA**).

Women are leaders, not participants. Women play central roles in community resource management.

In some urban NbS initiatives, women account for

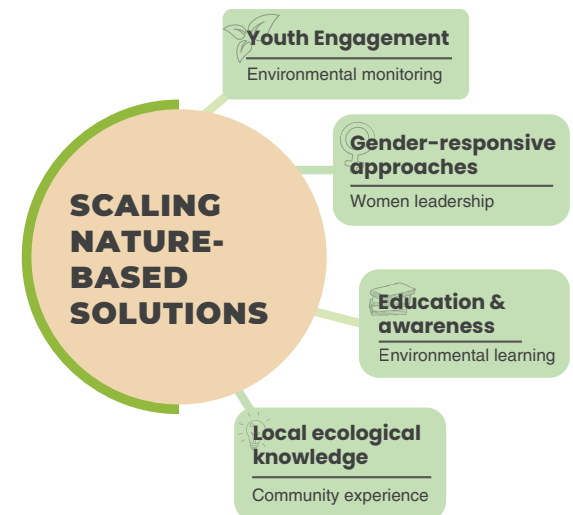
up to 60%*
of project participants,

yet gender considerations are not always systematically integrated into project design.



(* Session D1-S3.5 – Green Job Creation and Youth Engagement | Presentations from Enabel, GGGI, IUCN and the Rwanda Young Water Professionals (RYWP) highlighting employment opportunities linked to NbS implementation.

Beyond governance, inclusive NbS generate direct social dividends: improved environmental quality, access to green spaces and public health benefits — particularly in flood-prone and underserved neighbourhoods. Local ecological knowledge — communities' insights into flood patterns and ecosystem behaviour — is an underutilised asset that improves NbS design when integrated into planning.



Key insight

Inclusive participation is not complementary — it is what makes NbS work. Participatory governance, gender-responsive approaches, youth engagement and community stewardship must be embedded from the outset.



Photo ©: WRI Africa

Green Jobs and Local Economic Development

NbS as engines of green economic development.

NbS don't just restore ecosystems — they create jobs, build skills and stimulate local economies.

NbS implementation is inherently labor-intensive — ecosystem restoration, tree planting, landscape management, environmental monitoring. The economic case is compelling:

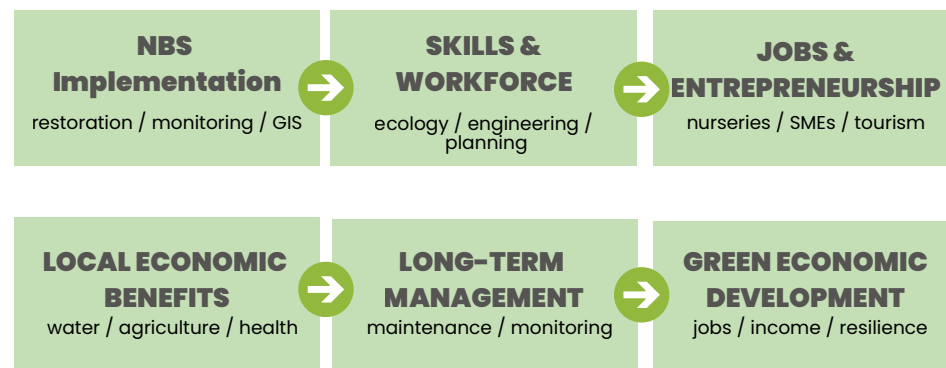
Indicator	Figure
Jobs generated vs grey infrastructure	2–5× more per dollar invested
Nyandungu Ecopark (121 ha restored)*	4,000 direct and indirect jobs
Wetland restoration across Kigali (projected)**	7,500 full-time equivalent jobs
Employment within 6 months after NbS vocational training in Rwanda	794 placed (76% rate)

NbS also stimulate broader economic opportunity: tree nurseries, landscaping enterprises, seedling distribution, environmental monitoring services and eco-tourism. However, limited access to financing, technical support and business development services remain barriers to growth.

Watershed restoration improves water quality and agricultural productivity. These benefits extend to entire communities.

Scaling requires a workforce that does not yet fully exist. NbS demand expertise across ecology, hydrology, landscape design, environmental planning and digital monitoring tools. Strengthening training systems and recognising long-term stewardship as formal employment are essential priorities.

Nature-Based Solutions as a driver of green economic development



Key insight

NbS are not a cost — they are an investment with measurable returns. Integrating job creation, skills development and ecosystem service markets into NbS programs transforms environmental restoration into a driver of inclusive green economic growth.



(*)Session D1-S3.5 – Green Job Creation and Youth Engagement / Presentations from GGGI highlighting employment opportunities linked to NbS implementation.

(**)Session D1-S3.5 – Green Job Creation and Youth Engagement / Presentations from Enabel, GGGI, IUCN and the Rwanda Young Water Professionals (RYWP) highlighting employment opportunities linked to NbS implementation.

Monitoring, Data and Learning Systems

What gets measured gets scaled.

Robust monitoring transforms NbS from promising pilots into credible, bankable, replicable infrastructure.

Monitoring is the bridge between ambition and accountability — and an investment readiness tool as much as an accountability one.

Without credible monitoring frameworks, NbS risk remaining isolated projects.

What effective NbS monitoring must capture:

Dimension	Key indicators
Climate resilience	Flood reduction capacity, vegetation cover change
Ecosystem health	Biodiversity restoration, water quality
Economic co-benefits	Employment creation, ecosystem service valuation
Social outcomes	Community well-being, urban environmental quality

Monitoring also unlocks financing. Financial institutions increasingly require measurable evidence of NbS effectiveness before committing resources (e.g. the **World Bank's Program-for-Results approach**).

4 critical requirements:

- 1 Align with ecological timelines, not administrative cycles** — restoration can take years to show measurable results
- 2 Deploy digital tools** — GIS, satellite imagery, environmental sensors — while closing the capacity gap to use them
- 3 Coordinate across institutions** — NbS span environment, planning, infrastructure and water management; cross-agency monitoring systems are essential
- 4 Integrate community participation** — local stakeholders bring valuable ecological knowledge and reinforce long-term stewardship



NbS contributions:

Flood reduction capacity	Vegetation cover change
Ecosystem service valuation	Climate resilience
Urban environmental quality	Social benefits

Monitoring also feeds policy learning. Data from NbS initiatives can directly inform urban planning strategies, climate adaptation policies and infrastructure investment decisions.

Key insight

Monitoring systems are foundational to scaling NbS. Strengthening frameworks, improving data systems and building knowledge-sharing platforms creates the evidence base needed to move NbS from experiments to systemic urban infrastructure.



02

Priority Actions

STRATEGIC THEMES
EMERGING FROM
THE FORUM

PRIORITY
ACTIONS

NATURE BASED
SOLUTIONS IN
PRACTICE

ROADMAP FOR
IMPLEMENTATION

CONCLUSION
FOR DIALOGUE
TO DELIVERY

ABOUT THE
FORUM AND
METHODOLOGY

Priority Actions

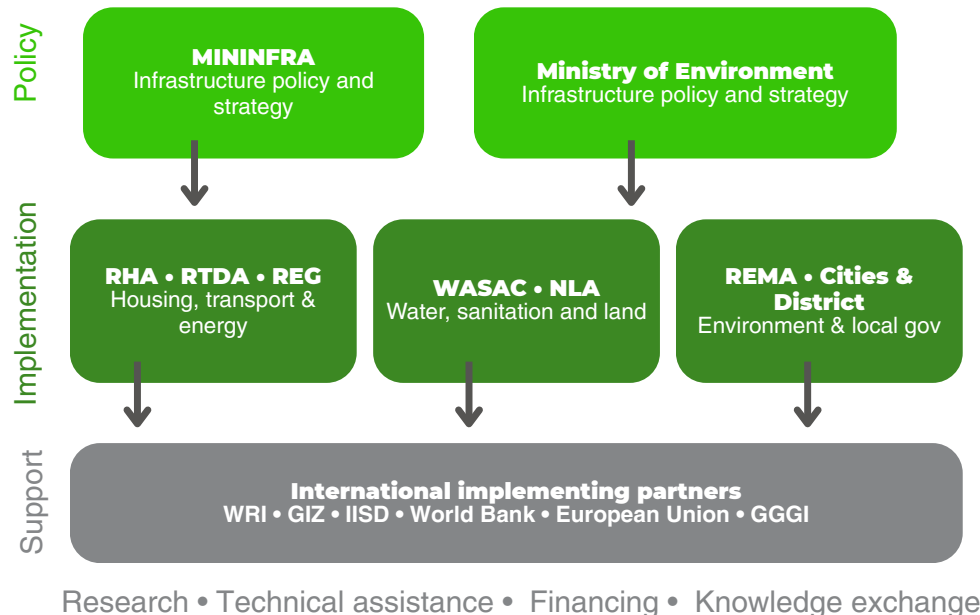
Nature-Based Solutions don't just restore ecosystems

They create jobs, build skills and stimulate local economies.

Rwanda has already laid the groundwork. The **Green Growth and Climate Resilience Strategy**, the **National Urbanization Policy** and the country's **Nationally Determined Contributions** reflect a genuine commitment to environmentally sustainable development.

NbS initiatives are emerging across Kigali, secondary cities and districts, where ecosystem restoration, watershed management and climate resilience programs are increasingly recognized as core components of territorial development.

Rwandan institutions and partners



Rwanda | Photo © : Serrah Galos | WRI; RECOR Terrafund

6 Transformations to Scale Urban Nature-Based Solutions

Rwanda and its partners commit to advancing 6 key transformations to enable the widespread adoption of NbS across cities, districts and landscapes.

1 FROM PILOT PROJECTS TO URBAN AND TERRITORIAL INFRASTRUCTURE SYSTEMS

Rwanda's national policy foundations are strong. What is needed now is stronger coordination across the institutions responsible for infrastructure, environment, urban development and disaster risk management aligning policy frameworks and operational guidelines from the national to the district level.

Priority areas for capacity building include cost-benefit assessments and the development of bills of quantities for NbS projects, equipping national and local institutions with the practical tools needed to plan and budget nature-based infrastructure effectively.

NbS still too often exist as isolated projects. Yet case studies demonstrated their capacity to deliver essential services — flood regulation, watershed protection, urban cooling, biodiversity restoration — at city and territorial scale. The shift required is clear: NbS must become integral components of urban planning frameworks, infrastructure investments and watershed management strategies across cities.

At policy level, the Ministry of infrastructure (**MININFRA**) and the **Ministry of Environment** provide the strategic frameworks and regulatory direction that enable NbS to be recognized as critical infrastructure. Implementation is driven by **implementing agencies** - Rwanda Housing Authority (**RHA**), Road Transport Development Agency (**RTDA**), Rwanda Energy Group (**REG**), Water and Sanitation Cooperation (**WASAC**), the National Land Authority (**NLA**) and the Rwanda Environment Management Authority (**REMA**) – alongside **city authorities and district governments**. **International implementing partners** – **WRI**, **GIZ** and **IISD**, the **World Bank**, the **European Union** and **GGGI** - support this transformation across all dimensions through research, technical assistance, financing and knowledge exchange.

2 FROM FRAGMENTED GOVERNANCE TO COORDINATED NBS POLICY FRAMEWORKS

3 FROM GRANT-FUNDED PILOTS TO BANKABLE NBS INVESTMENT PIPELINES

Local governments, civil society organizations and community groups across Rwanda's cities and districts are essential stewards of restored ecosystems.

In Rwanda's context, **professional bodies** play a particularly important bridging role — connecting government institutions with communities and helping disseminate information on NbS approaches. **The Rwanda Institute of Architects, the Institute of Engineers Rwanda (IER) and the University of Rwanda** contribute to this interface between technical expertise and community engagement.

Civil society organizations are equally critical actors: **the ARCOS Network** brings experience in community-based conservation and restoration, while **AVEGA-AGAHOZO** contributes to women's empowerment and community resilience. Youth networks such as the **Rwanda Young Water Professionals (RYWP)** further strengthen local capacity and youth participation across NbS initiatives.

Involving communities, youth and women throughout the project cycle is what ensures long-term sustainability and equitable benefit-sharing.

Financing for climate resilience is expanding — the priority is strengthening project preparation: robust feasibility analysis, ecosystem service valuation and monitoring frameworks that produce bankable investment pipelines.

International implementing partners play a central role in mobilizing climate finance and building investment readiness.

At the national level, the Rwanda Green Fund (**FONERWA**) provides an essential instrument for supporting project preparation and environmental financing — including flagship initiatives such as the **Green City Kigali** project. This also reflects a broader institutional evolution: **MININFRA** is now actively internalizing nature-based infrastructure within its own mandate — a significant signal that NbS are increasingly recognized as core infrastructure, not simply environmental add-ons

4 FROM TECHNICAL PROJECTS TO INCLUSIVE COMMUNITY STEWARDSHIP

5 FROM ENVIRONMENTAL PROGRAMS TO GREEN ECONOMIC OPPORTUNITIES

What cannot be measured cannot be scaled. Effective monitoring frameworks — capable of capturing ecological restoration outcomes, climate resilience benefits and socio-economic impacts — are essential for demonstrating the value of NbS investments and enabling adaptive management.

REMA, national statistical agencies, city and district governments, and international implementing partners all play important roles in strengthening data systems, deploying digital monitoring tools and facilitating knowledge exchange across cities and regions.

NbS are not just good for nature — they are good for economies. Restoration projects, watershed management and urban greening programs generate jobs, stimulate local entrepreneurship and support environmental service markets.

International implementing partners advance this transformation through sustainable infrastructure programs, green finance initiatives and capacity-building — with **national institutions, local governments and the private sector** as essential partners.

In the peri-urban context, the **Ministries of Agriculture and Environment** are also key actors, driving initiatives such as terracing and forestry programs. **The Rwanda Institute for Conservation Agriculture (RICA), designed by MASS Design Group** illustrates how ecological systems, agricultural production and built infrastructure can be integrated at campus scale.

6 FROM PROJECT MONITORING TO INTEGRATED NBS KNOWLEDGE SYSTEMS

Key actors reference

Role	Actors	Contributions	Transformation
Policy	Ministry of Infrastructure (MININFRA), Ministry of Environment	Strategic frameworks and regulatory direction enabling Urban and Peri-Urban Nature-Based Solutions to be recognized as critical infrastructure	1 - 2 - 3
Implementation	National Land Authority (NLA), Rwanda Energy Group (REG), Rwanda Environment Management Authority (REMA), Rwanda Housing Authority (RHA), Road Transport Development Agency (RTDA), Water and Sanitation Cooperation (WASAC), City authorities, District governments	Operational delivery of NbS across urban and territorial planning, infrastructure and environmental management	1 - 2 - 3 - 5 - 6
Community stewardship	Built Environment Professional Bodies (IER, RUPI, RIA, RIQs, RAPEP, ROLS, IRPV), University of Rwanda, ARCOS Network, AVEGA-AGAHOZO, Rwanda Young Water Professionals (RYWP)	Bridging government and communities; inclusive participation, gender-responsive approaches and youth engagement	4 - 5 - 6
International financial and technical partners	European Union, GIZ, Global Green Growth Institute (GGGI), International Institute for Sustainable Development (IISD), World Bank, World Resources Institute (WRI)	Research, technical assistance, financing and knowledge exchange across all six transformations	All

12 priority actions

Lead

Primary accountable actor, responsible for driving implementation and reporting progress.

Support

Contributing actors providing technical assistance, financing or coordination. Attribution should be validated with MININFRA and relevant line ministries.

PHASE 1

Governance alignment

Strengthen coordination across MININFRA, the Ministry of Environment and REMA to enable cross-sector NbS implementation

Lead

MININFRA, Ministry of Environment

Support

REMA, City of Kigali, District authorities

Planning integration

Support cities and districts in embedding NbS into master plans, watershed strategies and climate adaptation frameworks, backed by practical guidelines and planning tools

Lead

City authorities, District governments

Support

MININFRA, International Financial and Technical Partners (IFTP)

Project pipeline

Develop well-structured, investment-ready NbS proposals through technical assistance from WRI, GIZ, the European Union, the World Bank, GGGI and IISD

Lead

MININFRA, FONERWA

Support

IFTP

Capacity building

Train city planners, engineers, environmental specialists and local authorities in NbS design and implementation. During the Forum, the World Bank and the European Union (Enabel) launched a capacity building workshop to empower districts in identifying viable NbS projects — with activities planned in the months ahead.

Lead

IFTP

Support

MININFRA, District authorities, University of Rwanda, IER

Data systems

Expand environmental monitoring and spatial data access to support evidence-based decision-making

Lead

REMA, National statistical agencies

Support

City authorities, RYWP, WRI, IISD

PHASE 2

Investment mobilization

Deploy financing through FONERWA, international climate finance and development finance institutions to fund flood mitigation, watershed protection, urban greening and biodiversity restoration

Lead

FONERWA,
IFTP

Support

MININFRA,
Private sector

Green jobs

Link restoration and urban greening programs to employment opportunities for youth and local communities

Lead

Ministry of Labour

Support

IFTP, RYWP, District
governments, Private
sector

Urban and territorial integration

Embed NbS into development programs across Kigali, secondary cities and districts, through the implementing agencies responsible for infrastructure and environmental management: RHA, RTDA, REG, WASAC, NLA and REMA

Lead

RHA, RTDA, REG
WASAC, NLA,
REMA

Support

City authorities,
District governments,
MININFRA

Community stewardship

Sustain participatory planning and local ownership to ensure long-term effectiveness

Lead

District
governments,
City authorities

Support

ARCOS Network
AVEGA-AGAHOZO,
RYWP,
Rwanda Institute of
Architects, IER

PHASE 3

Full integration

NbS embedded within urban planning frameworks, climate adaptation strategies and national infrastructure planning as standard components of resilient infrastructure

Lead

MININFRA
Ministry of
Environment

Support

RHA, RTDA, REG
WASAC, NLA, REMA, City
and District governments

Monitoring and evaluation

Integrated frameworks tracking long-term ecological recovery, climate resilience and socio-economic outcomes

Lead

REMA, National
statistical agencies

Support

IFTP, City and
District governments

Knowledge and regional collaboration

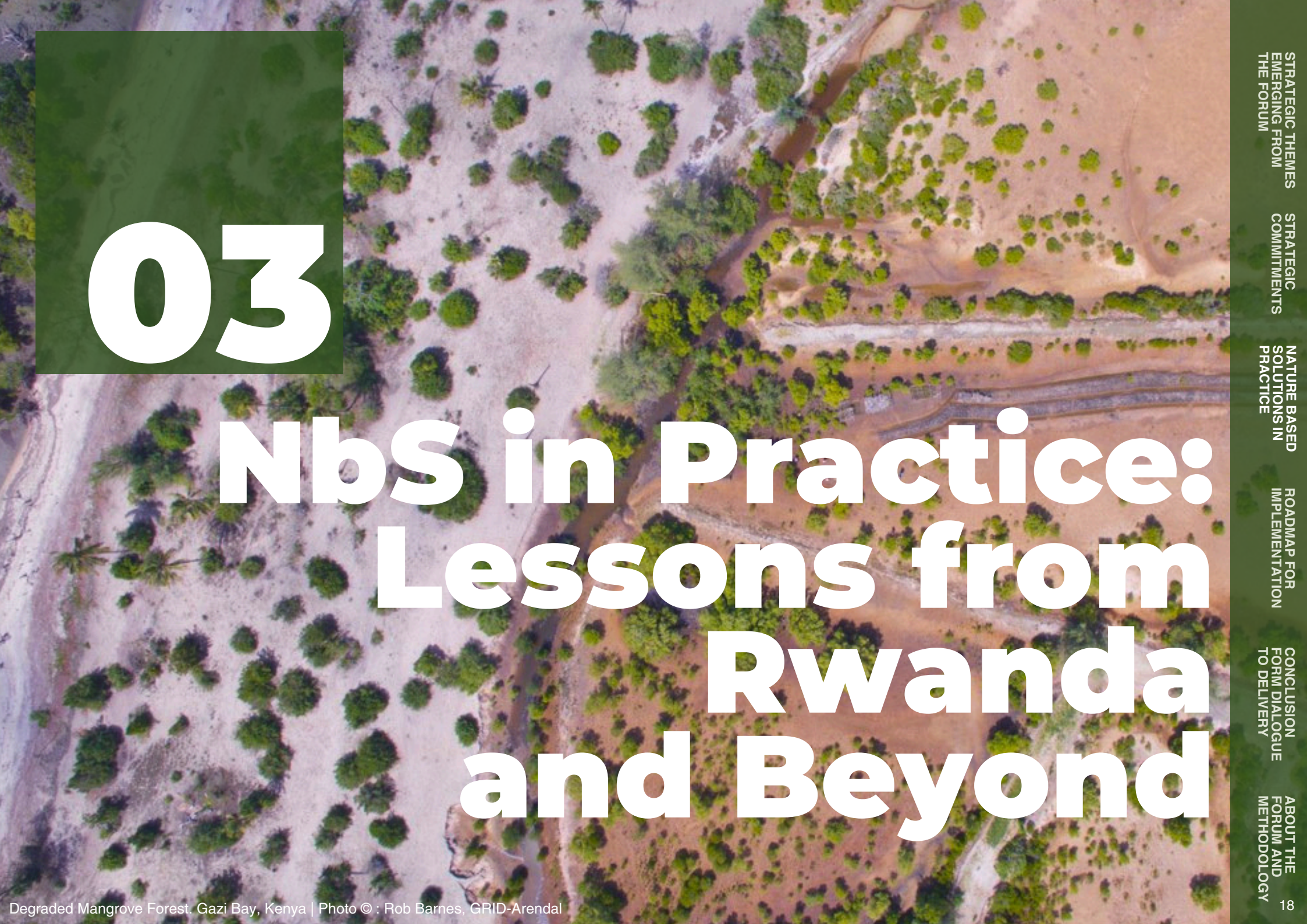
Platforms connecting cities, districts, researchers and development partners to share experiences and replicate success across the region

Lead

IFTP
MININFRA

Support

City authorities
University of Rwanda



03

NbS in Practice: Lessons from Rwanda and Beyond

NbS in Practice : Lessons from Rwanda and Beyond

Nature-Based Solutions are not theoretical.

Across Africa, they are already being implemented — restoring wetlands, greening cities, managing watersheds and reducing flood risks while improving lives and generating economic opportunity.

The following examples, drawn from Rwanda and beyond, show what is possible — and what can be replicated.

Kigali Wetland Rehabilitation Programme | 📍 Rwanda*

Implementor: Government of Rwanda (REMA, City of Kigali)

Supporting/ Financing actors: World Bank, development partners

Context

Rapid urban growth in Kigali has increased pressure on the city's natural ecosystems. Historically, wetlands played a crucial role in regulating water flows, filtering pollutants and reducing flood risks. However, urban expansion and environmental degradation weakened these ecological functions, increasing the vulnerability of surrounding communities to flooding and environmental stress.

NbS Intervention

The Kigali Wetland Rehabilitation Programme aims to restore degraded wetlands while integrating ecological restoration with urban infrastructure planning. The initiative combines wetland rehabilitation, stormwater regulation, biodiversity restoration and the development of recreational spaces including pedestrian and cycling paths.

Impact

Approximately **491 hectares of wetlands** have been rehabilitated, restoring hydrological functions and strengthening flood protection within the urban watershed. Restoration efforts have supported the return of biodiversity, with numerous bird species returning to restored habitats. The project has also improved access to green public spaces while contributing to improved water quality and environmental health.

Key Lesson

Urban wetlands can function as **essential ecological infrastructure**, delivering flood regulation, water purification and biodiversity benefits while improving the quality of urban life.



()Session D1-S2 – NbS Case Studies | Examples from Kigali wetland restoration, Addis Ababa green corridor development and the SUNCASA urban climate resilience program demonstrated how NbS interventions can stimulate local economic activity, tourism development and environmental service markets. By Rwanda Environment Management Authority (REMA)*



Addis Ababa Green Corridor Initiative | 📍 Ethiopia*

Implementor: Addis Ababa City Administration

Supporting/ Financing actors: National banks, public financing institutions

Context

Addis Ababa faces rapid urban expansion, environmental degradation and increasing demand for improved infrastructure and public space. Addressing these challenges required a comprehensive approach capable of integrating environmental restoration within urban redevelopment strategies.

NbS Intervention

The Addis Ababa Green Corridor Initiative integrates river restoration, urban greening and public space development within broader urban transformation projects. The initiative combines ecological restoration with improvements in urban mobility and landscape design to create green corridors connecting different parts of the city.



()Session D1-S2 – NbS Case Studies | Examples from Kigali wetland restoration, Addis Ababa green corridor development and the SUNCASA urban climate resilience program demonstrated how NbS interventions can stimulate local economic activity, tourism development and environmental service markets. By Addis Ababa City*

Impact

The project has contributed to the rehabilitation of degraded urban areas while improving environmental quality and creating attractive public spaces. The integration of green corridors within the urban fabric has helped enhance urban aesthetics, promote recreation and support environmental resilience.

11,283

houses provided to residents in Kebele houses

179,066

jobs created

300

hectares of land provided as replacement

17.1

billion ETB paid for compensation

Key Lesson

Nature-Based Solutions can be embedded within **large-scale urban redevelopment programs**, demonstrating how ecological infrastructure can support sustainable city transformation.



Photo © : Addis Corridor

SUNCASA Urban Nature-Based Solutions Programme | 📍 Sub-Saharan Africa**

Implementors: WRI (World Resources Institute), IISD, City authorities

Supporting/ Financing actors: Global Affairs Canada, partner cities

Context

Cities across Sub-Saharan Africa face increasing climate risks including flooding, heat stress and environmental degradation. Many municipalities lack the technical capacity and financial resources required to implement NbS initiatives at scale.

NbS Intervention

The **Scaling Urban Nature-Based Solutions for Climate Adaptation in Sub-Saharan Africa (SUNCASA)** program supports cities in implementing ecosystem restoration and urban greening initiatives that strengthen climate resilience. In Kigali and other participating cities (Dire Dawa, Ethiopia; Johannesburg, South Africa), the program supports tree planting, ecosystem restoration and community-based adaptation initiatives.

Impact

In Kigali, the program has so far supported the planting of approximately **1.26 million trees** and the restoration of more than **2,400 hectares of degraded landscapes**. The initiative has also promoted gender inclusion, with women representing approximately half of program beneficiaries.

Key Lesson

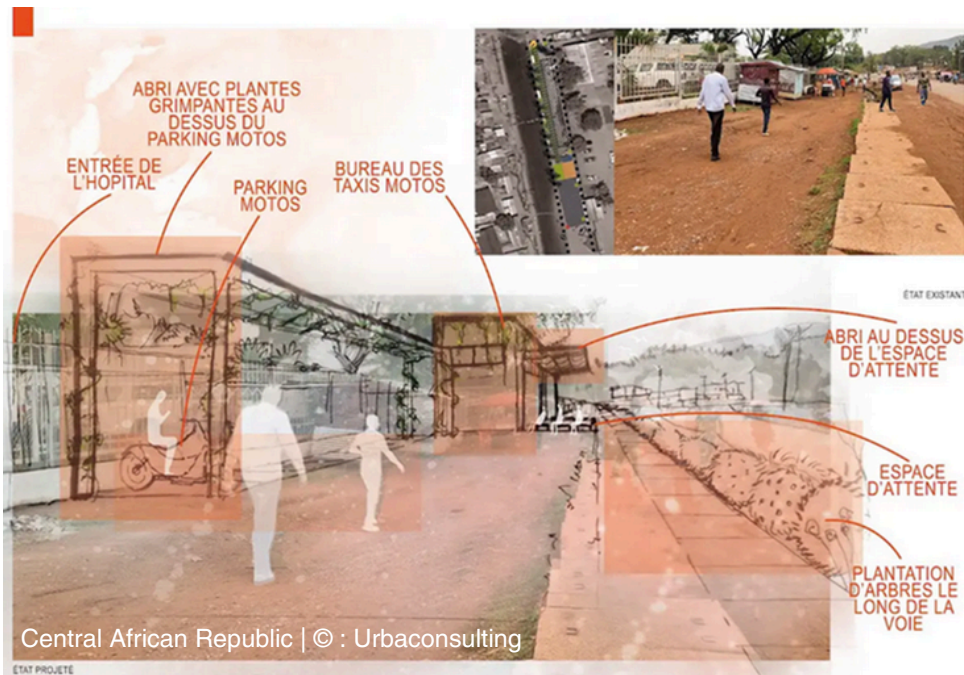
Multi-partner collaboration combining technical expertise, climate finance and local engagement can significantly accelerate the adoption of NbS initiatives in rapidly growing cities.



*(**) Session D1-S2 – NbS Case Studies | Examples from Kigali wetland restoration, Addis Ababa green corridor development and the SUNCASA urban climate resilience program demonstrated how NbS interventions can stimulate local economic activity, tourism development and environmental service markets. By IISD*



Photo © : SUNCASA



Nyandungu Ecopark Restoration | Rwanda**

Implementor: Government of Rwanda (REMA, City of Kigali)
Supporting/ Financing actor: FONERWA

Context

Urban wetland degradation in Kigali reduced ecosystem functions and limited opportunities for recreation and biodiversity conservation.

NbS Intervention

The Nyandungu Ecopark restoration project rehabilitated a degraded wetland area while transforming it into a multifunctional ecological park. The initiative combined ecosystem restoration with the development of recreational infrastructure and environmental education facilities.

Impact

The restoration of approximately **121 hectares** of wetland ecosystems has improved biodiversity conservation while creating an attractive public green space. The park also contributes to environmental education and eco-tourism, attracting thousands of visitors each month.

Key Lesson

NbS initiatives can simultaneously support **ecosystem restoration, recreation and green economic opportunities**, demonstrating the multiple benefits of investing in ecological infrastructure.



(**) *Session D1-S3.5 – Green Job Creation and Youth Engagement | Presentations from Enabel, GGGI, IUCN and the Rwanda Young Water Professionals (RYWP) highlighting employment opportunities linked to NbS implementation. By GGGI*

PROVIR Urban Resilience Programme

📍 | Central African Republic*

Implementor: Government of CAR
Supporting/ Financing actor: World Bank

Context

Cities in fragile and rapidly urbanizing contexts often face severe environmental challenges including flooding, erosion and degraded infrastructure systems. Limited environmental data and institutional capacity can make it difficult to design effective resilience strategies.

NbS Intervention

The **PROVIR Urban Resilience Programme** integrates ecosystem-based approaches within broader urban infrastructure and resilience investments. The program combines participatory planning methods with NbS interventions such as riverbank stabilization, flood mitigation measures and watershed restoration.

Impact

By integrating NbS within larger infrastructure investments, the program demonstrates how ecosystem-based approaches can strengthen urban resilience while improving community participation in planning processes.

Key Lesson

Nature-Based Solutions can be successfully implemented even in **data-scarce or institutionally complex contexts** when participatory planning and adaptive approaches are used.



(*) *Session D1-S2 – NbS Case Studies | Examples from Kigali wetland restoration, Addis Ababa green corridor development and the SUNCASA urban climate resilience program demonstrated how NbS interventions can stimulate local economic activity, tourism development and environmental service markets. By Hydroconseil-Urbaconsulting*



Kigali | Photo © : Rwanda Development Bank

Emerging NbS Initiatives in Rwanda's Secondary Cities

📍 | Rwanda

Discussions during the Forum also highlighted the increasing interest in scaling Nature-based Solutions (NbS) beyond the capital city. Pilot interventions in secondary cities such as the one in Musanze by Enabel—though relatively small in scale—demonstrate high impact when designed through participatory processes and embedded within a broader stormwater management master plan. These initiatives combine community-driven implementation with ecosystem-based design to address localized flood risks, enhance watershed protection, and improve urban drainage performance.

Such experiences provide practical evidence that NbS can be effectively operationalized in rapidly growing urban contexts when aligned with integrated urban water management frameworks. They also highlight the importance of coupling site-specific interventions with city-wide planning instruments to ensure coherence, scalability, and long-term sustainability. Overall, these initiatives underscore the need to systematically integrate NbS into territorial and urban planning frameworks across Rwanda's cities and districts, enabling a transition from isolated pilot projects to coordinated, landscape-scale resilience strategies.



Emerging Ecosystem-Based Practices in Rwanda's Districts 📍 | Rwanda

The project development workshop held during the Forum further demonstrated that many ecosystem-based practices already exist across Rwanda's districts. Participants from various regions highlighted local initiatives related to **watershed restoration, terracing, agroforestry, wetland protection and erosion control**.

Although these interventions are often implemented through agriculture, land management or environmental conservation programs, they reflect principles consistent with Nature-Based Solutions. Strengthening coordination between these initiatives and urban planning systems could further enhance their contribution to climate resilience and sustainable development.

Climate-Sensitive, Socially Just Planning and Housing

📍 | Rwanda (Kigali, Kamonyi District)

Implementor(s): Government of Rwanda (MININFRA, local authorities)

Supporting/ Financing actor: GIZ

Context

Rapid urbanisation in Rwanda is intensifying climate risks and social inequalities, particularly in informal settlements with limited infrastructure and high vulnerability where vulnerable communities are most affected. This creates a need for neighbourhood-level planning approaches that actively involve communities in shaping resilient, inclusive, and climate-sensitive urban development.

NbS Intervention

In two pilot neighbourhoods (Gatenga/Kigali, Busasamana/Kamonyi), the project implements nature-based solutions through participatory, GIS-informed neighbourhood planning, where community members co-identify climate risks and co-design appropriate responses. Small-scale green and blue infrastructure is prioritised based on local knowledge and needs, ensuring that solutions are socially accepted and responsive to everyday challenges.

Impact

The approach improves climate resilience, environmental sustainability, and living conditions while enhancing social inclusion, particularly for women and vulnerable groups. It also supports in-situ upgrading that reduces displacement and contributes to stronger governance and financing mechanisms for sustainable urban development.

Key Lesson

NbS are most effective when embedded in participatory planning processes that ensure local ownership and context-specific design. Their scalability depends on combining participatory approaches with institutional embedding, and sustained capacity development.



04

Roadmap for Implementation (2026–2030)

STRATEGIC THEMES
EMERGING FROM
THE FORUM

PRIORITY
ACTIONS

NATURE BASED
SOLUTIONS IN
PRACTICE

ROADMAP FOR
IMPLEMENTATION

CONCLUSION
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Roadmap for Implementation (2026–2030)

Ambition without action is just intention. The roadmap below translates the 12 priority actions into a phased approach, structured around three complementary stages: **establishing enabling foundations, scaling implementation, and institutionalizing NbS within long-term urban development systems.**

This is how Rwanda moves from momentum to transformation.

PHASE 1

Enabling Foundations (2026–2027)

Build the institutional, technical and financial conditions for NbS to scale.

Phase 1 is about converting Rwanda's strong policy foundations into operational reality.

Priority actions:

- **Governance alignment** — Strengthen coordination across MININFRA, the Ministry of Environment and REMA to enable cross-sector NbS implementation
Lead: MININFRA, Ministry of Environment
- **Planning integration** — Support cities and districts in embedding NbS into master plans, watershed strategies and climate adaptation frameworks, backed by practical guidelines and planning tools
Lead: City authorities, District governments
- **Project pipeline** — Develop well-structured, investment-ready NbS proposals through technical assistance from WRI, GIZ, the European Union, the World Bank, GGGI and IISD | *Lead: MININFRA, FONERWA*
- **Capacity building** — Train city planners, engineers, environmental specialists and local authorities in NbS design and implementation. During the Forum, the World Bank and the European Union (Enabel) launched a capacity building workshop to empower districts in identifying viable NbS projects — with activities planned in the months ahead | *Lead: International Financial and Technical Partners (IFTP)*
- **Data systems** — Expand environmental monitoring and spatial data access to support evidence-based decision-making | *Lead: REMA, National statistical agencies*

PHASE 2 (2027–2028)

Scaling Implementation

Move from pilots to programs — across cities, districts and territories.

Phase 2 shifts to delivery. NbS become visible components of urban development, watershed restoration and climate adaptation — financed, implemented and owned at the local level.

Priority actions:

- **Investment mobilization** — Deploy financing through FONERWA, international climate finance and development finance institutions to fund flood mitigation, watershed protection, urban greening and biodiversity restoration | *Lead: IFTP*
- **Urban and territorial integration** — Embed NbS into development programs across Kigali, secondary cities and districts, through the implementing agencies responsible for infrastructure and environmental management | *Lead: RHA, RTDA, REG, WASAC, NLA and REMA*
- **Green jobs** — Link restoration and urban greening programs to employment opportunities for youth and local communities | *Lead: Ministry of Labour*
- **Community stewardship** — Sustain participatory planning and local ownership to ensure long-term effectiveness | *Lead: District governments, City authorities*

PHASE 3 (2029–2030)

Institutionalization and Long-Term Impact

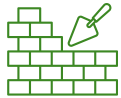
Embed NbS permanently into Rwanda's urban and development systems.

Phase 3 is about durability. NbS are no longer projects — they are infrastructure, policy and practice.

Priority actions:

- **Full integration** — NbS embedded within urban planning frameworks, climate adaptation strategies and national infrastructure planning as standard components of resilient infrastructure
Lead: MININFRA, Ministry of Environment
- **Monitoring and evaluation** — Integrated frameworks tracking long-term ecological recovery, climate resilience and socio-economic outcomes | *Lead: REMA, National statistical agencies*
- **Knowledge and regional collaboration** — Platforms connecting cities, districts, researchers and development partners to share experiences and replicate success across the region | *Lead: IFTP, MININFRA*

1



PHASE 1

Enabling Foundations (2026–2027)

2



PHASE 2

Scaling Implementation (2027–2028)

3



PHASE 3

Institutionalization and Long-Term Impact (2029–2030)

*Through this roadmap, **Rwanda** and its partners reaffirm their shared commitment to advancing Nature-Based Solutions as a central pillar of resilient, inclusive and sustainable urban development.*

By strengthening governance frameworks, mobilizing investment and empowering communities, NbS play a transformative role in shaping the future of cities and territories across Rwanda and the region.

05

Conclusion: From Dialogue to Delivery

Urban & Peri-Urban NbS Forum

Applying Nature-based Solutions in Infrastructure Planning, Design, and Investment

2-4 March, 2026 | Kigali - Rwanda



From Dialogue to Delivery

The tools, the knowledge and the will to transform urban development with nature already exist — what is needed now is coordinated action.

Bringing together government institutions, city authorities, development partners, research organizations, civil society and the private sector, the Forum on Urban and Peri-Urban Nature-Based Solutions generated something rare — genuine alignment. Across sectors and scales, participants converged on a shared diagnosis and a common direction: NbS must move from promising pilots to central components of urban infrastructure, territorial planning and climate adaptation strategies.

The **six transformations** identify the systemic shifts required. The **twelve flagship priority actions** provide a concrete agenda for action. The **phased roadmap for 2026–2030** outlines the steps — from enabling foundations to full institutionalization — needed to translate ambition into outcomes.

Rwanda enters this next phase from a position of strength. Strong policy frameworks — **the Green Growth and Climate Resilience Strategy, the National Urbanization Policy, the country's Nationally Determined Contributions** — provide the foundation. Emerging NbS initiatives across Kigali, secondary cities and districts demonstrate that implementation is already underway. And a broad coalition of partners — **WRI, GIZ, the European Union, the World Bank, GGGI and IISD** — stands ready to support the journey.

The path forward is clear:

- **National institutions** — strengthen policy coordination, align governance frameworks and create the enabling conditions for NbS to scale across sectors
- **Cities and districts** — embed NbS into master plans, infrastructure investments and climate adaptation strategies from the outset
- **Development partners** — sustain support for project preparation, investment readiness, financing mechanisms and knowledge exchange
- **Communities and civil society** — remain active stewards of restored ecosystems, ensuring long-term sustainability and equitable benefit-sharing

The transition toward nature-positive cities will also require sustained investment in innovation, monitoring systems, professional skills and cross-sector partnerships. As NbS approaches mature, the knowledge generated in Rwanda can contribute to a growing regional and global movement toward sustainable urban development.

The true impact of the Forum will be measured by the decisions and investments that follow.

Photos ©: GIZ/ Saleh Ruzindaza



The future of cities will be built with nature, or it will not be resilient.

Through this Call to Action, Rwanda and its partners choose to build it right — together, at scale and for generations to come.



06

About the Forum and Methodology

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The International Forum on Urban and Peri-Urban Nature-Based Solutions

The Forum on Urban and Peri-Urban Nature-Based Solutions was held at the Kigali Marriott Hotel, Kigali, from March 2nd to 4th, 2026. Convened by **the Ministry of Infrastructure of Rwanda (MININFRA) in collaboration with the World Resources Institute (WRI), the European Union, GIZ, the World Bank, the Global Green Growth Institute (GGGI) and the International Institute for Sustainable Development (IISD)**, the Forum brought together policymakers, technical experts, development partners, researchers, civil society organizations and practitioners.

Participants explored how NbS can address challenges including flooding, environmental degradation, urban heat stress and biodiversity loss, while supporting inclusive economic development and green employment. The programme combined high-level discussions, thematic technical sessions, international case studies and participatory workshops — covering both strategic policy dimensions and practical implementation lessons from Rwanda and beyond.

Capitalizing Knowledge from the Forum

The Call to Action is the result of a structured knowledge capitalization process designed and led by Hydroconseil.

To ensure that discussions and insights were accurately and comprehensively captured, Hydroconseil implemented a dedicated documentation approach covering the full range of Forum sessions.

Documentation was based on standardized note-taking templates developed by Hydroconseil and adapted to different session formats. These templates were designed to systematically capture the key elements emerging from each session: challenges identified by participants, strategic insights related to scaling NbS, examples of ongoing projects and implementation experiences, and potential commitments or policy signals relevant for advancing NbS implementation.

Hydroconseil was assisted by a team of young professionals and students from the **Rwanda Young Water Professionals (RYWP)** network, who served as session rapporteurs under Hydroconseil's guidance and coordination. Their involvement reflects the important role that emerging professionals can play in advancing knowledge exchange and environmental stewardship in Rwanda.



Photos ©: GIZ/ Saleh Ruzindaza

From Forum Discussions to Call to Action

Insights were organized across six thematic areas: governance and institutional coordination, financing and investment readiness, NbS integration in urban planning, inclusive and gender-responsive participation, green job creation, and monitoring and knowledge systems.

This analysis forms the foundation of the Call to Action — articulating **six transformations**, supported by **twelve flagship priorities** and a **roadmap for 2026–2030**.



Photos ©: GIZ/ Saleh Ruzindaza

Acknowledgements

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The active participation of representatives from national institutions, districts, secondary cities, development partners, researchers, civil society and the private sector — including district representatives and students — enriched the discussions and shaped the perspectives reflected in this Call to Action.



A Call to Action for Urban and Peri-urban NBS

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