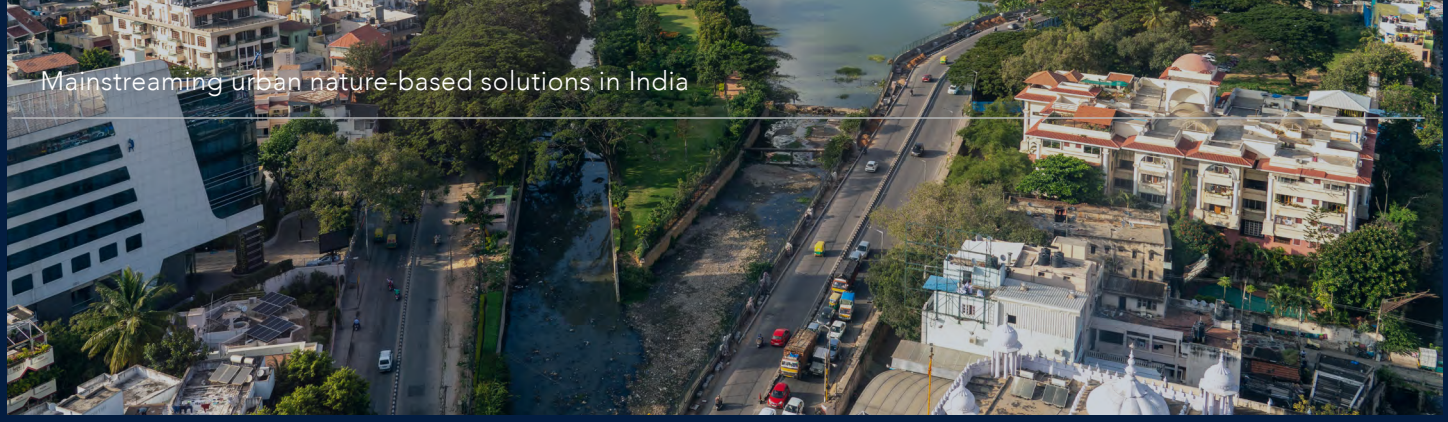
Mainstreaming urban Nature-Based Solutions in India

Executive summary

This paper presents an action agenda of the role Nature-based Solutions (NbS) can play in addressing the complex and interlinked challenges contemporary urban environments face, including extreme weather, ecological degradation, and declining urban liveability. As urban centres continue to expand, they contribute to escalating environmental pressures. NbS have emerged as a promising paradigm—integrating natural processes and ecosystem services into the fabric of urban development to enhance resilience, mitigate risk, and promote environmental improvements. Interventions such as urban afforestation, wetland restoration, nature-sensitive stormwater management, and green building and infrastructure exemplify how ecological systems can be harnessed to deliver multiple co-benefits. Yet, despite the increasing policy attention and demonstrated efficacy of NbS, their widespread adoption remains constrained by a lack of understanding, limited technical capacity, fragmented governance structures and roles, inadequate financing mechanisms, and a lack of institutionalization into the planning frameworks. Furthermore, the inherent complexity in evaluating the multi-dimensional benefits of NbS—including climate adaptation, urban flood management, biodiversity conservation, heat reduction, improved air and water quality, public health improvements, and protection of vulnerable communities—continues to hinder their prioritisation within urban policy discourse.



This paper is the outcome of a round table discussion organized by ICF that brought together diverse stakeholders, including decision makers, policymakers, funding agencies, urban planners, researchers, civil society actors, and private sector representatives to deliberate on the current state and future potential of NbS in urban contexts. The round table highlighted critical themes such as the need for embedding NbS in city master plans and development regulations, the importance of participatory planning and community co-creation, the need to host a consolidated knowledge hub and guidelines, and the urgency of building a robust evidence base to support policy decisions. Participants also discussed innovative financing mechanisms and strategies to leverage the private sector and emphasized the necessity of interdisciplinary capacity building to support the scaling of NbS.

Anchored in these deliberations, the paper articulates a strategic roadmap for operationalising NbS in urban areas. It advocates institutional mainstreaming, inter-sectoral coordination, demonstrative pilot interventions, community co-production, and the mobilisation of diverse financial instruments. By consolidating insights from both policy and practice, this document seeks to inform and influence decision makers, guiding a transition toward urban futures that are not only climate-resilient and ecologically regenerative, but also reflective of local aspirations.

Attendees and contributors of roundtable discussion

- Former – National Mission for Clean Ganga
- Climate Policy Initiative (CPI)
- Coalition for Disaster Resilient Infrastructure (CDRI)
- Confederation of Indian Industry (CII)
- C40 Cities
- India Climate Collaborative (ICC)
- Indian Green Building Council (IGBC)
- International Union of Conservation of Nature (IUCN)
- GIZ- India (Deutsche Gesellschaft für Internationale Zusammenarbeit)
- National Institute of Urban Affairs (NIUA)
- Sehreeti Developmental Practices Foundation
- The Nature Conservancy (TNC)
- The World Bank Group
- UK Foreign, Commonwealth & Development Office (FCDO)
- Wetlands International
- World Wild Fund (WWF)

Background

Indian cities are increasingly facing the compounded effects of extreme weather, rapid urbanisation, and ecological degradation. The conversion of open, permeable land into hard, paved surfaces—exacerbated by shifting rainfall patterns and rising temperatures—has led to critical urban challenges such as loss of green cover and recreational open spaces, flooding, groundwater depletion, intensification of the Urban Heat Island (UHI) effect and the resultant increased energy demand for cooling. Traditional grey infrastructure has proven inadequate to manage these complex risks. NbS offer an integrated, cost-effective, and adaptive alternative that leverages natural systems—existing and induced—to enhance climate resilience, environmental quality, and public health outcomes. Globally, NbS could potentially contribute to meeting 37% of climate targets by 2030 (World Bank, 2022), underscoring their significance.

India's urban expansion has been rapid and ecologically disruptive. From 2005–06 to 2022–23, built-up area increased by 35%, at an average of 2.4% annually (Annual Land Use and Land Cover Atlas of India, NRSC). Urban population in India is projected to reach 600 million (40%) by 2030 (a 35.4% increase from 2021), generating significant demand for urbanisable land, real estate, and infrastructure.

What is urban NBS

Nature-based Solutions (NbS) are actions that conserve, restore, and manage natural or modified ecosystems to address challenges such as extreme weather, disaster risk, food and water security, and human health. NbS aim to enhance biodiversity and human well-being by working with nature, rather than against it, offering low-cost, low-risk, and sustainable alternatives to traditional infrastructure.

Urban NbS are a subset of these strategies, specifically designed to integrate natural processes into urban planning and design. They aim to harmonize the built environment with natural systems, offering sustainable alternatives or complements to conventional infrastructure.

Unlike traditional "grey" infrastructure (like concrete drains, flyovers, or floodwalls), urban NbS are rooted in landscape and ecology and designed to use natural systems to address urban challenges.

Typical urban NbS interventions

Typical urban NbS interventions include integrating softscapes of ecological value, within buildings and plots, within the public realm, and along natural land and water systems within cities. These include:

1. **Green roofs:** These are vegetated rooftop systems that improve insulation and reduce building heat-gain and manage and capture rainwater. Green roofs also provide microhabitats for birds and pollinators in dense urban settings.
2. **Rain gardens:** Shallow, vegetated basins designed within open spaces on-plot and off-plot to capture and filter runoff from impervious surfaces. They help recharge groundwater and reduce urban flooding by slowing and filtering stormwater.
3. **Permeable paving:** This involves using materials like porous concrete or interlocking grass pavers that allow rainwater to percolate into the ground. It helps reduce surface runoff and mitigate the urban heat island effect.
4. **Bio-swales:** Engineered landscape features that channel and treat stormwater through vegetation and soil layers. As an alternative to hard-lined drains, bio-swales prevent waterlogging and reduce the pollutant load entering urban water systems.

5. **Urban forests:** Creating urban forests involves planting and maintaining trees and foliage in public spaces to provide shade, improve air quality, and reduce urban temperatures. They improve biodiversity and support carbon sequestration while enhancing urban aesthetics.
6. **Miyawaki forests:** Dense, native mini-forests grown on small urban plots using a fast-growing plantation method (growth within 2–3 years). They enhance biodiversity, absorb carbon, and improve urban microclimates.
7. **Green corridors:** Continuous stretches of greenery, such as tree-lined streets or park-connectors, that allow for species movement, walking, cycling and recreational activities. They promote ecological connectivity and improve air quality.
8. **Riparian buffers:** Strips of vegetation planted along urban rivers or streams that protect waterways from erosion and pollution. They enhance aquatic ecosystems and provide a natural defense against flooding.
9. **Wetland restoration:** Rehabilitating degraded urban wetlands to restore their ecological functions. Urban wetlands support biodiversity, store floodwaters, and purify urban runoff.
10. **Sponge city features:** Design-elements that help absorb rainwater including features such as permeable pavements, retention ponds, and green infrastructure that absorb, store, and purify rainwater. They aim to prevent urban flooding and promote water conservation.

Learnings from case studies

Globally and in India, cities are demonstrating adoption of NbS at local, city-level and national scales through directly implementing projects, or operating national/regional scale frameworks.

Chennai—Sponge Cities Initiative by the Greater Chennai Corporation to prevent flooding in low-lying areas and support water conservation. Fifty-seven sponge parks are being developed with enhanced permeability to collect and store rainwater and recharge groundwater via mini ponds, trenches, and rainwater harvesting structures.

Delhi—Biodiversity Parks Initiative has established a network of seven biodiversity parks by remediating degraded landscapes using native flora and fauna, which has helped successfully reintegrate natural ecosystems into the urban fabric, improving ecological resilience and providing educational and recreational value for residents.

Singapore—ABC Waters Programme by Singapore's Public Utility Board replaced hard-lined stormwater drains nationwide with soft landscaped natural drains. Such large-scale transformation of urban drainage networks into multifunctional green-blue corridors demonstrates the potential for NbS to deliver both flood management and community recreational spaces in densely built environments.

Australia—Water Sensitive Urban Design is a land planning and engineering approach that integrates the urban water cycle with urban design to minimize environmental impact and improve urban quality of life. It is a framework that guides all built-environment related development in the country, including in government, private sector, or community projects. It is implemented through guidelines, standards, and codes.

India and urban NbS

As Indian cities face intensifying extreme weather, there is a growing recognition of the need to align urban development with ecological principles. In response, several national and state-level schemes are increasingly embedding NbS into their design and implementation frameworks. These efforts span across urban greening and stormwater management, coastal protection, waste treatment, and ecological restoration, and are supported by growing ecosystem of platforms, policies, and planning reforms. The following outlines key Indian government initiatives that are mainstreaming

NbS into the urban landscape, demonstrating the country's evolving commitment to climate-responsive, nature-positive urban development.

Key schemes integrating urban NbS

- **AMRUT:** AMRUT includes projects for urban greening, park development, water body rejuvenation, and increasing green cover, which are core NbS components to reduce urban heat and manage stormwater.

Under AMRUT 2.0, 2,429 park projects covering 5,044 acres have already been developed, and 1,729 more are approved, totalling investments of over ₹6,000 crore.

3,078 water body rejuvenation projects worth ₹6,159.29 crore aim to restore urban water bodies to improve urban cooling and groundwater recharge.

- **Swachh Bharat Mission:** While primarily focused on sanitation, SBM supports waste management and water-conservation efforts that complement NbS-like wastewater treatment and urban water cycle restoration.
- **Complementary Afforestation Fund Management and Planning Authority (CAMPA):** CAMPA funds are used for afforestation and forest restoration, including urban forestry projects that enhance green cover in cities. The Nagar Van Yojana aims to develop 400 urban forests and 200 city gardens across India by 2024-25, with a budget of ₹895 crore under CAMPA.
- **Indian Forum for Nature-based Solutions:** The country's first NbS consortium promotes awareness, policy integration, and scaling of NbS across Indian cities by connecting government, academia, civil society and private sector.
- **City-scale solutions:**
  Heat mapping and planning integration: Chennai has integrated UHI assessments into its Master Plan 2026–46, promoting sustainable cooling through green and blue infrastructure.
- **Cool roofs and urban cooling plans:** Cities like Rajkot are pioneering reflective roof materials, while Bangalore has demonstrated energy savings of 1,642 MWh/sq. m/year, translating into ₹10,348 million in annual savings through white roof implementation.

Indian cities like **Chennai, Delhi, Mumbai, and Bangalore** are experimenting with NbS models such as sponge cities, biodiversity parks, and Miyawaki **forests. However, a city-wide, policy-driven, and well-financed approach is what is needed to move beyond isolated projects toward integrated resilience planning.**

Challenges and barriers to urban NbS adoption and scale-up in India

Despite the growing recognition of NbS as an effective, low-cost strategy for enhancing urban resilience and ecological sustainability, their widespread adoption in Indian cities remain limited. While several national missions and local initiatives have begun to incorporate NbS into urban development, these efforts often remain fragmented and small in scale. Implementing NbS in complex urban environments presents a range of structural, institutional, financial, and socio-cultural challenges.

1. Limited policy and regulatory support

- NbS is not yet systematically embedded in key planning frameworks like in the URDPFI guidelines or Model Building Byelaws.

2. Technical and capacity deficit

- Municipal engineers and planners are often trained in conventional engineering solutions and lack the technical expertise to plan and implement ecosystem-based approaches.
- Absence of standardised guidelines for design, quantification, estimation, construction, and maintenance of NbS makes it difficult to institutionalise best practices.

- Integrated capacity within the industry to undertake NbS projects, (which lie at the cusp of civil engineering, hydrology, and landscape design) limits the number of implementation players.

3. Fragmented urban governance

- Lack of coordination between multiple departments (e.g. planning, water, PwD, housing etc.) results in siloed planning and missed opportunities for cross-sectoral integration of NbS.
- Weak institutional mandates for NbS in urban planning documents and regulations mean that ecological considerations are often secondary or absent.

4. Financial constraints

- Inadequate funding is a persistent barrier, with most municipal budgets prioritizing grey infrastructure over green alternatives
- Lack of access to innovative finance such as green bonds, climate funds or PPP limits the scalability of NbS.
- Difficulty in quantifying returns and benefits lowers investment attractiveness.

5. Weak data and monitoring systems

- Most cities lack baseline ecological and climate data needed to plan context-specific NbS interventions (e.g., urban heat maps, water flow data).
- There is limited capacity of monitoring and evaluation, which hampers the ability to measure effectiveness and adaptively manage NbS.

6. Perception barriers

- NbS is often seen as a soft or aesthetic intervention, lacking the perceived strength or reliability of grey infrastructure.
- Public and political support can be limited due to low awareness of ecological benefits or misperceptions about maintenance and costs.

"The world is looking for durable and effective options to tackle global challenges such as food and water security, and now, economic recovery from the global pandemic. To this end, the new IUCN Global Standard for Nature-based Solutions is ideally placed to harness and accelerate the sustainable use of nature."

— Stewart Maginnis,
IUCN Global Director for the Nature-based Solutions Group

Takeaways from the roundtable

The roundtable discussion convened a diverse assembly of stakeholders, encompassing policymakers, governmental advisors, implementation agencies, and think tanks, to deliberate upon the key challenges and potential resolutions pertaining to the mainstreaming of urban NbS.

The roundtable focused on deliberations around four key questions around integrating urban NBS in cities across policy and regulatory framework reforms, capacity building, financing strategy, and behavioural change and awareness.

The key insights derived from this forum are given as follows:

Learnings from the roundtable

- **Establishing clear definitions:** Despite the widely used definition of NbS given by IUCN, the concurrent use of varied terminologies, such as "ecosystem-based solutions" and "green solutions," which may constitute NbS, causes a lack of comprehensive understanding among institutional stakeholders
- **Promoting NbS in governance:** The disinterest of municipal bodies to adopt NbS projects is primarily attributable to a lack of awareness and knowledge among relevant municipal stakeholders, and the absence of mandatory directives or incentives for municipal engineers to adopt innovative NbS interventions. Furthermore, sometimes, NbS are not looked upon as engineering solutions, which often necessitates adherence to established schedules of rates, for which adequate provisions are currently lacking. This frequently limits the capacity of municipalities to sanction or approve NbS projects, thereby inadvertently promoting conventional, readily implementable engineering alternatives.
- **Institutionalizing NbS implementation:** The successful mainstreaming of NbS at the municipal scale is frequently contingent upon the support of senior-level officials possessing the requisite political will and backing. To go beyond the limitations of individual-driven initiatives, a transition towards an institutionalized approach, integrating NbS across policy frameworks, operational processes, and established practices, is deemed crucial. This can be facilitated through mechanisms such as climate budgeting and the explicit mandate for engineers and planners to incorporate green solutions into urban development plans and projects.
- **Securing municipal buy-In for NbS implementation:** To secure buy-in from municipal institutions, which are often result-oriented and have other socio-economic priorities, it is crucial to demonstrate the effectiveness of NbS through pilot projects. These pilots should be supported by impact-oriented, evidence-backed data and successful case studies that clearly show the tangible benefits of NbS. Demonstrating how these solutions can directly impact the municipality, improve resilience, and meet broader development goals will be key to gaining the necessary support for their wider implementation.
- **Enhancing financial sustainability for NbS:** The deliberations underscored the significant dependence on governmental grants and developmental funding agencies for the implementation of urban NbS. This reliance stems from the limited short-term financial returns associated with NbS and the capital-intensive nature of certain urban solutions, that limits private sector financing.
- **Innovative financing for urban NbS:** Currently, NbS implemented by the private sector are often perceived primarily as aesthetic enhancements for urban greening, rather than as long-term, sustainable solutions for addressing urban environmental challenges. While it does act as a

facilitator to promote NbS, going beyond the "2%" share by private sector is important to implement solutions at scale. However, it was also agreed upon in the discussion that NbS being at a nascent stage may be highly dependent on public/grant-based financing as there is no immediate profit yield.

- **Scaling up NbS for lasting impact:** Urban challenges frequently exhibit micro-climatic specificities, necessitating a spectrum of tailored interventions. The impact of implementing NbS in urban environments to address issues such as cooling, the mitigation of urban heat island effects, the reduction of energy consumption for cooling purposes, and the softening or greening of urban surfaces is typically observed in the long-term, as natural systems take time to evolve. Hence, a small-scale intervention, although beneficial, may not have an impact at the city scale.
- **Catalysing private investment in NbS:** Currently, private sector involvement in urban NbS is often perceived as an "ornamental" contribution to urban greening rather than a long-term sustainable solution. Moreover, private sector financing is largely confined to the corporate social responsibility (CSR) initiatives of major corporations. While CSR plays a facilitative role, scaling up NbS implementation necessitates mechanisms that encourage private sector contributions beyond the current "2% share." The sustainable finance taxonomy by government of India, currently under preparation may provide the required "push" for private sector financing in the sector.
- **Accelerating impact with proven solutions:** The deliberations also highlighted the potential for leveraging existing, successful NbS interventions implemented across the country to achieve rapid and tangible outcomes. Furthermore, existing governmental schemes, such as Namami Gange, AMRUT, Nagarvan Yojana, and climate budgeting and action plans that promote NbS, represent valuable resources that can be effectively utilized and adopted at scale.
- **Greening of private built infrastructure:** Given that a substantial proportion of urban land is characterized by privately owned built developments, including buildings, paved surfaces, roads, and essential services, the discussion advocated for the implementation of more stringent regulations to promote "green buildings" that extend beyond mere rating systems. Cities should consider adopting comprehensive "green" development control regulatory frameworks and mandating specific greening practices to effectively mitigate the urban heat island effect within their jurisdictions.
- **Establishing a NbS-specific database:** A comprehensive database is essential for planning, implementing, and monitoring NbS in urban areas. It should include geospatial data to identify key locations, such as heat islands, flood-prone zones, and vulnerable areas, along with environmental data (e.g., air quality, temperature, water quality) to determine which NbS are most needed. Social and demographic data will help prioritize interventions in at-risk communities, while infrastructure data will guide integration of NbS into both public spaces and private developments. This database will enable cities to make informed, data-driven decisions, prioritize high-impact interventions, and ensure effective resource allocation for long-term urban resilience.

An action agenda for mainstreaming urban NbS solutions in India

Mainstreaming NbS in Indian cities requires a coordinated, multi-stakeholder approach that aligns short-term actions with long-term systemic changes. Given the complex, cross-sectoral nature of NbS, successful implementation hinges on collaboration between key stakeholders, including the Ministry of Housing and Urban Affairs (MoHUA), Ministry of

Environment, Forest and Climate Change (MoEFCC), state urban departments, Urban Local Bodies (ULBs), development finance institutions (DFIs), private sector actors, academic institutions, and civil society organizations. Local communities, particularly those vulnerable to climate impacts, must also be central to both planning and implementation processes.

Key stakeholders and their roles in mainstreaming urban NbS in India

1. **Central government ministries**

- **Ministry of Housing and Urban Affairs (MoHUA)**
  - Lead integration of NbS into national urban missions (AMRUT, Smart Cities, SBM, PMAY).
  - Issue guidelines, model by-laws, and coordinate inter-ministerial convergence.
- **Ministry of Environment, Forest and Climate Change (MoEFCC)**
  - Provide technical expertise on ecosystem-based approaches.
  - Align NbS with biodiversity, forest, and wetland conservation efforts.
- **Ministry of Jal Shakti, Ministry of Rural Development, Ministry of Power**
  - Enable cross-sectoral linkages (e.g., water-sensitive design, energy-efficient landscapes).
- **NITI Aayog**
  - Integrate NbS into national planning frameworks and sustainability indicators.

2. **State governments and urban development departments**

  - Develop, adapt and enforce state-level urban policies based on national guidelines and regional master plans integrating NbS, including make provisions of NbS in the procurement processes.
  - Facilitate coordination between ULBs, parastatals (e.g., development authorities, housing boards), and departments (forests, PWD, irrigation).
  - Allocate state budget lines for urban resilience and green infrastructure.

3. **Urban Local Bodies (ULBs)**

- Identify, plan, and implement city-level NbS projects (e.g., urban forests, bio-swales, sponge parks).
- Integrate NbS into DPRs, RFPs, and local development control regulations (DCRs).
- Engage communities and monitor outcomes through local data systems.

4. **Development Finance Institutions (DFIs) and financial sector**

- Support development of innovative finance mechanisms (e.g., green bonds, climate-linked loans).
- Provide concessional funding, blended finance, or risk-pooling instruments.
- Assist in building municipal finance capacity for long-term NbS budgeting.

5. **Private sector and real estate developers**

- Invest in NbS-aligned infrastructure and green-certified real estate.
- Adopt NbS in compliance with planning regulations and ESG targets.
- Partner in Public-Private Partnerships (PPPs) and demonstration projects.

6. **Academic and research institutions**

- Generate localized climate and ecosystem data for urban NbS planning.
- Support innovation in materials, monitoring, and modelling (e.g., urban cooling simulations).
- Build capacity through curriculum reform and targeted training programs.

7. Civil society and non-governmental organizations (NGOs)

- Mobilize community participation and promote co-creation of NbS.
- Serve as watchdogs for equitable and inclusive implementation.
- Document and disseminate best practices and case studies.

8. Community groups and citizens

- Act as stewards and co-implementers of local NbS (e.g., maintaining urban gardens or ponds).
- Provide feedback and local knowledge for adaptive management.
- Benefit directly from improved resilience, health, and quality of life.

This section outlines a strategic framework for integrating NbS into India's urban development paradigm, divided into immediate short-term actions that enable quick wins and long-term strategies that embed resilience into urban systems at scale.

Short-term actions

1. Climate-related data baselining

- Develop a nationally recognized methodology to conduct city/regional assessments.
- Conduct natural asset mapping, urban heat island assessments, flood risk profiling, and ecosystem inventories to identify NbS entry points for cities/regions.
- Develop city-specific environmental performance indicators linked to NbS outcomes.

2. Convergence with existing schemes

- Align NbS interventions with schemes like NMCG, CAMPA, PMAY, Jal Jeevan Mission, and Swachh Bharat Mission.
- Revise scheme guidelines to explicitly allow NbS components and outcomes, which allows for ready adoption and access to immediate funding to these efforts.

3. Financing framework development

- Integrate NbS components into municipal budgeting processes and climate budgeting tools.
- Identify and earmark funding within existing missions (AMRUT, SBM, Smart Cities) for NbS implementation.
- Initiate pilot applications of green bonds or climate-linked loans at the city level, as best practices, which could be scaled-up for wider adoption.
- Local government to earmark budget for funding NbS projects.
- Leveraging CSR funding and/or multilateral funding to scale-up large scale NbS projects.

4. Coordination with MOHUA and city departments

- Establish an NbS task force under MOHUA involving state urban departments, municipal bodies, and key central ministries (e.g. MoEFCC).
- Appoint NbS focal points in Urban Local Bodies (ULBs) to coordinate planning and reporting.

5. Capacity building and training

- Launch short-term training programs for municipal engineers, planners and administrators.
- Develop toolkits for preparing climate-sensitive DPRs and RFPs incorporating NbS principles.

6. Demonstration projects

- Implement high-visibility NbS pilots (e.g., sponge parks, urban forests, bio-swales) in selected cities to demonstrate feasibility.
- Document case studies and generate evidence for replication and policy feedback.

7. Communication and awareness campaigns

- Develop outreach materials tailored to different stakeholders (citizens, developers, officials) to promote NbS awareness.
- Use visual communication, public exhibitions, and local champions to build support.

Long-term strategies

1. Policy and regulatory integration

- Embed NbS in master plans, DCRs, environmental regulations, and building bylaws.
- Institutionalized NbS standards, design guidelines, and codified engineering codes for ULB use.

2. Institutionalization of NbS

- Establish a national NbS Centre of Excellence or Urban Ecology Mission to guide implementation and innovation.
- Create-state and city-level institutional frameworks with defined roles, responsibilities, and reporting structures.

3. Sustainable finance mechanism

- Develop a national taxonomy and certification system for NbS to unlock private and institutional finance.
- Set up NbS-specific funds and risk-pooling instruments to support long-term scaling.
- Institutionalize blended finance and insurance-based mechanisms (e.g., mangrove or coral reef insurance).

4. Mainstreaming in education and professional training

- Revise academic curricula of planning, architecture, and engineering programs to include NbS and ecosystem-based planning.
- Promote research and innovation in climate-resilient infrastructure and nature-positive urbanism.

5. Private sector and community partnerships

- Offer incentives for private investment (e.g., tax breaks, FAR bonuses, recognition schemes) in urban NBS.
- Institutionalize community stewardship models for local NbS governance especially in informal and vulnerable areas.

6. Integrated monitoring and evaluation systems

- Develop digital platforms and GIS based dashboards to monitor NbS implementation and impact.
- Establish frameworks for adaptive management using real-time data and community feedback.

ICF in action:

ICF is one of the leading consultants with more than 30 years of experience working collaboratively with national, regional, and local governments and private sector clients to plan, design, implement, and monitor ecological restoration projects in environments ranging from coastal wetlands and estuaries to freshwater river systems and grassland, scrub, and woodland habitats. ICF develops solutions in light of the social contexts and the people whose behaviour affects the resources.

- ICF supported Rajkot Municipal Corporation in a feasibility study for NbS in Rajkot, a city facing issues such as urban flooding and the urban heat island effect.
- ICF is currently working with Natural England on a £12.5m Shared Outcome Funded pilot to test approaches to creating and restoring natural habitats in ways that tackle the twin challenges of extreme weather and biodiversity loss, while also exploring governance models and blended finance approaches.
- ICF developed relevant guidelines such as Nature-based Solutions for Coastal Highway Resilience (2019) and the Sector Environmental Guidelines (SEGs) for Biodiversity Conservation, Agriculture, Infrastructure, and Healthcare Programming for USAID, providing practical guidance on how to design and implement NbS in various contexts.
- Over the last five years, ICF led 18 tropical biodiversity and forest analyses focused on identifying biodiversity co-benefits, including identifying opportunities to integrate NbS benefits across USAID technical sectors.

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