

Nature-Based Cooling for Cities: Regional Reflections and the Road to Abu Dhabi

Overview

The International Union for Conservation of Nature (IUCN), the All India Disaster Mitigation Institute (AIDMI), and the CSIR-National Environmental Engineering Research Institute (NEERI) jointly organised a Roundtable on “Nature-Based Cooling Solutions for Cities” on Monday, September 8, 2025.

Held in the lead-up to the **IUCN World Conservation Congress 2025, Abu Dhabi**, this high-level event brought together **120 participants** from 11 countries—including policymakers, scientists, development partners, civil society members, and youth leaders—to explore how **Nature-Based Solutions (NbS)** can address growing threat of **urban heat risks** in South Asian cities.

Moderated by **Mr. Vishal Pathak (AIDMI)**, the session facilitated dialogue across practice, policy, and research. It also marked the launch of *Southasiadisasters.net* **Issue #224**, “*Nature-Based Cooling Solutions for Cities*”, co-edited by **Dr. Prajna Paramita Panda** and **Mr. Mihir R. Bhatt**, the first-ever such collaborative efforts by 17 contributing authors.

Highlights for Action

1. **Dr. Prajna Paramita Panda, IUCN SSC AsESG**, advocated for **integrated NbS corridors**, not isolated green projects, and emphasised linking biodiversity, livelihoods, and public health. *“NbS are not just green patches in grey cities—they are a bridge between people and ecosystems. If done right, they restore trust in both nature and governance.”*
2. **Mr. Khaled Marafi, IUCN Regional Council Candidate, West Asia**, highlighted **dryland NbS solutions** such as drought-tolerant trees and community-based afforestation initiatives—as models for building climate resilience in heat-prone urban arid areas worldwide. *“Drylands like Jordan have shown that water-scarce cities can still be climate-resilient—if they work with nature, not against it.”*
3. **Dr. Shalini Dhyani, CSIR-NEERI, India**, presented evidence from Indian cities demonstrating how **urban forests and wetlands** regulate microclimates and the need to scale such nature-based solutions in response to citizen demand. *“Green spaces are not luxuries—they are survival infrastructure. In Nagpur, forest patches are 3°C cooler than the city around them.”*
4. **Mr. Raja Asvanon, SEI, Thailand**, emphasised the importance of **urban climate zoning and pro-poor design** through green infrastructure and detailed mapping of heat-vulnerable populations. *“We must shift from reactive heat responses to anticipatory urban design. Cooling needs to be planned, not patched.”*

Top Five Drivers

What is pushing the uptake of Nature-Based Cooling Solutions (NbS) in cities:

1. **Escalating Urban Heat Risk:** Increasing frequency and severity of heatwaves, with deadly impacts in South Asian cities.
2. **Public Health and Livelihood Concerns:** Rising heat-related illnesses and income loss, particularly affecting informal workers and vulnerable urban populations.
3. **Policy Momentum:** Strong alignment with India’s Cooling Action Plan, Smart Cities Mission, and SDG targets.
4. **Evidence of Effectiveness:** Growing scientific and community-based evidence demonstrating that NbS can lower temperatures by 2–10°C.
5. **Community Demand for Livable Cities:** Increasing civic engagement and youth advocacy driving the call for greener, cooler urban spaces.

Top Five Enablers

What is helping to make NbS implementation possible or scalable:

1. **Cross-Sectoral Collaboration:** Effective coordination among urban planning, health, water, and environment sectors.

2. **Local Knowledge and Traditional Practices:** Integration of heritage cooling techniques (e.g., stepwells, courtyards, native trees).
3. **Pilot Demonstrations:** Field-tested NbS pilots in cities like Nagpur, Lucknow, Panaji, and Cochin.
4. **Digital Tools and Heat Maps:** Use of geospatial data to identify and prioritise vulnerable zones for NbS interventions.
5. **Global and Regional Partnerships:** Collaborative efforts among IUCN, AIDMI, IIED, SEI, and local governments to co-create solutions and share knowledge.

Top Five Limitations

What's currently holding back wider adoption of NbS in cities:

1. **Fragmented Urban Governance:** Lack of coordination across departments and silos in planning.
2. **Insufficient Financing Mechanisms:** Scarcity of dedicated funds or incentives to support NbS at the city level.
3. **Unequal Access and Green Gentrification:** Risk of NbS benefiting wealthier zones unless designed with equity.
4. **Limited Awareness Among Urban Decision-Makers:** NbS often perceived as ornamental, rather than essential infrastructure.
5. **Weak Monitoring and Evaluation Frameworks:** Lack of robust indicators to measure NbS effectiveness and impact.

Concluding Remarks and Way Ahead

“Let us make our cities cooler—not only in temperature, but in how we care, share, and plan together.”

Mr. Mihir R. Bhatt, AIDMI, India, shared six actionable priorities:

1. **Localise NbS** through community-led pilots and micro-planning.
2. **Advance equity**, ensuring urban cooling reaches the most vulnerable first.
3. **Unlock finance** using blended models and public-private-community partnerships.
4. **Institutionalise NbS** in master plans, zoning codes, and DRR frameworks.
5. **Track impact** with citizen science and participatory monitoring.
6. **Form a South Asia Nature-Based Cooling Network** for ongoing collaboration.

Key Takeaways to Abu Dhabi

1. **NbS must be treated as core infrastructure**, on par with roads or water systems.
2. **Cooling is climate justice**—solutions must reach those with the least access to relief.
3. **Dryland and heritage-based models** offer culturally grounded pathways.
4. **Youth, women, and informal workers** are essential to both design and delivery.
5. **Cross-sectoral integration** is key—from urban planning to health and housing.

Next Steps

1. **Feed key insights into the IUCN World Conservation Congress 2025** in Abu Dhabi.
2. **Disseminate Issue No. 224** to municipalities, planning commissions, and global donors of city projects.
3. **Launch a South Asia Network on Nature-Based Cooling**, convened by AIDMI, IUCN, and CSIR-NEERI.
4. **Support pilots in 5–7 high-heat cities** across India, Bangladesh, or Nepal.
5. **Organise a follow-up roundtable in early 2026**, focusing on financing, tracking, and scaling NbS.

Mr. Mihir R. Bhatt closed with a call to **treat shade, water, and greenery as public rights**—not discretionary add-ons. *“This is not about planting more trees. It’s about cities restoring nature urgently.”*

As moderator, Mr. Vishal Pathak steered the session toward **community ownership, local innovations, and inclusive governance**, linking AIDMI’s field experience with the global discourse on NbS. *“Nature-based solutions must serve the most heat-exposed and climate-vulnerable groups first. From homeless to schoolchildren, equity in cooling must be non-negotiable.”*

More discussions and actions are being planned. Be in touch at www.aidmi.org.