

## Chapter

# Rooted Narratives: Environmental Humanities and the Cultural Imagination of Urban Greening

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## Abstract

Urban greening and reforestation are increasingly recognized as essential strategies to combat climate change, mitigate urban heat islands, and restore ecological balance in cities. Yet, beyond their technical and ecological value, green spaces also embody cultural, symbolic, and emotional dimensions that shape how communities relate to their urban landscapes. This chapter explores the intersection of ecology and culture, framing urban greening initiatives as cultural landscapes that carry memory, meaning, and identity. Drawing from the Environmental Humanities, the chapter examines how trees, parks, and reforested sites function not only as ecological infrastructures but also as carriers of collective narratives and social values. Through selected case studies – including post-industrial reforestation projects, memorial parks, and community-led greening initiatives – the chapter highlights how literature, public art, and participatory design enrich the perception of urban nature. Special attention is given to the challenges of environmental justice, addressing how urban greening can either foster inclusion or contribute to phenomena such as green gentrification. By integrating storytelling, esthetics, and cultural memory with ecological planning, the chapter argues that “planting a tree also means planting an idea.” Urban reforestation is therefore presented not just as an environmental intervention but as a cultural and political gesture – one capable of fostering resilience, civic pride, and a sense of belonging, while supporting sustainable and inclusive urban development.

**Keywords:** urban greening, reforestation, cultural landscapes, Environmental Humanities, urban resilience, green gentrification

## 1. Introduction

As global urban populations continue to expand and the impacts of climate change intensify, cities face mounting pressure to implement sustainable and adaptive strategies. Urban greening – through tree planting, reforestation corridors, park creation, pocket gardens, and vertical greenery – emerges not only as ecological infrastructure but also as vital to public health, air quality, climate cooling, biodiversity, and psychological wellbeing.

Yet, while scientific and technical approaches to urban greening rightly emphasize quantifiable metrics – carbon sequestration, pollution reduction, thermal modulation – they risk reducing urban nature to passive infrastructure. Such framings overlook the cultural, symbolic, and affective layers embedded within trees and landscapes. Trees serve as living archives – markers of memory, civic symbols, memorial anchors, and identities shaped by literary, ethical, and social narratives.

This chapter reframes urban trees through the lens of the Environmental Humanities (EH). By foregrounding the symbolic, affective, and narrative dimensions of greening efforts, it shifts the focus beyond functional design to ask: *How do cultural narratives, memory, and identity shape – and are shaped by – urban reforestation?* Using insights from environmental history, cultural geography, critical heritage studies, and literary ecocriticism, it conceptualizes trees as narrative agents embedded in lived geographies.

The central research question guiding this chapter is:

*In what ways can the EH deepen our understanding of urban reforestation by uncovering its cultural, symbolic, and narrative dimensions, thereby complementing conventional ecological and infrastructural approaches?*

To address this question, the chapter:

- Examines key theoretical perspectives on the cultural significance of urban nature;
- Explores case studies in which trees and green spaces act as symbolic, emotional, and social agents – ranging from memorial plantings to contested tree removals and community-led stewardship initiatives;
- Considers the implications of these cultural readings for urban planning, environmental justice, and participatory governance.

Our argument is that urban trees should be seen not merely as static elements of green infrastructure but as active nodes in living, narrative ecosystems – entities that shape collective memory, identity, and place-based imaginaries. Recognizing this narrative dimension allows for more integrated approaches to urban greening, where quantitative ecological metrics are complemented by qualitative cultural insights, leading to policies and designs that are both environmentally robust and socially meaningful.

By taking this approach, the chapter contributes to interdisciplinary debates linking urban ecology, heritage studies, environmental policy, and cultural geography, advocating for a form of urban greening that is resilient, inclusive, and culturally resonant while supporting climate adaptation and sustainable development.

## **2. Theoretical framework: Environmental Humanities and urban nature**

In the past two decades, the EH have emerged as a critical interdisciplinary response to the limitations of technocratic and resource-driven approaches to ecological challenges. Rooted in fields such as cultural geography, environmental history, literary studies, anthropology, and philosophy, EH posits that today's environmental crises are not only technical or scientific problems but also deeply

cultural and narrative ones [1–3]. The stories we tell – or fail to tell – about nature shape the policies we implement and the futures we imagine.

As scholars like Rob Nixon [4], Donna Haraway [5], and Anna Tsing [6] argue, ecological relationships are as much symbolic and affective as they are functional. The concept of “storied matter” [2] encapsulates this perspective, suggesting that landscapes, plants, and other non-human entities act as narrative agents, capable of embodying histories, memories, and values. An urban tree, for example, is not merely an ecological asset – filtering air or providing shade – but can also serve as a living monument, marking sites of protest, collective memory, or community identity.

One of EH’s key contributions to urban sustainability discourse is its attention to affective ecologies – the emotional and embodied relationships individuals and communities form with their environments [7]. These affective bonds, shaped by practices of care, remembrance, and even grief, often elude conventional policy metrics or cost-benefit analyses. The felling of a neighborhood tree may thus represent not only the loss of an ecosystem service but also a rupture in cultural continuity and a trigger for civic activism [8, 9].

EH also challenges anthropocentric paradigms of urban design by advancing frameworks like multispecies urbanism [10, 11], which foreground the co-agency of humans, plants, and other species in shaping urban life. Cities are not static human constructs but hybrid ecologies, where street trees, pollinators, fungi, and even invasive species participate in the making of everyday spaces. This perspective aligns with recent critiques of the “infrastructural” paradigm of urban greening [12], which tends to reduce urban nature to measurable functions while neglecting its cultural, historical, and narrative dimensions.

Closely related is the growing recognition of cultural ecosystem services (CES) – the non-material benefits derived from nature, such as esthetic pleasure, spiritual value, and a sense of place [13, 14]. While CES frameworks highlight these intangible dimensions, they often lack the methodological tools to fully explore them. EH fills this gap by employing narrative analysis, ethnography, and historical inquiry to uncover the symbolic grammars embedded in landscapes. For example, memorial trees, sacred groves, or community gardens do not merely serve ecological functions but also act as carriers of memory, identity, and social cohesion [15–17].

Consider the case of a reforested brownfield: From a planning perspective, its success might be measured through biodiversity metrics or the remediation of contaminated soil. Yet an EH approach asks different questions: Does the new forest acknowledge the site’s industrial past? Were local communities engaged in its design, perhaps to honor the memories of labor or migration? Does the new planting narrative connect ecological regeneration with cultural storytelling? Far from opposing technical solutions, EH enriches them, ensuring that urban greening projects are not only sustainable but also socially and symbolically resonant.

Ultimately, EH encourages us to view the city as a palimpsest – a living manuscript of overlapping histories, ecologies, and narratives. Urban trees, in this view, are inscriptions that carry collective memories: A linden avenue commemorating historic events, a fig sprouting from a ruin, or a grove planted after a wildfire. These layers of meaning resist standard ecological accounting but are vital to a city’s identity and emotional geography.

By reframing urban greening as both an ecological and cultural practice, EH challenges planners, policymakers, and scholars to ask not only *what* we plant but *why, how, and with what stories*. In this way, urban reforestation becomes not just an environmental intervention but a narrative act – a process of weaving together memory, identity, and ecological care. This approach opens pathways for more inclusive and participatory forms of urban governance, where sustainable futures are measured not only by ecological resilience but also by the cultural narratives they sustain.

### **3. Case studies and comparative insights: Transformative urban greening**

If we accept that urban nature is not merely ecological infrastructure but also a cultural and narrative phenomenon, we must turn to the spaces where these entanglements become most visible. In cities shaped by crisis, transformation, and informal resilience, greening initiatives often transcend their ecological function, becoming sites of cultural negotiation, affective labor, and symbolic reparation. Urban greening in these contexts is not just about mitigating climate impacts or enhancing biodiversity; it is about rewriting the story of the city itself – turning sites of abandonment, trauma, or neglect into living archives of resilience and collective memory.

This section presents three emblematic case studies, selected for their ability to illuminate what we define as *transformative urban greening*: Practices in which tree planting, community gardening, and urban reforestation operate as acts of memory work, social healing, and place-making. Each case study is drawn from a different geographical and historical context – post-industrial Europe, commemorative landscapes in the United States and Germany, and grassroots initiatives in rapidly urbanizing cities of the Global South. Despite these differences, all cases reveal a convergence of ecological function and cultural meaning.

#### **Methodological approach**

The following analysis synthesizes insights from secondary literature, policy and planning documents, and qualitative sources (including interviews, site reports, and artistic representations). Rather than striving for exhaustive coverage, each case was chosen for its illustrative power – demonstrating how cultural, ecological, and affective dimensions of urban greening intersect in distinct but resonant ways.

To ensure a coherent comparative perspective, each case is examined through a triadic interpretive lens grounded in EH:

- **Memory:** How do greening practices engage with local histories, trauma, or cultural memory?
- **Participation:** Who initiates and sustains these projects? What forms of collective agency or grassroots involvement are present?
- **Justice:** How do these efforts address issues of inequality, socio-spatial exclusion, or ecological injustice?

This framework allows us to understand urban greening as a *platform for narrative reconstruction* – a means of reshaping both urban ecosystems and the social stories attached to them.

### **3.1 Post-industrial reforestation: Ruhrgebiet, Germany**

The Ruhr region in Germany is widely recognized as a pioneering model of post-industrial landscape transformation, where abandoned steel and coal infrastructures have been repurposed into ecological parks and cultural heritage sites [18]. Through large-scale initiatives such as the Internationale Bauausstellung (IBA) Emscher Park (1989–1999), a network of linear forests, green corridors, and rewilded industrial ruins was established to regenerate both ecology and local identity [19, 20]. One of the most celebrated sites, Landschaftspark Duisburg-Nord, blends reforestation with industrial archeology, allowing birches, poplars, and wild grasses to reclaim former blast furnaces and rail tracks. Rather than erasing industrial traces, the design by Peter Latz integrates them as a narrative framework, creating a hybrid space where ecological resilience coexists with cultural memory [21–23]. Public participation, cultural events, and heritage tourism play a central role in sustaining the park as a living archive of the Ruhr’s industrial past.

### **3.2 Urban memory parks: 9/11 memorial grove and Tempelhofer Feld**

Urban greening can also act as a living memorial. The 9/11 Memorial Grove in New York City, designed by Peter Walker and Michael Arad, features rows of white oak trees as symbols of endurance and renewal. Their seasonal rhythms – blossoming, shedding leaves, and renewal – mirror the emotional cycles of grief and remembrance [24]. The grove is not simply decorative but a ritualized space of collective memory, where trees function as silent witnesses to tragedy and recovery.

Similarly, Tempelhofer Feld in Berlin, a former Nazi-era airport and Cold War site, was reimagined as a vast public park after 2008. It now features meadows, community gardens, and temporary art installations that reflect both the site’s complex history and its contemporary role as a democratic, open landscape [25]. Here, greening and cultural memory intersect, with grassroots groups using gardens to create narratives of reconciliation, inclusivity, and civic pride.

Both examples highlight how urban trees and green spaces can mediate between past trauma and future aspirations. Rather than monumentalizing memory through static stone, these landscapes use living materials – trees, grasses, flowers – as dynamic memorials that encourage reflection, dialogue, and resilience.

### **3.3 Community-led greening in rapidly urbanizing cities**

In rapidly urbanizing regions, urban greening often emerges through bottom-up, community-driven efforts, particularly where public resources are limited. In Medellín, Colombia, the “Green Corridors” (*Corredores Verdes*) initiative has transformed degraded urban zones into micro-forests, shaded pedestrian paths, and biodiversity hotspots. This project, widely recognized for reducing local urban heat islands, relies on community participation, social education, and local stewardship, turning greening into a tool for social inclusion and environmental justice [26–28].

In Metro Manila (Philippines), grassroots organizations have mobilized to plant trees along flood-prone rivers, creating community food gardens, medicinal plant areas, and protective green belts [29]. These efforts combine disaster mitigation with cultural storytelling, where trees are often planted during local ceremonies, embedding them into the collective narrative of resilience [30]. Such initiatives underscore the role of local ecological knowledge and collective action in shaping sustainable urban futures.

These initiatives are deeply participatory and narrative-driven: Residents are not passive beneficiaries but co-authors of the landscape, embedding local stories, traditions, and ecological knowledge into the urban fabric [31]. By intertwining ecological function with cultural expression, these projects foster social cohesion and environmental justice, particularly in marginalized neighborhoods often excluded from formal planning [32].

Across these examples, urban greening becomes transformative when ecological functionality is intertwined with cultural meaning [33]. The Ruhrgebiet demonstrates how industrial ruins can evolve into ecological memorials [34]; the 9/11 Memorial Grove and Tempelhofer Feld illustrate how trees can narrate collective trauma and healing [35]; while Medellín and Manila highlight community co-authorship of green spaces as tools of empowerment and justice [36]. By viewing these initiatives through the lens of EH, we recognize that trees and parks are not neutral infrastructure but agents of narrative, identity, and affective connection. This perspective urges urban planners to integrate ecological goals with cultural and social dimensions, ensuring that reforestation strategies are both resilient and meaningfully rooted in local narratives.

#### **4. Storytelling, public art, and participatory design: Greening as cultural infrastructure**

Urban greening becomes truly transformative when it transcends the boundaries of ecological intervention and urban policy, emerging instead as a shared cultural narrative. As the preceding case studies illustrate, trees and green spaces are not passive elements of urban infrastructure; they acquire meaning, memory, and symbolic weight through stories, images, rituals, and participatory practices [37, 38, 39]. These mediating forms – literature, public art, and co-design – act as “cultural infrastructures” [40], making the ecological both visible and emotionally resonant.

Contemporary ecocritical literature frequently casts trees and green spaces as protagonists, reinscribing them with agency and symbolic presence [41]. Works such as *The Overstory* [42] or Hope Jahren’s *Lab Girl* [43] invite readers to perceive trees as active witnesses and kin – echoing the EH’s emphasis on “storied matter” [2]. These narratives do not merely describe urban greening; they shape its public perception by framing tree-planting as acts of protest, care, or cultural memory.

Even classical allegories, like Italo Calvino’s *Il barone rampante* [44], offer enduring metaphors of arboreal life as an alternative form of citizenship and spatial negotiation – an interpretive lens echoed in Mediterranean contexts such as Naples, where spontaneous greening and balcony gardens reflect vernacular ecological practices [45]. Literature thus functions as a cognitive and affective scaffold, enabling individuals and communities to “read” urban trees as living texts that weave together history, myth, and future aspirations.

Artistic interventions – murals, sculptures, eco-art, and performative installations – operate as a visual and spatial language that communicates the invisible work of urban ecologies [46, 47]. In places like Medellín, where hillside reforestations intersect with histories of violence and social repair, murals often depict trees as guardians, mothers, or storytellers, transforming green spaces into narrative landscapes of healing and resilience [48]. Similarly, the *Edible Hut* project in Detroit illustrates how art-led greening initiatives can reclaim abandoned lots, blending community gardening with esthetic activism [49].

Public art, in this sense, is not an accessory to environmental planning but a cultural technology that amplifies the political and emotional resonance of green interventions. Through the language of color, form, and symbolism, art allows trees and gardens to function as visible emblems of collective memory and socio-ecological repair.

Participation in urban greening – whether through formal co-design workshops or informal community-led planting – operates as a performative act of place-making [51, 52]. These practices are not limited to functional landscaping but are deeply ritualistic and narrative. Tree-planting ceremonies, for example, often mark pivotal moments – such as commemorations of loss, recovery from disaster, or collective visions of the future. In Medellín, “memory walks” and neighborhood planting events integrate local oral histories with ecological regeneration, producing green spaces that are both lived and storied [53, 54].

In Naples, spontaneous greening – balconies turned into micro-gardens, abandoned plots reclaimed as communal orchards – embodies a form of vernacular design that embeds local knowledge, mythologies, and cultural resilience into the urban fabric [55]. These “everyday ecologies” challenge top-down models of planning by foregrounding care, community ownership, and symbolic attachment.

What emerges from this interplay of literature, art, and participatory practices is a shift in how we understand urban nature. Rather than viewing green infrastructure as a purely technical or ecological system, we recognize it as cultural infrastructure – a narrative scaffold where meanings are negotiated, identities are formed, and collective memories are inscribed [56, 58]. Trees, in this perspective, are not merely carbon sinks or shade providers but living witnesses, entwined with human stories of displacement, resilience, and hope.

In cities like Detroit, Naples, and Medellín, urban greening becomes legible and sustainable only when it is culturally mediated – when communities can see and feel their histories and aspirations reflected in the landscape. This insight is crucial for planners and policymakers: Without cultural embedding – through storytelling, esthetic interventions, and participatory rituals – urban greening risks remaining an abstract technical exercise rather than a shared, lived, and meaningful practice.

## **5. Planting trees, planting ideas**

Urban greening is not only an ecological or technical endeavor; it is, fundamentally, a cultural and narrative act. Trees and green spaces in the city are more than carbon sinks or biodiversity supports: They are living archives of memory and meaning, inscribed with stories of migration, marginalization, care, and transformation [58, 2]. Through the lens of the EH, green infrastructure emerges as a site where ecological functions intersect with cultural narratives, esthetic values, and affective attachments. Case studies from Detroit, Naples, Ruhrgebiet, and Medellín

demonstrate that urban greening is most transformative when it resonates with local history and community identity. In such contexts, planting trees becomes an act of place-making and reimagining belonging, rather than a mere policy response to climate change or urban heat islands [12, 55]. These examples also highlight potential tensions: Top-down greening projects that disregard cultural contexts risk perpetuating inequalities or erasing community memory, reducing green infrastructure to a depoliticized and technocratic solution [59, 60].

To describe a city as “narratively just” is to move beyond traditional notions of distributive or procedural justice – focusing instead on whose stories are visible, whose histories are acknowledged, and whose ways of knowing are integrated into the planning of urban nature [61, 62]. Narrative justice entails that:

- Urban greening initiatives incorporate participatory storytelling tools – such as memory walks, oral history projects, and creative mapping – to ensure that local voices and histories inform the design of green spaces [63, 64].
- Indicators of success include not only ecological metrics (e.g., canopy coverage, biodiversity indices) but also cultural metrics, such as symbolic resonance, community participation, and historical recognition [13].
- Green spaces are recognized as platforms for cultural expression and ecological citizenship, where commemorative plantings, artistic interventions, and rituals of care become part of urban identity-building [65, 56].

EH perspectives suggest that urban trees are not inert components of infrastructure but actors in “narrative ecosystems” – shaping how communities remember the past, inhabit the present, and envision sustainable futures [42, 66]. As such, integrating cultural and narrative dimensions into urban greening is not a luxury but a prerequisite for building resilient, inclusive, and meaningful cities. To operationalize these insights, this chapter proposes several strategies for embedding EH methodologies into planning and governance:

1. Participatory narrative planning

Planners, landscape architects, and policymakers should integrate narrative-based methods – story circles, cultural asset mapping, and citizen ethnographies – into the early stages of green infrastructure design [67]. These tools help uncover place-based meanings and mitigate the risk of erasing local histories.

2. Cultural impact assessments (CIA)

Just as environmental impact assessments (EIA) evaluate ecological effects, CIAs should assess the cultural and symbolic implications of greening projects – particularly in heritage-rich or post-trauma urban areas (UNESCO, 2019).

3. Cross-sector collaboration

Urban greening policies should explicitly involve artists, historians, anthropologists, and local storytellers alongside technical experts [37, 40]. Their expertise ensures that urban forests and parks are emotionally legible and culturally embedded.

4. Policy frameworks for narrative inclusion  
Frameworks such as UN-Habitat's Right to the City and UNESCO's Culture|2030 Indicators can guide cities in integrating memory, heritage, and cultural narratives into green planning (UN-Habitat, 2020).
5. Education and capacity building  
Planning schools, universities, and professional training programs should promote cultural literacy – teaching future practitioners to combine environmental planning with narrative methods, critical geography, and EH perspectives [51, 56].

By acknowledging that “to plant a tree is also to plant an idea,” this chapter advocates for urban greening strategies that merge ecology with culture. This integrated approach enhances not only environmental resilience but also social cohesion and symbolic belonging, fostering cities that are sustainable, storied, and inclusive.

## **6. Conclusion: Toward storied and sustainable urban futures**

This chapter has argued that urban greening and reforestation must be understood as cultural as well as ecological interventions. By applying the lens of the EH, we have shown that trees and green spaces are not merely technical solutions to climate change or urban heat islands, but also living archives of memory, identity, and collective imagination. As such, the success of urban greening initiatives depends not only on ecological performance but also on their cultural legibility, symbolic resonance, and social inclusiveness.

The case studies of Detroit, Naples, and Medellín illustrate that when urban greening aligns with local histories, affective attachments, and participatory practices, it becomes a tool for social healing and narrative reconstruction. Conversely, top-down or purely technical projects risk erasing memory, reinforcing inequalities, or reducing green infrastructure to a depoliticized backdrop.

A key insight emerging from this chapter is the need for “narrative justice” – an approach that recognizes that urban environmental justice is not only about access to green space but also about whose stories, memories, and cultural values shape that space. In this sense, to plant a tree is also to plant an idea: Every green intervention carries narratives of the past and aspirations for the future.

Moving forward, the integration of cultural and narrative methodologies – such as participatory storytelling, creative mapping, and cultural impact assessments – should become standard in urban planning. Cross-sector collaboration with artists, local historians, and humanists can help create urban landscapes that are not only ecologically resilient but also culturally meaningful and emotionally resonant.

Finally, urban greening should be understood as part of a broader “cultural infrastructure” – a framework that merges technical expertise with narrative imagination, ecological science with public art, and policy with community memory. By embracing this integrated vision, cities can transform reforestation and green space planning into opportunities for storytelling, social cohesion, and heritage-building, fostering sustainable and inclusive futures for both people and nature.

## **Conflict of interest**

The authors declare no conflict of interest.

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