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The bioregional leap. A collaborative pact for the watersheds of Los Angeles

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Abstract
The Emerald Necklace Expanded Vision Plan reimagines the green infrastructure of Los Angeles County through a bioregional lens, interpreting the watershed as the living structure underlying the urban environment. The vision is brought to life through a mosaic of projects, partnerships, and programs, revealing how a coherent regional framework can emerge even in highly fragmented governance settings. The initiative shows, on one hand, how green infrastructures can become strategic instruments if integrated into a bioregional perspective. On the other hand, the Emerald Necklace Accord, a voluntary agreement among diverse agencies and actors for the implementation of the vision, exemplifies at the same time the promises of collaborative governance approaches and the limits inherent in soft governance.

Keywords: bioregional planning, metropolitan areas, green infrastructure, pact-based governance, soft planning

1. Introduction: regeneration of living systems and bioregional planning

After decades of urban expansions that ignored the logics of nature, planning and design have increasingly turned their attention to the regeneration of living systems. This shift to regenerative design (Lyle, 1994; Pedersen Zari and Hecht, 2020), biophilic design (Beatley, 2010), ecological network planning (Malcevschi, 2025), green infrastructure planning, and so on, is a sign of a renewed attention to the ecological and social processes that sustain life, and is accompanied by growing recognition that ecological, social, and cultural processes are better understood and sustained through regional rather than urban-scale strategies.

Approaches based on Green Infrastructures (GI) and Nature-based Solutions (NbS) have become central to urban design and policy agendas (Chatzimentor, Apostolopoulou and Mazaris, 2020; Grabowski and Hess, 2022), promising to enhance ecological sustainability and reconnect people to nature. Their potential, however, remains limited when applied to the urban scale only or, above all, when nature is reduced to a service provider to the

built environment. Instead, their transformative capacity becomes fully visible when incorporated into a bioregional approach. Such an approach reframes living systems as the primary foundation of human settlements (Magnaghi, 2020). A bioregion, which encompasses cities, rural landscapes, and mountain areas as parts of a single territorial ecosystem (Saragosa, 2001), provides a sound basis for planning at the scale where ecological processes unfold. Bioregional planning implies working at the scale of watersheds, of the urban–rural and valley–mountain metabolisms that sustain life. At this level, bioregional planning reveals its greatest, largely untapped, potential, i.e. the capacity to provide an integrated framework where environmental, social, and spatial dimensions can converge.

Early twentieth-century planners and thinkers such as Patrick Geddes, Lewis Mumford, and Benton MacKaye, who are considered the historical antecedents of bioregionalism, had already envisioned the city as part of a larger regional organism, emphasizing the interplay between environment, settlement, and social life (Paquot, 2018). Authors such as Peter Berg in the 1970s reframed this tradition within a bioregional perspective, arguing that urban areas must restore reciprocal relationships with the ecological systems that sustain them (Berg, 1978). An approach to planning that is grounded in geographic land units and integrates natural systems, urban settlements, and governance institutions also characterizes the early practice of landscape planning, dating back to the seminal work of Frederick Law Olmsted (Schurch, 2018).

Despite these roots that clearly point to metropolitan and infrastructural concerns, bioregional planning is often considered applicable to rural areas or small to medium-sized cities only. Recent theoretical and practical developments, however – particularly in France and Italy through the work of Alberto Magnaghi and his notion of the urban bioregion (Magnaghi, 2014; 2020a) – have demonstrated that a bioregional approach can be successfully applied to diverse metropolitan regions such as Rome[1] (Poli et al., 2025), Florence[2], Lille[3], Bordeaux[4], and even Vitória[5] in Brazil (Poli and Luciani, 2024). The concept of urban bioregion, in fact, responds to a dual need: to rebalance the human-nature relationship "at the geographical scale of today's way of inhabiting territories", and to tackle the challenge of contemporary urbanization "starting with the denser fabrics of metropolitan areas and intermediate post-metropolitan territories, and continuing with the finer fabrics of hilly and mountainous areas" (Magnaghi 2020b, pp. 34-35).

Today, complex governance structures, the multiplication of actors, and the need to connect strategic visions with local projects raise questions about the appropriate institutional arrangements, multi-scalar design tools, and models of co-design and co-management. Open questions concern models of co-design and co-management capable of building socially shared territorial visions, as well as the need for inclusive governance frameworks that avoid forms of "exclusion through inclusion"[6] (Uribe, 2024). Moreover, planning and design at multiple scales, from regional living systems to neighbourhood gardens, require tools that can connect strategic visions and local projects. Planning, as a discipline historically rooted in top-down rationality, is challenged to rethink its own role, evolving to support regenerative, participatory, and trans-scalar approaches.

Against this backdrop, this paper examines the Emerald Necklace Expanded Vision Plan for Los Angeles County (Fig. 1) as a case study. Through the case study analysis, it explores how an initiative born from civil society can contribute to the advancement of bioregional and regenerative planning frameworks, and how such frameworks can innovate institutional planning and governance. Questions addressed by this study include the following:

- How does the Emerald Necklace reinterpret concepts of regeneration, green infrastructure and bioregional planning?
- What governance mechanisms and partnerships does the Emerald Necklace Accord generate, and how do these mechanisms operationalize the regeneration of living systems at multiple scales?

[1] Study "Studies, research and strategic lines to reorganise the Metropolitan City of Rome into a system of resilient and self-sustainable urban bioregions" (2021-22), coordinated by D. Poli, funded by the Metropolitan City of Rome.

[2] Study "The metropolitan city of Florence: a system of polycentric, self-sustaining and resilient urban bioregions" (2017-2018), coordinated by D. Poli, funded by the Metropolitan City of Florence.

[3] Chair «Acclimatize post-mining territories» headed by Lille's School of Architecture and Landscape (scientific coordination B. Mariolle and D. Poli, steering committee Mission Bassin Minier, Regional Office of Cultural Affairs of Hauts de France Region and Maisons-et-Cités).

[4] Study "Biorégion Aquitaine" (2012-2015), funded by the Aquitaine Region. The Italian unit was coordinated by D. Poli.

[5] Study "An integrated project to enhance Araçatiba's heritage and identity" (2023), coordinated by D. Poli, together with R. Hermanny de Almeida.

[6] "The influence of managerial ideas on multistakeholder processes has led to a situation where *political marginalization occurs through inclusion rather than deliberate acts of exclusion*. Two processes are at play: the accommodation of dissent and the uniformation of political subjects" (Uribe 2024, p.2). See also Swyngedouw (2005) on the ambiguities of multistakeholder governance.

- What lessons does the Emerald Necklace Expanded Vision offer for developing trans-scalar and multi-actor governance frameworks in other contexts?

The research adopts a qualitative and interpretive approach grounded in the analysis of planning documents and the reflective interpretation of a contemporary design process, combining two complementary components. First, a document analysis was conducted on planning reports, vision plans, and documents produced by Amigos de los Rios – the initiator and promoter of the plan – and collaborating agencies. These sources provided a basis for tracing the evolution of ecological and planning ideas from the early Olmsted legacy of the Emerald Necklace to the current expanded framework. Second, semi-structured interviews were carried out with two key figures in the process – William Allen, who contributed to the plan from The Conservation Fund, and Claire Robinson, Executive Director of Amigos de los Rios. The interviews focused on the models of partnerships and agreements, the

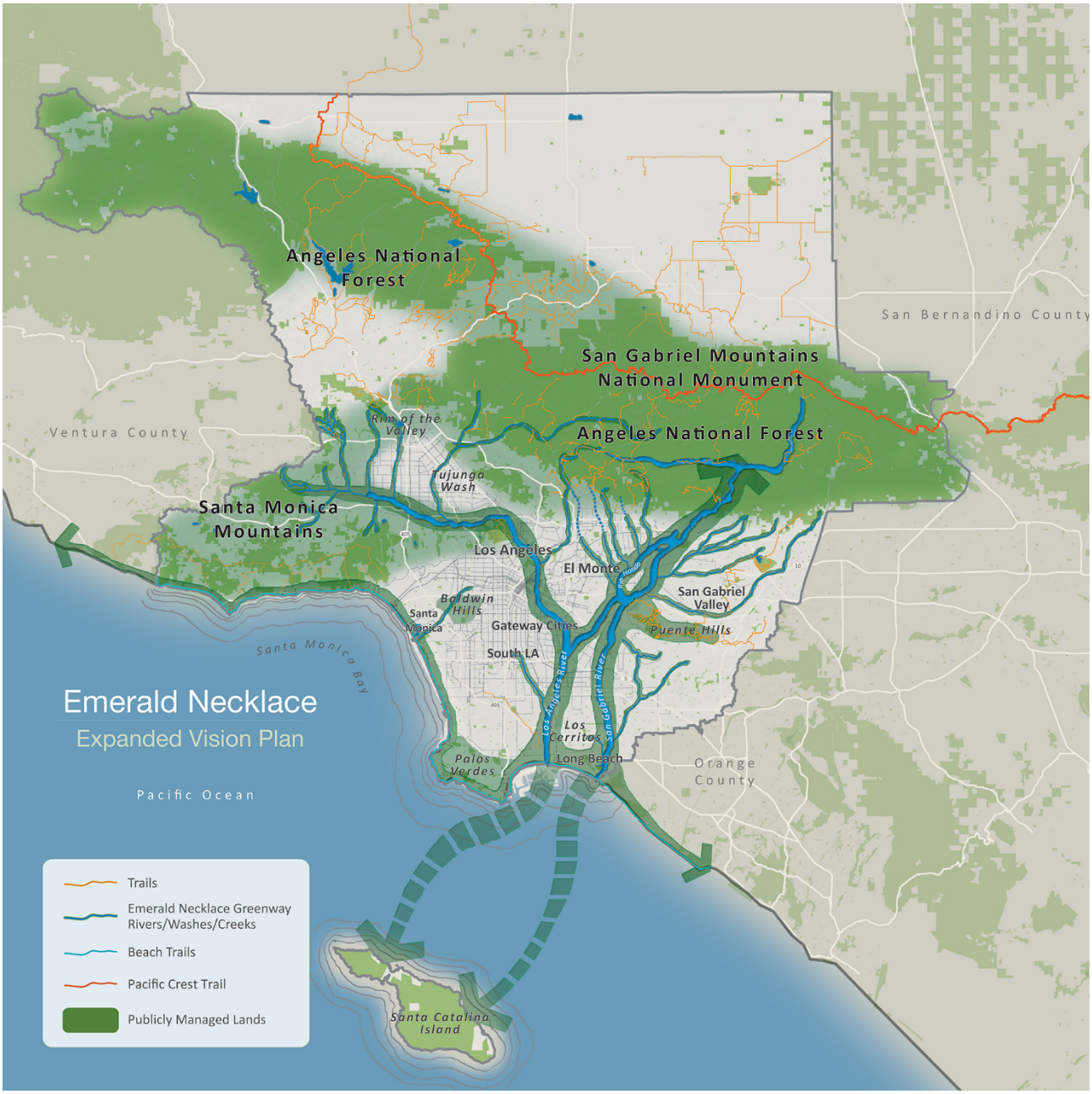


Figure 1 | The 2014 "Emerald Necklace Forest to Ocean Expanded Vision Plan". © Amigos de los Rios

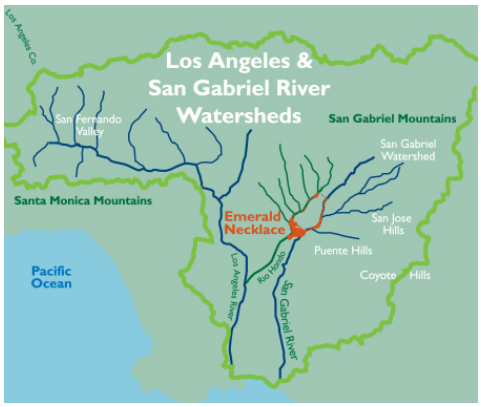
relationship with ordinary planning instruments, and the practical challenges of implementing regenerative planning across different scales. The fact that both interviewees are co-authors of this paper points to a collaborative research process linking practitioner knowledge and academic interpretation. This way, the work

connects to the tradition of research-through-design (Stappers and Giaccardi, 2014), where the case itself becomes an instrument to generate theoretical insights.
The paper structure follows the analytical framework, articulated into three sections which present, in the order, the historical evolution of the Emerald Necklace vision for Los Angeles, the governance mechanisms and the Emerald Necklace Accord and, finally, the broader implications for trans-scalar and integrative planning frameworks.

2. Planning for Los Angeles: from Olmsted to Amigos de los Rios

Los Angeles has faced throughout its history challenges of rapid urbanization, environmental degradation, and a chronic lack of green and public spaces. Concerns about the impacts of sprawling development on liveability, public health, and the environment emerged as early as the 1930s, when planners and civic leaders began advocating for a bioregional approach to the county, an approach that sought to treat natural systems, human communities, and urban infrastructure together at a regional scale. Although largely forgotten for decades, this perspective has recently been revisited, updated, and put into practice through some initiatives brought up by the civil society and supported by the institutions.
In the late 1920s, civic leaders in Los Angeles were already concerned about the region's limited provision of parks and playgrounds compared to other metropolitan areas. They feared that rising traffic congestion, air pollution, and rapid population growth could undermine the county's liveability and competitiveness, making it harder to attract and retain new residents. For this reason, the Los Angeles Chamber of Commerce commissioned two leading planning and landscape architecture firms — Olmsted Brothers of Brookline, Massachusetts, and Harland Bartholomew & Associates of St. Louis — to develop a regional plan for the city. The report they produced, "*Parks, Playgrounds and Beaches for the Los Angeles Region"*, urged immediate action and envisioned "a co-ordinated regional system of parks and open spaces ranging from neighbourhood playgrounds to far-flung 'reservations' in the surrounding mountains and deserts, the whole linked through a network of pleasure drives or parkways" (Hise and Deverell, 2001, p. 329). The plan not only offered recommendations to improve the urban and regional green infrastructure but also proposed innovations in the governance mechanisms, including the creation of a super-jurisdictional parks board to implement the vision at its core (Hise and Deverell, 2000).
Perhaps it was precisely because it went too far that the Olmsted-Bartholomew plan was never adopted (Hise and Deverell, 2001; Goldin, 2000). Nearly a century later, with a population now exceeding ten million, Los Angeles County faces today an even more dramatic condition under the pressures of metropolitan growth. Over time, its territory has become dominated by an extensive network of freeways that, while enhancing high-speed mobility across the metropolitan area, have further fragmented the natural systems, compromising the ecological continuity of rivers, open spaces, and communities.
More recently, grassroots organizations have mobilised for change, demanding a shift in infrastructure planning from grey to green, and from top-down, expert-led approaches to more interactive models centred on community needs and aspirations (Loukaitou-Sideris and Gottlieb, 2004). The 1990s marked a phase of consolidation of the theory of communicative and interactive planning, with a parallel international diffusion of its practice (Carena, 2005), reflected and at the same time further encouraged by international policy frameworks, from Agenda 21 to the Aarhus Convention.
In this spirit, in 2005 the nonprofit organization Amigos de los Rios looked back at the original Olmsted-Bartholomew plan and translated its vision into a contemporary green infrastructure strategy. The initiative began with the design of a 17-mile loop of parks and greenways along the Rio
Hondo and San Gabriel rivers in East Los Angeles, leveraging the presence of publicly owned yet underutilized spaces (Figg. 2-3). This first phase aimed at reconnecting fragmented open spaces, restoring ecological functionality, and providing equitable access to nature for the surrounding communities.
The Emerald Necklace initiative matured over time and expanded beyond its initial scope and context, evolving into a broader regional plan that had the ambition to reconnect the top of the watersheds in the San Gabriel Mountains to the Pacific Ocean. In collaboration with The Conservation Fund, another nonprofit organization, Amigos de los Rios developed the "Emerald Necklace Forest to Ocean Expanded Vision Plan", released in 2014 (Amigos de los Rios and The Conservation Fund, 2014). The new plan, now covering the whole county for an extension of 4,000 square miles, envisions a green infrastructure network structured around the three major river systems, namely the Los Angeles River, the San Gabriel River and the Rio Hondo, depicted as the ecological backbones of the metropolitan area (Fig. 1).

The Expanded Vision is organized around three main components: a conceptual map, a set of regional goals with the identification of the respective priorities, and an overview of existing plans and programs that provide opportunities for implementation. The conceptual map conveys a powerful image of a living regional system, in



Figures 2 and 3 | The 2005 Emerald Necklace park network. © Amigos de los Rios

which rivers and green corridors form the connective tissue linking ecosystems and communities. For each regional goal, specific "collaborative priorities" are identified, accompanied by dedicated thematic maps. Implementation strategies begin by mapping on one hand the existing plans at multiple scales, on the other a portfolio of best practices for accessibility improvement, ecological restoration, and green infrastructure design. Rather than proposing a new plan from scratch, the Expanded Vision is presented as a federative framework which weaves together diverse local initiatives into a unified regional strategy for ecological and social regeneration.

Amigos de los Rios and The Conservation Fund actively engaged a broad and heterogeneous network of stakeholders, involving city and county agencies, political representatives, water districts, nonprofit organizations, school districts, private-sector partners, and members of the general public. Stakeholder participation was structured through a series of meetings, followed by continuous communication. These communication strategies served as opportunities for dialogue, provided constructive feedback on the draft plan, helped fill technical and informational gaps, and highlighted ongoing initiatives or innovative opportunities to be included in the plan.

Public engagement was also considered central to the construction of the vision. The evolving plan was in fact presented during weekend volunteer events, that were opportunities to gather input from residents and participants. This iterative process enabled the Emerald Necklace Expanded Vision to integrate a wide spectrum of perspectives and grounded the plan in a community-based vision for Los Angeles County, that aims to connect institutional planning with the lived experiences and aspirations of the locals.

The transition from the 2005 Emerald Necklace plan to the 2014 Expanded Vision marks what can be described as a "bioregional leap" in the way the territory is read and interpreted. Although the plan does not explicitly define

itself as bioregional, its framework implicitly adopts this perspective, since the *Expanded Vision* defines its territorial boundaries not according to political or administrative divisions, but rather following the logic of natural systems. In this sense, it resonates with Robert Thayer's definition of a bioregion as "a unique region definable by natural (rather than political) boundaries with a geographic, climatic, hydrological, and ecological character capable of supporting unique human and nonhuman living communities" (Thayer, 2003, p. 3), which he calls a "life place". As stated in the Emerald Necklace Accord (see paragraph 3.1), "the Rio Hondo, San Gabriel, and Los Angeles Rivers and their tributaries (collectively, the "Watershed") are part of a significant ecological area that is home to a rich variety of plants and animals and provides a welcome sanctuary for the people who call this region home" (Emerald Necklace Coalition, 2012).

Actually, Olmsted himself played a seminal role in introducing a landscape planning approach grounded in natural systems and ecological units, such as the watershed (Schurch, 2018). This perspective also introduced the notion that a city does not exist in isolation but rather inhabits a larger ecological context — the proper scale at which, today, sustainability can be meaningfully pursued through the re-localization and tendential closure of metabolic cycles.

The focus on watersheds at the county scale, core to the Emerald Necklace Expanded Vision, also carries important implications for interactive design and collaborative governance. Working at the scale of living systems requires a significant effort in bringing together a diverse network of actors. This is especially the case of California, where planning is highly decentralized. Therefore, the plan issues "a strong call for meaningful collaboration" across scales, planning levels, decision makers and stakeholders in general.

3. The Emerald Necklace Accord: a hybrid governance infrastructure

Building on the historical vision and community-led initiatives, the Emerald Necklace Accord exemplifies how multi-scalar governance can operationalize bioregional planning. The Emerald Necklace experience unfolds as a hybrid governance model, whereby community initiative and institutional commitment combine to generate an integrative and adaptive framework. Rather than a top-down form of governance, it is a collaborative framework grounded in a voluntary, pact-based agreement, designed to build operational consensus, share resources, and align diverse strategies and plans.

Amigos de los Rios, an organization that had long been working with local regeneration projects, initiated the planning process by establishing the first collaborative alliances. The first 2005 Emerald Necklace concept was formalized with a legal document, the Emerald Necklace Accord, through which the signatories committed themselves to collaborate for the planning and implementation of the projects comprised in the plan. The 37 signatories – a group known as the Emerald Necklace Coalition – included state agencies (State Rivers and Mountains Conservancy), county agencies (Los Angeles County Board of Supervisors), cities, school districts, and community-based organizations (Amigos de los Rios, n.d.). The Coalition is a voluntary, reticular and multi-scalar alliance. For the Expanded Vision, Amigos de los Rios hired The Conservation Fund, which had experiences in developing green infrastructure plans for metropolitan areas such as Chicago and Houston, and renovated the Accord in 2012, and the Coalition involved up to 62 members.

The Accord is collaborative pact that, while not financially binding, carries a strong commitment to interinstitutional and community cooperation, grounded in a shared sense of responsibility for the territory and its living systems. The Accord signatories recognize the watersheds of the Rio Hondo, San Gabriel, and Los Angeles Rivers as a shared ecological and social resource that provides environmental, recreational, educational, and economic benefits for the entire region. Member agencies agree to engage in the preservation and enhancement of open spaces for recreation, environmental education purposes, the restoration of native habitats, a sustainable approach to water management, conservation, and flood control. United by this common interest, member agencies make a commitment to support one another through the exchange of information, mutual endorsements for grant applications, and coordinated planning efforts. They also agree to establish regular dialogue and engage in joint initiatives to integrate fragmented existing plans into a coherent regional framework. Amigos de los Rios facilitates and coordinates this joint effort, maintaining the partnership network and ensuring communication among members (Emerald Necklace Coalition, 2012).

The translation of the plan into projects and its implementation reflect the cooperative but not binding nature of the Accord. Given their formal commitment, each of the member agencies within the Coalition was asked to adopt the Expanded Vision plan. The way in which the plan was adopted varied considerably among agencies. In some cases, it was formalized through resolutions approved by elected officials; in others, it emerged more informally through the initiative of planning staff and ongoing administrative practices. The Emerald Necklace Expanded

Vision plan, in fact, is not conceived as a single, linear project. Rather, it provides a systemic vision that is incrementally defined, operationalized and implemented through a multitude of sectoral plans, ordinary planning instruments, community projects, and local initiatives (Figg. 4-5), as well as through the gradual integration of existing plans into a single framework.

The implementation process is therefore incremental and adaptive in nature, advancing as funding becomes available and strategic opportunities arise.

Although the process may appear fragmented – and in some aspects it is – the whole is held together by the narrative and strategic consistency offered, in fact, by the bioregional vision, which provides a shared horizon of meaning and action. The plan and the Coalition, in fact, play a crucial role in addressing a structural gap in the planning system in California: the absence of an intermediate level capable of integrating local and/or municipal-level planning initiatives into an overarching vision. The territories included in the Expanded Vision plan, in fact, are characterized by a fragmented governance system, where the planning framework is highly decentralized in favour of the municipal level. This means the numerous municipalities of East Los Angeles County struggle with the absence of supra-municipal coordination or even find themselves in competition with neighbouring municipalities for resources and investments (Hlady, 2014). The Emerald Necklace initiative encourages a shift from competition to cooperation, advancing towards a unified regional strategy.

As for the financing mechanisms, they also differ depending on the agency and the project. To develop the Expanded Vision, Amigos de los Rios applied to a State grant funded through Proposition 84, a major statewide program supporting environmental and community-oriented investments (State of California, 2007; Davies, Christensen and Kareiva, 2019)[7]. The projects that operationalize the Expanded Vision plan often receive funding with the same, or similar mechanisms, by applying to State grants. Most of them receive financing from local Capital Improvement Programs, i.e. the multi-year plans developed by municipal administrations to finance, construct, renovate, or maintain public infrastructure and assets. Other, minor sources of funding include corporate entities and private philanthropy. However, the private sector's interest in eastern Los Angeles County has been historically low – which is also one of the reasons why Amigos de los Rios developed the 2005 Emerald Necklace plan.

4. Implications for bioregional planning and governance innovation

The analysis of the Emerald Necklace Expanded Vision offers broader insights into how regenerative, community-led, and ecologically grounded approaches can be advanced within fragmented metropolitan regions. The case

Figures 4 and 5 | The River Greenway project transformed over 15 acres of the formerly barren Rio Hondo Right of Way into a nature discovery trail, establishing a tree canopy and native plant landscapes to improve soil, sequester carbon, and restore bird habitats. © Amigos de los Rios

[7] Proposition 84 is a voter-approved general obligation bond allocating funds to water quality and drinking water availability, food protection, state and local parks, coastal and ocean protection, and habitat conservation. Funds are distributed through a competitive grant process.

sheds light on how green infrastructure planning can acquire renewed meaning when incorporated into a bioregional framework; on the possibility to adapt the model developed through the Emerald Necklace Coalition to other institutional and territorial contexts; and on how pact-based, soft governance tools can foster regional coordination towards regenerative ends.

The Emerald Necklace Expanded Vision provides an example of a community-led initiative that reinterprets and operationalises the principles of regeneration and bioregional planning in the context of a complex metropolitan area. Although the plan does not explicitly define itself as bioregional, in recognising the watershed as the basic

territorial unit where ecological, social, and cultural processes unfold it demonstrates an uptake of the core logic of bioregionalism. This new perspective makes the plan take a "bioregional leap", in terms of scale but also as a qualitative leap in the way green infrastructures are understood, represented and designed. Attention shifts from administrative boundaries to the living systems that sustain the city and to the urban–rural and urban–mountain exchanges: in other words, the metabolisms that structure the regional landscape. The bioregion is thus understood not only as a larger planning scale, but as the complex socio-ecological organism to which urban systems are anchored.

The plan can be interpreted as an evolution of the regional and landscape planning traditions, informing a contemporary project of ecological and social regeneration based on green infrastructure. Rather than a network of connected green spaces, GI is here interpreted as the arterial system of the territory's vital cycles, an infrastructure that restores the continuity of living systems and situates the city as part of a broader organism. This territorial-ecological reading of the region reshapes the meaning of GI as an operational tool, providing a basis for its strategic integration into the bioregional approach. Here, the often-vague notion of green infrastructure becomes the operational mechanism through which bioregional regeneration of the metropolitan watersheds can be put into practice. The bioregional approach provides the frame of meaning and makes the strategic orientation explicit, while GI planning supplies the design methodologies. Together, they form a coherent conceptual and operational foundation for regenerative regional planning.

The Emerald Necklace initiative represents a successful example of a strategy that integrates objectives related to green infrastructure, environmental education, social cohesion, and cultural identity within a unified framework built around bioregional principles. Its multi-actor model can serve as an adaptable reference for other initiatives at the regional scale involving metropolitan areas. In Europe, similar governance arrangements are involved in the implementation of instruments such as river contracts, ecomuseums, and others. The effectiveness of these initiatives often depends, as in the Emerald Necklace case, on strong institutional commitment and coordinated effort among the stakeholders. The experience of river contracts, in particular, suggests major recurring challenges include institutional fragmentation, limited operational capacity, financial constraints, and difficulties in integrating these tools with ordinary planning instruments (Bastiani 2011; Calace et al., 2023). The Emerald Necklace therefore offers a point of reference on how these issues might be addressed.

In the United States, arrangements of this nature belong to a broader constellation of collaborative governance practices that have emerged to pursue conservation approaches, using similar non-regulatory, adaptive mechanisms[8]. The extent to which the Emerald Necklace as a model for green infrastructure planning can be replicated elsewhere depends on the institutional, financial, and environmental contexts.

First, it depends on the institutional modality through which regional coordination is produced. In regions endowed with a strong metropolitan or regional authority, as in Portland, the institutional basis for bioregional planning is already formalized. In contrast, highly decentralized contexts such as our Southern California case lack a centralized land-use authority and therefore require a different governance architecture. Here, regional coordination must be built through pact-based, cross-sectoral arrangements between public agencies, water and flood-control districts, NGOs, community groups, and other actors. This suggests that replicability, in the absence

[8] Examples of conservation collaboratives that employ similar governance frameworks include Huston Wilderness, an alliance whose aim is "to protect and promote the 10 diverse ecoregions of the 20+ county area around Greater Houston, Galveston Bay, and the Texas Coast" (Houston Wilderness, n.d.); the Chicago Wilderness Alliance, a regional collaborative "working to implement landscape-scale approaches to conservation in and around the southern shores of Lake Michigan" (Chicago Wilderness Alliance, n.d.); or The Intertwine Alliance, based in the Portland-Vancouver region, that aims at protecting and restoring the region's ecosystems for the wellbeing of the "human and wildlife communities" (The Intertwine, n.d.).

of a central authority, depends on the capacity of a territory to assemble agreements involving institutions and civil society that perform the integrative functions needed for bioregional planning.
Second, the outlook of major transportation and infrastructure funders strongly influences the capacity to align investment priorities with regenerative and bioregional objectives; institutional cultures, in fact, vary significantly across states. For instance, the State of Florida had a key role in the identification and planning of the state's green infrastructure network, with major funding from the Florida Department of Transportation, that had an interest in learning how to avoid and minimize environmental impacts of transportation infrastructure development (Center for Landscape Conservation Planning, n.d.). This greenway planning process led to the Florida Forever funding program that acquires high priority ecological lands. These types of efforts would provide enabling conditions for future metropolitan planning efforts.
A third factor concerns the urgency and visibility of resource constraints – such as water scarcity, declining water quality, or exposure to natural hazards. Under these conditions, agencies and civil-society actors often become more willing to experiment with voluntary governance frameworks like river-basin agreements, multi-stakeholder coalitions, or green-infrastructure pacts, rather than maintaining fragmented or sectoral approaches. Resource constraints can function as catalysts for institutional innovation, in the sense that urgency and pressure make collaborative, landscape-scale initiatives necessary.
As a governance approach, the Emerald Necklace Accord provides regional coordination in a highly decentralized planning environment. But beyond this, it is emblematic of a shift from hierarchical and regulatory modes of governance toward pact-based, collaborative models. The voluntary agreement formalises a network among public agencies, nonprofit organizations, and local communities, thus outlining a governance model that relies on negotiated commitment rather than hierarchical authority. The agreement, in line with its voluntary nature, builds on mutual trust and distributed responsibility, enabling actors with different mandates and operating at different scales to work towards a common vision for the territory.
Voluntary alliances are particularly useful when there is a need to address multi-jurisdictional challenges and formal institutional planning has limited operational capacity due to spatial, procedural, scalar constraints. Such arrangements operate within what planning theorists call “soft spaces” (Allmendinger and Haughton, 2007): arenas for planning processes that fall between or beyond administrative and institutional boundaries of formal, “hard” planning spaces. Here, “soft planning” approaches (Faludi, 2013) accommodate new forms of governance and planning processes, characterized by informal and voluntary frameworks, complementarity of spatial entities and planning actions, and a focus on effectiveness (Cavaco et al., 2023). The Accord can thus be seen as part of this evolving landscape of governance innovation.
As such, the Accord’s major strength lies in the capacity to build an integrative framework that connects local initiatives with regional strategies. The unifying vision proposed and disseminated by the Amigos de los Rios and its network acts as an orienting narrative, able to align distributed action across administrative boundaries. Its implementation process outlines an incremental and easily adaptable model that progresses “opportunistically” through a constellation of autonomous but interconnected plans, projects, programs, and community initiatives, integrated by the common underlying vision.
This capacity to weave together autonomous initiatives unfolds also at a higher level, since Amigos de los Rios, as well as The Conservation Fund, is part of the Metropolitan Greenspaces Alliance (MGA), which connects similar organizations and experiences. The MGA operates as a “network of networks”, that fosters coordination among member organizations by developing shared goals and principles, sharing capacities, and promoting the development and exchange of tools and practices. It provides an important arena for dialogue, mutual learning, and strategic alignment. The development of a shared system for monitoring and evaluation would be a key step to sustaining this effort, providing tools to assess both tangible outcomes, including conservation and regeneration objectives, and immaterial outcomes, including the strength of the network itself. A relevant reference within the MGA is provided by The Intertwine Alliance in Portland, which has introduced a system of indicators (FSG and The Greater Cincinnati Foundation, 2012) designed to monitor the performance of the organization in terms of “collective impact” (Kania and Kramer, 2011). This concept stresses the difference from “isolated impact” and indicates “the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem” (ibidem).
Amigos de los Rios plays a crucial role in sustaining the architecture of the Emerald Necklace Coalition, playing the role of a “backbone organization” (Turner et al., 2012): it fosters collaboration, maintains the coalition, and supports the alignment of diverse actors around the common vision. Public agencies integrate the Accord into

their planning tools, providing institutional support. Local communities participate through education, stewardship, and volunteer programs (Fig. 6). The result is a dynamic form of bioregional governance that links strategic planning with local, context-specific action.

While these innovations increase opportunities of civic engagement in territorial governance and urban design, they also carry inherent ambiguities. The very features that make these soft, pact-based frameworks effective – flexibility, voluntariness, informal coordination – may at the same time blur lines of accountability, redistribute

Figure 6 | Volunteers take part in a tree planting event along the Rio Hondo River Trail. © Amigos de los Rios

responsibilities without redistributing power, or give way to forms of depoliticized participation in line with current neoliberal trends (Swyngedouw, 2005). Being aware of the ambivalent nature of such innovative governance arrangements is fundamental to prevent them from turning into the very opposite of what they promise. If the success of a pact-based approach depends less on formal authority than on relational capacity — the ability to weave networks, foster trust, and maintain continuity across political cycles – it is also true that a clear institutional framing is needed to guarantee truly democratic outcomes.

In sum, the Emerald Necklace shows that bioregional planning and governance is not a single static model but rather an evolving and context-specific practice of regeneration and collaboration, involving diverse actors and grounded in the living systems of the bioregion.

Authorship contribution statement

Giulia Luciani: Conceptualization, Writing – original draft, Writing – review & editing. William Allen: Writing – review & editing, Validation. Claire Robinson: Writing – review & editing, Validation.

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