# The Planetary Urbanization of Governance: A Framework for Multi-Scalar Regeneration

## Part 1: The Foundations of Planetary Urbanization

The planetary urbanization (PU) thesis, advanced by Neil Brenner and Christian Schmid, represents a foundational critique of traditional urban studies, requiring a radical epistemological and geographical shift. It moves the focus away from the city as a bounded entity toward the process of urbanization as a worldwide socio-spatial condition.1 This conceptual reframing is essential for grounding any meaningful strategy of regenerative governance, which must operate not only within metropolitan boundaries but across the entirety of the integrated planetary landscape.

### 1.1 Conceptualizing the Worldwide Urban Fabric: Beyond Methodological Cityism

The core argument of the PU thesis originates from Henri Lefebvre’s mid-20th-century proposition regarding the complete urbanization of society.1 This radical hypothesis demands that analysts shift their focus entirely from studying fixed "urban form" to deciphering the globally expansive and variegated "urbanization process".1 This reframing challenges "methodological cityism"—the conventional academic and policy focus on discrete, distinct, and universal types of cities.2 Under the planetary view, cities are understood as merely one particular *form* or node within a broader, dynamic field of urbanization.4

A key implication of this thesis is the "annihilation of the outside".5 PU contends that spaces lying well beyond traditional metropolitan centers—including deserts, oceans, mountain ranges, and the global atmosphere—are no longer genuinely "non-urban." Instead, they have been functionally integrated into the worldwide urban fabric through political-economic relations, technological infrastructures, and global commodity chains.1 The idea of the non-urban is thus regarded as an ideological projection stemming from a dissolved, preindustrial geo-historical formation.1 Instead, the world is conceived as an encompassing continuum of urbanization.5

This analytical shift compels a fundamental reconsideration of socio-ecological conflict. If the urban condition is universal, conflict cannot be characterized as existing merely *around* the city (e.g., urban versus rural land use disputes). Rather, conflict is understood to be distributed *within* the total urban fabric, occurring along gradients of resource extraction, infrastructure control, and dispossession that connect distant spaces.1 The critical policy challenge therefore transitions from defining obsolete spatial boundaries (urban versus non-urban) to defining and managing the integrated metabolism of the urban totality—specifically, regulating how planetary resources are extracted, circulated, and consumed across this immense continuum.6 This systemic understanding establishes the necessity for regenerative governance to manage interconnected metabolic flows rather than isolated municipal jurisdictions.

### 1.2 The Implosion-Explosion Dialectic: Capital and Territorial Transformation

The complete urbanization of society is driven by the internal contradictions of capitalist development, articulated by Brenner and Schmid through the **implosion-explosion dialectic**.7 This phrase, adapted from Lefebvre, illuminates the mutually recursive, contradictory, and deeply conflicting links between capitalist agglomeration and the comprehensive transformation of global territory.5

**Implosion** describes the gravitational pull of capital, finance, and population toward zones of high concentration—the agglomeration cores or traditional metropolitan centers. This movement involves creative destruction, often restructuring or displacing inherited urban forms to accommodate new forms of financial and informational capital.5 **Explosion**, conversely, refers to the expansive territorial diffusion of the functional requirements necessary to sustain these cores, transforming distant landscapes well beyond the metropolitan peripheries.5 The explosion diffuses the urban logic—its social organization, spatial requirements, and technical infrastructure—across the entire planet to secure labor, resources, energy, and circulation routes.3

The intensity and geography of this dialectic vary spatio-temporally, depending crucially on the specific faction of capital involved.5 Financial capital and major property investments typically dominate the implosion cores, whereas industrial-manufacturing capital, agro-business capital, and resource extraction capital drive the expansive explosion into resource frontiers.5 This differentiation means the explosion phase often serves as the primary mechanism for accumulation by dispossession (a term elaborated by David Harvey) and ecological imperialism, as capital seeks out cheap nature and marginalized labor in previously non-integrated or peripheral territories.8 Consequently, the expansive territorialization of the urban requires differentiated regenerative strategies: regulatory controls on speculative finance and property capital in the implosion cores, coupled with robust mechanisms for enforcing spatial justice and ecological restoration in the explosion zones.

### 1.3 Operational Landscapes: The Diffused Urban Interior

Operational Landscapes (OLs) are the material manifestation of the explosion dynamic. Defined as spaces that lie "well beyond the traditional city cores and suburban peripheries," OLs are essential, functional components of the urban worldwide fabric, though they often lack traditional urban density.1 They represent the production and ongoing transformation of an industrialized urban fabric where agglomeration centers and their peripheral operational zones are intertwined and co-articulate within the global capitalist system.3

These spaces organize the planetary terrain through diffused production areas and sophisticated global commodity chains.10 Specific examples of OLs include transoceanic shipping lanes, transcontinental highway and railway networks, massive agro-industrial catchment zones, and resource extraction areas such as mineral operations and hydroelectric facilities.1 The operational function of these landscapes is fundamentally urban because they facilitate the absorption, circulation, and consumption of capital and commodities generated for the metropolitan cores.6 The economic returns generated by these multi-million dollar investments (e.g., slaughterhouses, refrigeration plants, mineral processing facilities) support significant, generally urban-based workforces, confirming their functional integration into the urban metabolism.6

The analysis of OLs reveals that the urban logic—a calculation based on production costs, land rent, and transport costs to the market 10—has effectively been diffused across the planet. This modern configuration can be understood as the **Planetary Thünen Town**.10 In the original 19th-century Von Thünen model, land use optimized itself around a single market "Town." Today, the "Town" is the globally dispersed Agglomeration Core, and the OLs are the vast, technologically optimized resource zones that are spatially organized to minimize transport costs and maximize extraction efficiency.10 This framework validates the imperative for regenerative governance to treat these seemingly remote areas not as isolated 'nature' or 'rural economy,' but as critical urban infrastructure requiring systemic socio-ecological management.

## Part 2: The Urban Revolution and Spatial Justice

The synthesis of planetary urbanization with practical governance requires rooting the framework in a renewed understanding of spatial justice, drawing critically from Lefebvre’s concept of the urban revolution.

### 2.1 Henri Lefebvre’s Hypothesis of Complete Urbanization

Lefebvre postulated that urbanization becomes the main medium connecting the minutiae of everyday lives to the social order of capitalism and its relations with nature.5 He argued that once the critical point of "complete urbanization" is reached, this process fundamentally determines planetary social and environmental dynamics.1 For critical theory, this hypothesis provides the essential context: contemporary political-economic and ecological crises are not merely *urban* crises, but the internal contradictions of a globally urbanized society.

### 2.2 The Right to the City Revisited: From Demand to Resistance

The Lefebvrean concept of the "Right to the City" (R2C) traditionally embodies the dual demands for participation in the creation of urban life and the appropriation of space.8 However, in the context of planetary urbanization—where urban growth rests on processes of settler-colonialism, ecological imperialism, and the constant search for resource frontiers 9—the simple demand for a right *to* the city becomes insufficient, especially for populations in the explosion zones or extraction-induced resettlement sites.9

Critiques of the PU framework note that its emphasis on generality and universality can sometimes overlook Lefebvre's crucial focus on 'everyday life' and the significant political potential embedded in local resistance.9 To articulate spatial justice effectively in an unevenly urbanized world, the concept must be re-politicized to address the systemic violence generated by contemporary urbanization processes.

### 2.3 The Right Against the Urbicidal City

To address the profound dispossession and violence inherent in the expansion of capital into OLs, a radical modification of the R2C is necessary: the articulation of the **"right against the urbicidal city"**.9

The "urbicidal city" is characterized by growth that "explodes into space by subsuming natural resources for its continuous growth," resulting in **urbicide**, defined as the deliberate erasure of urban infrastructures and social life, functioning as a corporeal and urban consequence of necropolitics.9 Empirical studies focused on extraction-induced mandatory resettlement, such as those caused by coal mining in Tete, Mozambique, demonstrate this phenomenon: local populations are displaced into newly constructed spaces that, while technically classified as urban, fail to function as such, leading to unsafe living conditions and further displacement.9

The "right against the urbicidal city" thus functions as a crucial articulation of spatial justice designed to challenge the destructive mechanisms of capitalist urbanization, fostering the "true politics of encounter" among subordinated peoples globally.9 Crucially, this framework links the sustainability of urban forms directly to their relationship with surrounding agricultural hinterlands and resource frontiers, demanding that contemporary urban centers cease their reliance on ecological imperialism.9 For regenerative governance to succeed, it must be profoundly political and anti-extractive, integrating the concerns of peasant movements and world-ecology, viewing anti-colonial and counter-extractivist politics as indispensable for achieving a truly sustainable urban world.9

## Part 3: Critical Implications for a Regenerative Political Economy

Integrating Planetary Urbanization with David Harvey’s spatial political economy reveals the deep structural challenges that regenerative governance must confront, identifying precise leverage points for systemic transformation.

### 3.1 Spatializing Accumulation: Harvey’s Political Economy and the Production of Space

David Harvey’s analysis demonstrates that urbanization has historically served a crucial function in absorbing capital surpluses, doing so at ever-increasing geographical scales.8 This absorption is inherently violent, achieved through "burgeoning processes of creative destruction" that dispossess the urban masses of their right to the city.8 This process manifests as the simultaneous existence of two phenomena across the planet: the "planet of slums" and the "planet as a vast building site".8

The PU framework provides the geographical specificity for this creative destruction. The implosion concentrates financial capital and creates conditions for real estate speculation in cores, while the explosion diffuses extractive processes into resource frontiers.5 The struggles against exploitation (in the cores) and dispossession (in the OLs) are therefore deeply interlinked components of the same global circuit of capital.11 Regenerative governance must address this circuit holistically, linking social movements seeking justice in Athens or Lagos to resistance in extraction zones.11

### 3.2 Nested Scales Reconsidered: The Planetary Significance of Local Work

The fluid, multi-scalar reality of planetary urbanization, characterized by global flows, circulation, and migration, confirms that the socio-spatial configuration of contemporary cities cannot be understood merely on a municipal or subnational-regional scale.4

The fundamental contribution of the PU thesis to regenerative governance is the necessary affirmation that local work matters globally. Since every local space—from a city block to a remote extraction site—is functionally integrated into the planetary urban metabolism, an intervention at any single node carries systemic significance.4 Specifically, the political and economic scale of conflict is indivisible. Resistance to extraction in a remote resource zone (part of the explosion dynamics) instantly introduces friction into the global accumulation circuit (managed by financial capital in the implosion cores).5 This means that the political act of claiming the "Right Against the Urbicidal City" locally becomes an economic constraint on the global system. This principle demands that governance frameworks be designed to capture and leverage these multi-scalar political feedback loops.

### 3.3 Operational Landscapes as Leverage Points for Systemic Change

Operational Landscapes are not just peripheral victims of urban expansion; they are strategically vulnerable nodes within the global capitalist machine. Infrastructure within OLs, such as mineral operations, hydroelectric projects, and specialized agro-industrial facilities (e.g., slaughterhouses and refrigeration plants), represents enormous multi-million dollar investments that are indispensable for fueling agglomeration cores.6 These zones, often governed by centralized, profit-driven mechanisms tailored for extraction primacy, are brittle links in planetary commodity chains.

Therefore, OLs constitute critical leverage points for systemic change. Regenerative interventions focused on mandating ecological restoration, fostering local autonomy, or institutionalizing democratic control over resource facilities can effectively disrupt the unsustainable circulation of capital and force a shift toward closed-loop metabolisms. This intervention strategy moves beyond mitigating local damage and aims at structurally constraining the planetary circuit of accumulation itself.

The following table summarizes how the regenerative governance framework can operationalize the key elements of the Planetary Urbanization thesis:

Planetary Urbanization Components and Governance Leverage Points

| **Planetary Urban Component (Brenner/Schmid)** | **Key Function in Global Capitalism** | **Regenerative Governance Leverage Point** | **Scale of Intervention** |
| --- | --- | --- | --- |
| Implosion (Agglomeration Cores) | Centers of financial command, consumption, and capital surplus absorption. | Decentralization of power; financial regulation of property capital; circular economy integration. | Metropolitan, Regional |
| Explosion (Extended Urbanization/Sprawl) | Territorial diffusion of urban logic (peri-urban growth, real estate speculation). | Integrated green infrastructure planning; resilience mandates for sprawl; community stewardship models. | Local, Regional Basin |
| Operational Landscapes (OLs) | Resource extraction, logistics/transport, energy generation; nexus of ecological imperialism. | Infrastructure as commons; enforceable ecological restoration; indigenous/local community sovereignty. | Regional, Planetary Flow |
| Urbicidal Processes | Accumulation by dispossession; deliberate erasure of social and ecological life. | Right Against the Urbicidal City policies; spatial justice litigation; anti-colonial politics. | Local, Global Justice |

## Part 4: Synthesizing Frameworks for Regenerative Governance

To create a viable implementation architecture, the diagnostic power of Planetary Urbanization must be paired with institutional models capable of managing multi-scalar externalities. This necessitates the integration of Elinor Ostrom’s polycentric governance model and established regenerative design principles.

### 4.1 The Polycentric Challenge: Integrating Ostrom’s Nested Institutions with Planetary Scale

The complexity and dynamism of the urban continuum, described by Brenner and Schmid, demand a governance structure that can manage fragmented, complex interactions without relying on a single centralized authority. This requirement is met by Elinor Ostrom’s theory of polycentric governance.

Polycentricity is proposed as a pluralistic and alternative mode of governance designed to address the widespread loss of citizen faith resulting from the failures of centralized, global climate change initiatives.12 The polycentric structure relies on multiple, networked, semi-autonomous centers of decision-making that interact through cooperation, information exchange, and shared learning.13 This structure is uniquely suited to manage the nested externalities inherent in planetary urbanization.

By concentrating attention on lower levels of governance—local communities, watersheds, and regional authorities—the polycentric approach fosters local innovation and context-specific learning.12 Examples like the German *Energiewende* or the Barcelona Local Energy Agency demonstrate how localized, community-driven steps can positively affect the entire global climate system through the acquisition and dissemination of knowledge.12 This distributed, resilient mechanism provides the necessary organizational scaffolding for managing the variegated landscape of the planetary urban continuum.

The theoretical synergy between PU and Ostrom’s work is critical: the fragmented, non-linear reality of PU necessitates a decentralized structure capable of managing interconnected resource flows, exactly as Ostrom described for robust Common-Pool Resource (CPR) management.13 In the PU framework, the functional integration of the entire socio-ecological landscape—the atmosphere, transoceanic routes, and extraction zones—redefines the planetary metabolism itself as the ultimate CPR.1 Consequently, the institutional design principles developed by Ostrom for local CPRs must be scaled up and applied to planetary-scale phenomena (e.g., international logistics, atmospheric carbon budgets), moving beyond static global agreements toward adaptive, self-monitoring systems.

### 4.2 Regenerative Design Principles: Shifting from Mitigation to Net-Positive

Regenerative governance requires a normative shift in intention, moving beyond the goal of mitigating harm or achieving net-zero emissions toward actively restoring and enhancing ecological health and social equity—a **net-positive** urbanism.14

Regenerative design principles define the prescriptive content of the framework:

1. **Holistic and Ecosystem-Centric Approach:** The aim is to create sustainable systems that integrate environmental health, economic vitality, and social equity simultaneously.15 This includes focusing on biodiversity, native species, and explicit ecological restoration.15
2. **Resilience and Redundancy:** Planning must enable redundancies and contingencies throughout larger urban systems to maintain operational continuity and adaptability, recognizing the systemic fragility inherent in planetary flows.16
3. **Green Infrastructure and Co-Evolution:** Urban planning must prioritize green infrastructure that co-evolves with the natural elements of the place rather than simply containing or taming them. This includes water management principles like the "sponge city" concept.15
4. **Social Equity and Community Engagement:** Regenerative design must actively address social inequities by ensuring that benefits, such as access to resources and healthy living conditions, are distributed fairly.15 Community engagement throughout the design process is fundamental to tailoring solutions to specific needs and values.15

### 4.3 The Convergence Model: Juxtaposing the Urban Process with Governance Practice

The convergence of Planetary Urbanization (the diagnostic cartography) and Polycentric Governance (the institutional mechanism) creates a robust model for regenerative action. PU maps the scope of the problem by showing where urban processes (implosion, explosion, OLs) occur across the globe.1 Polycentricity then provides the appropriate institutional tools for local and regional actors to manage the resulting externalities and resource flows.12

For example, OLs require ecosystem-centric management (Regenerative Design) organized by nested institutional units (Polycentricity), such as regional watershed councils or bioregional planning authorities, rather than relying on distant, often uninterested national or global governments. This localized, yet networked, structure is essential for governing the globally distributed, yet locally rooted, contradictions generated by the planetary urban process.

## Part 5: Design and Implementation of Multi-Scalar Regenerative Governance

Implementing regenerative governance requires a designed architecture that institutionally translates the principles of PU and polycentricity into enforceable spatial and social practices.

### 5.1 Multi-Scalar Governance Architecture

The proposed architecture establishes multiple, networked polycentric nodes, ensuring that governance is decentralized yet strategically coordinated. This involves the creation or mandated empowerment of self-governing bodies at various nested scales—from local community trusts and neighborhood councils managing green infrastructure to large-scale, multi-jurisdictional watershed or bioregional planning authorities focused on Operational Landscapes.12

These nodes must adhere to shared global standards, such as the established Regenerative Design Principles, while retaining the autonomy to develop context-specific solutions.16 Resilience planning is a mandatory component, requiring these systems to incorporate redundancies and contingencies to maintain continuity, recognizing the vulnerability of global infrastructure to localized disruptions (e.g., climate events or political conflict).16

The implementation roles must be strictly delineated by scale to effectively manage the complexities mapped by the PU thesis.

Regenerative Governance Architecture: Integrating Polycentric and Planetary Scales

| **Governance Level (Ostrom)** | **Planetary Urban Scale Addressed** | **Core Regenerative Mandate** | **Infrastructure Strategy** |
| --- | --- | --- | --- |
| Global (Nesting/Monitoring) | Planetary Flows (Atmosphere, Trans-oceanic corridors, Finance) | Establishing global planetary boundaries; coordinating anti-urbicidal policies; monitoring extraction mandates. | International agreements on flow regulation; shared open-source data platforms. |
| Regional/Basin (Strategic/Meso) | Operational Landscapes, Watersheds, Mega-Regions | Ecosystem services integration (net-positive); regional resilience planning; large-scale ecological restoration. | Multi-jurisdictional utility systems; adaptive, green infrastructure corridors. |
| Local/Community (Operational/Micro) | Agglomeration Cores, Peri-Urban Settlement Sites | Ensuring social equity; place-based commons stewardship; decentralized energy/water systems; community co-production. | Localized green infrastructure; circular economy loops; flexible infrastructure as commons. |

### 5.2 Infrastructure as Commons: Models for Open Systems

To support a regenerative metabolism, the conceptual and legal status of infrastructure must be radically subverted. Infrastructure—encompassing both hard utilities (water, energy) and soft systems (green spaces, communications networks)—must be repositioned as the "urban commons" rather than purely as a financial or capital asset.17

This reframing is essential because placing infrastructure *as* commons promotes convivial and creative social relationships, facilitating dynamic collaboration, co-production, and the expansion of "networks of care" beyond intimate community boundaries.17 This openness and flexibility are crucial for finding adaptive responses to socio-ecological crises.17

Furthermore, the concept of "Infrastructure as Commons" serves as the institutional prerequisite for achieving systemic circularity. Regenerative design mandates closed loops and a circular economy.15 If crucial infrastructure and resource flows (water, waste processing, energy grids) remain privatized—and therefore financially optimized for shareholder profit rather than resource cycling—closed-loop systems will remain economically disadvantaged and politically difficult to implement. By establishing mechanisms that facilitate collaborative efforts in defining, creating, managing, and utilizing resources for communal well-being (the Infrastructure *of* Urban Commons), the financial barriers to implementing circularity are lowered, making regenerative goals technically and politically viable.17

### 5.3 Place-Based Work in Planetary Context: Operationalizing Regeneration

The final implementation step involves targeting specific spatial and institutional practices within the urban continuum:

1. **Regeneration of Operational Landscapes:** Place-based work must focus on implementing strict ecological restoration mandates in OLs.15 Governance mechanisms must ensure that major resource facilities (hydroelectric, mineral, and agro-industrial zones) shift from a primacy of extraction to integrated ecosystem health and mandated social equity.6 This requires regional/basin-level governance nodes to integrate ecosystem services and enforce the principles of social equity, especially fair distribution of benefits and access to resources for affected communities.15
2. **Local Innovation and Systemic Scaling:** Polycentricity is leveraged to foster local innovation. Successful, context-specific, place-based solutions (e.g., decentralized energy systems or local circular economy models) developed by communities must be shared and scaled horizontally across the polycentric network.12 This network structure transforms local successes into generalized global practice, ensuring that bottom-up knowledge continuously informs and adapts global standards.
3. **Enforcing Spatial Justice:** The "Right Against the Urbicidal City" must be operationalized through legal and political mechanisms, particularly to protect marginalized populations in peri-urban settlement sites and extraction zones subject to dispossession.9 Regenerative governance systems must actively integrate anti-colonial and counter-extractive politics into planning, ensuring that the benefits of sustainable development reach those historically excluded.9

## Conclusion: Reframing Governance for the Urban Age

The Planetary Urbanization framework fundamentally alters the scope of regenerative governance. By diagnosing the worldwide socio-spatial condition as completely urbanized, Brenner and Schmid demonstrate that all local interventions—particularly those within the functionally integrated but often invisible Operational Landscapes—carry planetary significance by constraining or redirecting the global circuit of capital accumulation.

The synthesis provides a complete framework by pairing this diagnosis with robust institutional design:

1. **Diagnostic Foundation:** Planetary Urbanization maps the crisis, revealing the implosion-explosion dialectic and identifying Operational Landscapes as crucial leverage points where accumulation by dispossession occurs.
2. **Institutional Architecture:** Ostrom’s Polycentric Governance provides the necessary decentralized and adaptive organizational structure capable of managing the nested externalities and resource flows across the variegated urban continuum.
3. **Prescriptive Content:** Regenerative Design principles shift the objective from mitigation to net-positive restoration of social equity and ecological health.

The core actionable necessity is the structural reform of how key planetary infrastructure is owned and managed. Reframing infrastructure *as* the urban commons is the institutional prerequisite for making circularity and ecological restoration economically and politically viable. Furthermore, the regenerative political imperative must be focused on aggressively enforcing the **Right Against the Urbicidal City** at the sites of extractive violence, thereby turning local resistance against planetary dispossession into systemic constraint on global capital accumulation.

Moving forward, global policy bodies must adopt the Polycentric Regenerative Framework, focusing on new metrics that track the full ecological and social costs generated by Operational Landscapes and enforcing multilateral agreements that empower regional and local self-governance over key common-pool resources that constitute the planetary urban metabolism.

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