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Toward Re-Entanglement: A Charter for the City and the Earth

Bauhaus Earth *Essays* 1



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Recognizing the dire threats of climate collapse and mass extinction, the global initiative Bauhaus Earth convened a team of scientists, architects, spatial planners, and policymakers from around the world to author a manifesto. *Toward Re-Entanglement: A Charter for the City and the Earth* is a call for radical transformation. It challenges all those with a role in the conception, production, operation, and governance of the building sector to address the systemic ecological, climatic, and social impacts incurred by its activities.

Twelve principles of "re-entanglement" guide the redesign of the entire life cycle of the urban realm: the reforming and rematerializing of the physical artifacts that comprise it, the reconfiguring of the socioeconomic structures that underpin it, and the reengaging of the bioregions that might sustainably supply it. In this way, the unprecedented convergence of the environmental and social crises we are causing offers powerful opportunities for systemic change.

The Charter is the first volume in the *Bauhaus Earth Essays* series that will launch in 2024, featuring a wide array of critical voices that will address the complete overhaul of the built environment which the climate crisis demands of us.

Call to Action

This is a call for radical and immediate action.

It is a call for the healthy and regenerative re-entanglement of human activity with the Earth's natural systems; a call to dismantle the conceptual, commercial, and technological barriers that blind us to the environmental impact of our own consumption; a call to engage human ingenuity and creativity to reimagine the act of building and dwelling, to reform the cultural and industrial processes involved, and the material artifacts these activities generate.

The production and operation of buildings must benefit not only the human species they house but *all* other living organisms, as well as the diverse biomes that they call home.

The history of humankind has seen the accelerating urbanization of the planet, a process that has relied on increasingly mechanistic economic models which propagate the relentless extraction of dwindling

terrestrial resources. In turn, this has severely distorted the Earth's natural systems, putting the future of humanity, our fellow organisms, and the planet as we know it at risk.

The city, as the most concentrated manifestation of human settlement, is our most durable yet ever-evolving cultural artifact. It serves as a center of innovation while consuming a vast amount of material and energy. It is a source of economic power that offers abundant opportunity, but it can also breed social inequity and deprivation. It represents human community but also stands for isolation and disenfranchisement. It is a symbol of human vitality but can obscure and suppress our natural ability to recognize the signals of systemic alarm that only nature can sound.

As societies, we already acknowledge its profound vulnerability: as a symbolic and strategic target in times of military conflict, as a vector of epidemics, and as a casualty of future shock and stress that the collapse of natural systems will inevitably trigger.

Change, therefore, must begin in the city and extend to the regional ecosystems that sustain human habitats. This change must take place with deep respect for the resources we use and in close synergy with rural communities, who have been ignored by current economic models. Their traditions, knowledge, and experience will be critical to our survival—and that of our fellow species.

We need to rethink and rework the materials, means, and methods with which we build our cities, and the way we organize, occupy, and maintain them. We must forge new social and economic values that inextricably tie human activity to ecological restoration, and that expose and embrace the symbiotic relationship between upstream environmental health and downstream vitality and equity.

Today, more than fifty years after the Club of Rome's visionary report *The Limits to Growth* anticipated the emergencies we now face, we reconvene in Rome to catalyze immediate and radical action. The challenge is daunting—but our ability to transform our global environment is proven. The time to act is now!

The only limit is our will to do so.

Why Must Act

Our species, and the terrestrial resources and systems on which we depend, have reached an existential tipping point. The contemporary building sector has become the most significant source of anthropogenic environmental disturbance, while failing to meet the basic needs of the global populations who continue to live in impoverished and deprived conditions. In every possible way, the tenets of sustainability and the contradictory aspiration of "sustainable growth" have proven incapable of delivering the allegedly interlinked benefits of social equity, environmental preservation, or economic feasibility.

The dire environmental and social consequences of our current materials, means, and methods of housing humankind reach far beyond our own city limits. The unregulated extraction and consumption of increasingly critical resources; a geological layer of processed materials and discarded waste piled on our Earth's surface; the industrial conversion of biologically rich

land and the decimation of healthy ecosystems that once thrived there; the alarming increase in the atmospheric concentration of greenhouse gases and the poisoning of the Earth's soils and waters—these scars are the legacy of homo faber.

By 2050, 2.5 billion new inhabitants are predicted to populate cities across the world, doubling the projected demand for new construction and tripling the land area we will consume in the process. If current practices continue, this will intensify the shock to our already weakened terrestrial systems. It will result in amplified greenhouse gas concentrations polluting our atmosphere, a glut of waste by-products, and significant degradation of the land and marine biomes that are our only source of resilience. As these ecological and climatic imbalances grow, so too will the social and economic stresses that global disequilibrium induces. Populations will migrate on an unprecedented scale from sites of scarcity to regions still rich in resources, straining political systems and exacerbating strife.

We acknowledge the many environmental and sociocultural agendas that have been proposed and ratified in recent years, and we take note of their contributions to this call to action. We choose, however, to address a subject largely neglected by current discourse, one of unrecognized significance in humankind's ongoing transgressions of planetary boundaries: the conception, production, operation, and disposal of buildings and cities, the resources exploited, the inequity and dysfunction this perpetuates, and the waste generated in the process.

As the designers and builders of our constructed environments; the stewards of our natural systems; the aggregators of materials and energy supplies that sustain our buildings and cities; the manufacturers of building products, assemblies, and infrastructures; and the scientific investigators who assess the implications and impacts of our building activities, we accept our responsibility and acknowledge our agency in restoring

the terrestrial health and well-being of our planet by making and maintaining buildings and cities.

The future is our Commons; only in committed solidarity can we save and restore it.

What Must

We must respond to today's unprecedented crises by embracing them as an opportunity to redesign our cities—not only the physical objects that comprise them but the entire life cycle of the urban environments we construct. The future cities we envision and ultimately build must incorporate our careful management and revitalization of the biological resources we draw upon. They must make creative use of industrial and consumer waste and apply it to the task of retrofitting, adapting, and upgrading our building stock and the multiple life cycles of reuse that cascade from it.

As both producers and consumers, we must employ this metabolic approach to building—as our agency and our means of tackling the grand challenges of our time: social inequality, climate change, biodiversity loss, and human health. The sheer mass of material we will inevitably need to extract to construct these human habitats; the land we will consume; the size and composition of the workforces we will engage to meet the

demands of those new citizens we seek to house; the ecosystems we will shape in the process—all serve as motivation and means to rethink our cities and their relationship to the regions that surround them, and the ecosystems that offer us potentially renewable natural resources and services.

These principles, properly understood and applied within specific regional, ecosystemic, and cultural contexts, must guide the redesign of our shared spaces, buildings, and infrastructures:





Nature is the existential infrastructure of life on Earth—including human life—and the only solution to healing the planetary crisis. We must seek out, learn from, and invest in the profound intelligence and enduring lessons that a healthy biosphere can offer us. There can be no investment in cities whether intellectual, spiritual, political, social, or economic—without a corresponding, coordinated, and continually renewed investment in the natural systems that surround and permeate them. Without an inextricable and enduring alliance between urbanity and nature, the concepts of energy efficiency, carbon neutrality, human health, economic vitality, and environmental sustainability are meaningless. Ecosystemic wellbeing, which includes humanity but is not limited to our species, must be understood as a fundamental right of all citizens and the organisms that contribute to the health of our terrestrial metabolism. Integrating natural systems such as forests, grasslands, wetlands, and marine biomes into cityscapes is essential to human health and well-being.

These are the systems that mitigate excess carbon dioxide, absorb and cleanse the stormwater runoff from our streets, shade our homes from the heat of harsh sunlight, infuse our dwellings with reoxygenated air, protect buildings from the ravages of wildfire and flooding, and remind us of our embodied relationship with our fellow species. By aligning ourselves harmoniously with nature, we can unlock an abundance of systemic benefits that rapidly accrue across vast timescales and geographies.

Expand the system **boundaries** of design and governance, and the temporal and spatial scales of our agency

Neither buildings nor cities are closed systems. They are, instead, in a continuous negotiation of energy and material with their immediate sites and wider hinterlands. We must marshal human experimentation and innovation—and the collaborative economic enterprises that may arise from them—to drastically limit negative impacts and embrace systemic, transscalar, and cross-sector environmental benefits. With each constructed element we conceive from a structural component to an entire neighborhood—we must design not just its form but its full life cycle. With each material, assemblage, or city block we imagine and implement, we must discipline our demands to reflect the capacity of our regions to supply it. We must acknowledge scarcity and respect—even *celebrate*—these constraints. Bioregionality, by which we mean the remapping of jurisdictional boundaries to reflect a region's natural ecological function, must replace the artificial divisions rooted in political affiliation that have prevented the effective governance of our environmental

resources and the ecosystems that are our natural infrastructure.

Enhance rather than deplete biodiversity



We must thread sensitive and synergistic feedback loops through our source ecosystems and the urban supply chains that pull on them. When we strip land of life-giving soils, flora, and fauna, or extract ores and minerals from geological substrata to build our cities, we are disabling the essential and productive biological capacity of the Earth. Every existing disturbance to ecological systems—except the blind extraction of material and energy for short-term gain-represents an opportunity. By valuing biodiversity and embracing the range, complexity, and constructive potential of our natural landscapes, we can provide renewable materials and services for our cities while improving the health, diversity, and expansion of those same natural systems. Rather than demanding that forests produce certain "prized" grades of wood or uniform species we can use to build, we must instead ask what forests can naturally provide while maintaining their inherent biodiversity. In place of destructive over-farming or filling in wetlands for suburban expansion, building

and agriculture can serve to restore soils and regenerate habitats, thereby enlightening our interaction with the landscapes we once abused. In addition to ecosystemic restoration, this optimized relationship with nature allows critical habitats and ecosystems to remain undisturbed and transforms our cities from predatory consumers into regenerative forces for nature.

Sink carbon by construction

We can transform cities from climate culprits into carbon banks, offsetting the significant lifecycle impacts created by their greenhouse gas emissions. If constructed and maintained with regeneratively sourced, renewable biobased materials—timber, bamboo, plants, and agricultural waste products-buildings, infrastructures, and entire urban systems can reliably store significant amounts of biogenic carbon. Where possible, plant cellulose can replace the energy- and emissions-intensive classes of mineral-based and petrochemically synthesized materials, such as concrete, steel, and plastics; we can deploy biomaterials at the scale of cities, over repeated cycles of recovery and reuse; and where plant fibers flow naturally from the yields of ecological silviculture or community-based regenerative agricultural activity, they can form massive and durable urban carbon sinks. By forging biological value chains that incentivize the protection, restoration, and expansion of global forests, we also create opportunities for meaningful and lasting rural employment. Meanwhile,

those sustainably managed source forests will continue to absorb more atmospheric carbon dioxide in future cycles of natural (and, where necessary, enhanced) regeneration. Where biogenic materials and processes cannot be applied to cities, buildings, and infrastructure, we must strive to continually decarbonize and optimize manufacturing processes, while seeking to minimize—and ultimately reuse—the number of carbon-emitting materials we use.

Capture natural energy rather than extracting fossil fuels

Our buildings and cities, and the sub- and exurban landscapes that emanate from them, are net energy consumers. In our technological zeal to invent elaborate mechanical systems to manage the quality and temperature of our air, we have failed to observe the abundant benefits of nature and the ecosystemic services it can offer us. Rather than learn from natural physical, chemical, and biological phenomena, we continually attempt to refine dysfunctional and rapidly obsolescent technical facsimiles. We have yet to take full advantage of the potential harbored by active and passive thermodynamic exchanges and other forms of energy generation associated with the vast surfaces we have arrayed across our constructed landscapes. The particular properties of the materials that comprise them—their density, reflectivity, chemical composition, even color-may serve as generative media for energy exchange, rather than the source of overheated urban corridors and spaces. Building walls and roofs must be reconfigured to optimize solar orientation and radiation

and facilitate its transformation into usable energy. Foundations and structural walls can serve as thermal mass to sink excess heat or cold, acting as vital media for heat exchange. Coupled with the reduction of production stage energy consumption, these lifecycle strategies may offset the loads of sectors unable to meet their own energy demands. By creatively reimagining and reconfiguring material applications, and carefully layering building and infrastructural assemblies, we can supplant our reflexive focus on engineering mechanical heating and cooling equipment and redirect squandered heat energy as a means to temper urban dwelling. By carefully planting trees to provide shade, reintroducing urban greenways and greenspaces to absorb UV energy and reduce surface albedo, and threading renaturalized waterbodies through our urban fabric to enhance evaporative cooling, we can reduce the heat gain in our public spaces and cooling requirements of our homes

Question why we build and what we build with and prioritize the reuse of existing buildings and material

Rather than assuming the solution to any urban building need is the extraction, processing, and consumption of raw material to construct new buildings and infrastructure, we must stringently reevaluate (and creatively revalue) what we have already made. By siphoning off-waste streams from industrial and consumer activity for repairing and retrofitting existing structures, we can create new, value-added processes that transform discarded and devalued matter into new forms of "raw" industrial material while revitalizing our urban habitats. When we promote circularity through multiple cycles of material reuse and embrace the repair, maintenance, and upgrade of our current building stock, we avoid a whole new set of environmental burdens, ecological disturbances, and the social dislocations they entail. Our critical assessment of the very premise of new building must be accompanied by a rigorous analysis of the materials and spaces we truly need. These fundamental reflections and subsequent analyses must precede any refinements in technology and efficiency that have become the reflexive response of the global building sector's current approach to "sustainability."

Build dense and poly-centric cities to restore urban community and regional wildlands

Cities, when convivially organized and clearly bounded, are inherently efficient organisms. By reigning in their spatial extents, we avoid converting biologically productive land into sprawling, infrastructurally attenuated, automobile-oriented hardscapes. Instead, we can optimize land already assigned to the urban sphere and thereby imbue it with more profound value. Dense, mixed-use neighborhoods where citizens can live, work, and play enhance urban quality and reduce infrastructural requirements across all scales of urban inhabitation: exterior building envelopes and systems, when shared by multiple urban households, in multistory buildings, reduce per capita embodied emissions; easy and equitable access to livelihoods, social facilities, and services reduce the externalized costs and emissions of long commutes. Efficient mass transport networks and mobility de-emphasize the use of automobiles and trucks within the city, reducing the energy consumed, the pollution emitted, and the vast area of land required. That land, in turn, can be reassigned as public pedestrian

corridors and green spaces, while promoting careful restoration of natural forest, wetland and other ecologically critical landscapes. Dense and efficient polycentric cities can replace unconstrained urban sprawl, eliminate often neglected and undervalued urban peripheries, and clarify and enrich the interaction between those convivial cities and the healthy wildlands that border them.

Provide homes for all people to build social equity, economic livelihood, and shared respect for our common resources

Housing is not merely a means of survival, a commercial product, or an investment instrument. Housing, understood as dwelling, provides homes where individuals and families can grow and evolve comfortably, within well-considered, functional, healthy, and spiritually restorative spaces. Those underserved and disenfranchised populations who struggle for access to the bare minimum of resources and services have become the first victims of our environmental crisis. The basic human right to dwell safely, securely, and with dignity must become our universal objective. Making secure and lasting homes for all is the means to meet a dire need, reduce vulnerability, build equity, and empower and stabilize individuals and households, their communities and, by extension, the resource landscapes that supply them. Stable homes, and the regenerative and equitable design and construction practices that produce them, create employment opportunities all along the building value chain and promote durable investment in people across all sectors of society. Our

failure to make it so will only exacerbate social inequities and drive the ever-deepening exploitation of our dwindling natural world.

Make public space the essential infrastructure of cities and the site of sociopolitical discourse and innovation

Our species can only mobilize our innovative capacities, determination, and solidarity to address our existential crisis if we build strong and cohesive societies. Rather than retreating into segregated islands of difference, we must focus on strengthening and expanding the fabric of public space. Public spaces have always been the locus of local democracy and participation—places where subjects negotiate difference and forge social bonds, and where a sense of community and belonging can emerge despite increasingly diverse and mobile global societies. The vast network of corridors and storage spaces built for cars and industrial use that bisect our cities must be reassigned and transformed into spaces that serve people and their needs. This is a critical lever with which we can convene across all generations, genders, social backgrounds, and abilities. While we acknowledge the networking power of digitalization, we believe the safe, walkable city and the physical, social encounters that occur there are the most effective means to promote our basic

human right to participate, experiment, and reinvent—the right to live in the city.

Empower rural communities and engage the traditional knowledge and practices of Indigenous peoples and non-Western cultures

The inextricable relationship between dense, vibrant cities and the ecosystems and human settlements of their hinterlands depends on the sustaining and rewarding employment of the individuals and communities who choose to dwell there. The revaluation of rural lives and spaces—whether tended as agricultural land or maintained as an ecological preserve—is essential to overcome cultural and political antagonisms and arrest the relentless consumption and devaluation of natural systems. The deep cultural knowledge and traditional practices of rural inhabitants offer valuable lessons for the regenerative management of regional ecological resources. By building on local traditions, we resist the universalizing force of modernity and embrace place-based knowledge. We must reapportion economic power at local, regional, and global scales by focusing on rural communities and their sustenance; reinstate and enforce the development rights of Indigenous communities, where they have been suppressed, to promote access to opportunity; shift established administrative and regulatory jurisdictions where they fail to meet need or effectively govern; and redistribute the responsibility to procure resources and to produce and manage our human habitat.

Welcome new urban citizens

Our unfolding climate emergency, along with political conflict and economic deprivation, has already displaced more than 100 million people worldwide. In the foreseeable future, either by immediate impact or a cascade of secondary effects, climate change will render vast regions of the world uninhabitable. We must use our ingenuity as designers, builders, and policymakers to anticipate the influx of those dislocated by environmental crisis: to engineer the spatial and infrastructural elasticity that our cities will need—in a political dimension and as constructed dwelling space—to absorb this new influx of people and the ideas and materials they bring with them. Cities are dynamic laboratories. They are the dense spatial settings within which we will imagine and negotiate a regenerative future. They must offer the necessary elasticity to absorb the natural transience of people, ideas, and materials that will be necessary to cope with the dire challenges facing our civilization. They are the sites in which diversities of human aspiration, background, and

vision can catalyze the changes these emergencies require.

Redefine beauty by building with love and compassion for humans and nonhumans alike Regenerative building—the cityscapes it creates and the ecosystems it seeks to restore will demand an unprecedented exchange of information, our collective collaboration, responsibility, and resolve, and our willingness to share and redistribute resources. If cities are to be our true catalysts for change, then they must incorporate broad awareness, appreciation, and protection of the often remote and unfamiliar landscapes and species comprising the only planetary home we know. We have an opportunity to redefine and entrench a new sense of beauty and joy in the making and experience of our buildings and cities—for the humans and nonhumans who inhabit our Earth.

What We Need for Systemic Change and a Regenerative **Future**

The transscalar and systemic re-formation of design and building practice—namely, the conceptual embrace of whole building and urban life cycles and their potential impact as a fundamental and totalizing concern—will entail new realms and scales of governance, collaborative and interdisciplinary design thinking and making, radical experimentation, novel and broad-based educational initiatives and learning networks, cross-cutting knowledge management and transfer, purposeful communication and participatory action. We need to democratize digitalization to inform and manage the productive entanglement of technosphere and biosphere. In addition to new materials, means, and methods, we seek new conceptual approaches, languages, and modes of action with which we will reshape and reform the artifacts and activities of the Anthropocene city.

In recognition of the dire threat posed by climate collapse and global mass extinction; in acknowledgement of our responsibility for the conception, materialization, and management of human habitats; out of deep concern for their irrevocable impact on the terrestrial sphere and on our own species' existence, we, the undersigned, call for the systemic transformation of our expectations and aspirations, our behaviors, and our practices. We commit to the redesign of buildings and cities to rebalance our relationship with nature and its ecosystemic health.

This is our shared challenge and our shared commitment.

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An initiative of Bauhaus Earth.

Motivations Reflections: **Bridging** Language and **Action**

It is clearly difficult, if not impossible, to fight for deep systemic changes if we cannot first imagine them—and the larger the systems-level change required, the more critical it is to engage society's full collective radical imagination to envision it.

Trott, C. D., Reimer-Watts, K., Riemer, M., (2022). "Climate justice: In pursuit of a practical utopia: transitioning towards climate justice," *The Routledge International Handbook of Community Psychology.* London/New York: Routledge, pp. 229–45: 235

The climate emergency has been described as a "crisis of imagination," mainly referring to a breakdown in our ability to grasp the scale, complexity, and profound ramifications of human impacts on terrestrial health. It is also a crisis in our ability to imagine the counterfactual: a more positive, hopeful future.

In the spring of 2022, when Bauhaus Earth convened an interdisciplinary and cross-cultural team of thinkers and makers from around the world—scientists, architects, spatial planners, and policymakers—to author a manifesto and serve as its initial signatories, it was our goal to empower our imaginations in crafting a joint statement and create a shared vision for the restoration of our climate and the preservation of the global ecosystem. As discussions began—mostly virtually or via email among an interdisciplinary group that had never convened before—we inevitably debated the purpose of the

words we were using, their varied meanings and associations, and the concepts that underpinned them. We recognized the value of a unified language as we sought quantifiable and actionable measures that we could articulate to align global political actors, structure multilateral processes, and give firm shape to the fuzziness of much of contemporary debate. But we also shared a deep sense of collective frustration with the semantic uniformity and repetitiveness of technocratic language, as well as the alarmist nature of an exponentially growing number of reports, agendas, work programs, and action-oriented documents seeking to address the climate emergency. We agreed that language itself seems to lock us in-reinforcing certain ways of thinking that confine us to our disciplinary bubbles, encourage sectoral technofixes, and often blind us to the overwhelming urgency and complexity of the current crisis. A "good future" must be more than the mere accomplishment of sectoral aims. How can we be firm and precise in our acknowledgement of the need for urgent action, while also recognizing that the simplistic approach of fulfilling each sector-related target—dressed in technocratic language—is not enough?

We launched the manifesto that resulted from these conversations at the MAXXI in Rome on 8 June 2022 and discussed it together in a conference at the Vatican's Pontifical Academy of Sciences over the following two days. The *Toward Re-Entanglement* Charter was our attempt to address the dilemma that separated description and concrete action. As a complete document, the Charter projects an imagined future. Its twelve principles imply a scope of thought and implementa-

tion far broader than many of us had anticipated. At its core, it acknowledges that we must engage both our individual and collective agency and embrace inevitable complexity through approaches that might at times seem contradictory or even self-defeating:

- 1— The need for deep systemic change that mobilizes and coordinates ecological, social, economic, and cultural possibilities to foster a concord of changemakers. We need to restore the climate while rebalancing the increasing inequities of human society.
- 2 The adoption of "and" rather than "or" in the relationship between the local and the global: calling for decisive, differentiated action within spatially explicit, bioregional territorial systems while remaining grounded in a deep understanding of planetary interlinkages.
- 3—The centrality of regenerative design as a practice: propagating circular economic cycles of consumption, together with the sustainable application of renewable, carbon-storing, and biobased building materials can generate the necessary symbiosis between the health and well-being of humanity and that of our terrestrial ecosystems.

We all agreed that the product of our work together — *Toward Re-Entanglement: A Charter for the City and the Earth*—was a tool to be utilized along at least two clear trajectories.

First, it can serve as a genotype for collective thought and action, necessarily evolving and increasingly finetuned to the regional contexts of each of the coauthors and their associated networks. In this way, the Charter will form new constellations of local actors who can adapt its ideas to the particularities of regional culture, climate, ecosystem, and political economic challenges.

Second, it can be a catalyst for policy change, as authors (augmented over time by new signatories) approach cities and regional governments to engage in dialogue to build concrete and readily implementable steps toward decarbonizing and ecologically regenerating their cities and bioregions. For a multitude of city-centric programs and networks—such as NetZeroCities, the "C40 Clean Construction Declaration," and the Carbon Neutral Cities Alliance, as well as initiatives launched by United Cities and Local Governments and the ICLEI (International Council for Local Environmental Issues), to name just a few—the Charter offers a set of core objectives and guiding principles.

In October 2022, in the first instantiation of this second pathway to system change, the city of Barcelona and the regional government cosigned the Charter-inspired "Barcelona Protocol," focused on bioregional cooperation as a means to adjust material and resource flows toward a climate-positive, equitable built environment. Discussions with partner organizations and networks to bring territorial climate imaginaries into their transition processes are ongoing. In pilot partnerships and projects unfolding across Indigenous communities, institutions, cities, and bioregions of southern Asia, the European

Union, in the Western Cape of Africa, and in northern Canada, the Charter has served as both philosophical anchor and conceptual feedstock for locally enacted, regionally specific, and globally informed transformations of the way we conceive and construct human settlement.

We at Bauhaus Earth believe firmly that the value of the Charter initiative lies in its transparency, interdisciplinarity, and adaptability both as open-source inspiration for and guidance toward a better future. The pathway to this future is blazed through a collective of complementary visions, a symphony of effective actions, and the cross-pollination of local cultural knowledges, orchestrated to build a broad-based movement. Its means are the way we choose to make our buildings and cities; its aim is the restoration and stabilization of planetary health and well-being.

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