

Editorial Preface

Beyond the Horizon of 2030 – The Paradigm Shift from Sustainable to Regenerative Design

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As we approach the critical turning point of the 2030 United Nations Sustainable Development Goals (SDGs), the global design and architectural community stands at a crossroads. For decades, the paradigm of “sustainable design” has driven our collective efforts to minimize the environmental impact of the built environment. Sustainable development has historically focused on harm mitigation, resource efficiency, and maintaining a state of equilibrium or homeostasis that does not compromise the needs of future generations.

However, as the compounded effects of the Anthropocene continue to jeopardize the biosphere’s resilience, it is becoming increasingly evident that our grace period is over. Simply doing “less bad” or aiming for net-zero energy is no longer sufficient to reverse the ecological and social damage already inflicted. The inherent contradictions in traditional sustainability, which often attempts to balance economic growth with ecological limits. This demands that we move past mere harm reduction.

Post-2030, the future of our built environment must be anchored in regenerative design. While sustainable design seeks to maintain the status quo and contain harm, regenerative design is a profound paradigmatic evolution that aspires to create net-positive benefits by actively restoring, renewing, and revitalizing both natural ecosystems and human communities. Rooted in systems thinking, this approach treats our cities and buildings as dynamic, open, and self-organizing entities capable of co-evolving with nature. It operates on the principle of “aliveness,” creating spaces that support mutual flourishing and enhance the vitality of the web of life.

In this issue of *ALAM CIPTA*, we explore how diverse facets of tropical design, urban planning, and technological integration are already planting the seeds for this regenerative future. We can observe this transition through four core regenerative themes present in our current featured articles:

1. Fostering Human Well-Being and Inclusive Social Systems Regenerative design places a profound emphasis on social equity and the physical, mental, and emotional health of all occupants. Design must be inclusive to truly regenerate the social fabric of our communities. This is brilliantly exemplified in the *Universal Child-Footboard Design*

for *Under-bone Motorcycle*, which champions inclusive mobility, and *Developing Kufi Haptic Prototype for Visually Impaired People*, bridging the gap between cultural art and sensory accessibility. Furthermore, *A Review on the Methods Used in the Study of Thermal Comfort for the Elderly* highlights the necessity of adapting our indoor environmental parameters to protect vulnerable populations, directly supporting the regenerative goal of human-centric wellness.

2. Place-Based Potential and Cultural “Aliveness” A core tenet of regenerative development is leveraging the unique cultural and ecological “potential” of a place. Moving beyond standardized green building metrics, regenerative spaces honor local traditions and biophilic human-nature connections. The exploration of *The Creative Thinking of Master Craftsman Latif Long as the Foundation for the Formation of Malay Architectural Design* reminds us that indigenous and traditional knowledge systems have long embodied reciprocal, regenerative worldviews. Similarly, the article *Dynamic Spaces, Dynamic Cities: Exploring Creative Placemaking Trends in Urban Development* illustrates how we can co-create vibrant socio-ecological hubs. Enhancing this vitality is the concept of biophilia, explored in *Immersive Nature: The Effect of Nature Environments Video During Class Breaks*, which proves that even digital connections to nature can actively restore human cognitive and emotional well-being.

3. Ecosystem Renewal and Indoor Environmental Quality (IEQ) To reverse environmental harm, our structures must act as extensions of the natural environment. Regenerative design fundamentally reimagines Indoor Environmental Quality (IEQ) by designing buildings that breathe, adapt, and provide restorative comfort without heavy mechanical interventions. *Enhancing Indoor Thermal Comfort: Roof Design Strategies for Traditional Vernacular Mosques* perfectly captures this by utilizing passive, context-sensitive design strategies that mimic natural cooling. On a macro-ecological scale, *The Impact of Land Use Change on the Ecosystem Service Value of Wetlands: A Thematic Review* warns us of the urgent need to transition from linear urban metabolisms to models that protect and regenerate the vital ecosystem services provided by our natural landscapes.

4. Systemic Thinking and Adaptive Technologies Finally, regenerative design is impossible without systemic thinking and regenerative feedback loops, i.e. the use of data to monitor, adapt, and continually improve the built environment’s performance. The integration of advanced spatial and data tools is essential for managing complex urban metabolisms. *Unlocking 3d Bim’s Potential: 3dsms for Efficient Space Management* and *Bibliometric Analysis of Transit Ridership and the Built Environment* showcase how digital twins and macro-data analysis can optimize resource flows. Likewise, geospatial and multi-criteria decision-making tools are critical for sustainable infrastructure

placement, as demonstrated in *A GIS Web-Based Application for Water Pipeline Construction Planning Projects in Kelantan Malaysia* and *Hexagonal Fuzzy-AHP with TOPSIS and COPRAS for Site Suitability Analysis of Electric Vehicle Charging Stations*. Finally, utilizing advanced monitoring for environmental stewardship is highlighted in *Tree Risk Assessment Using Parameters Extracted from UAV-Based Multispectral Imagery*, showing how technology can actively safeguard our green infrastructure.

As we look toward 2030 and beyond, *ALAM CIPTA* remains committed to guiding this vital transition. We invite researchers, designers, and policymakers to stop designing simply to “sustain” our current compromised state, and to begin designing to regenerate, heal, and enliven our world.

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