

Resilience Strategies: The Predicament in Landscape Planning and Design

Paulo Pellegrino¹

¹*University of São Paulo*

In the face of growing environmental challenges, landscape architects must embrace innovative approaches to design spaces that balance ecological health, climate resilience, and human well-being. This presentation explores four key strategies to address the predicament of contemporary landscape planning and design:

1. Water Management – Leveraging sustainable techniques such as rainwater harvesting, permeable surfaces, and natural filtration systems to optimize water use and mitigate urban flooding.
2. Biodiversity and Life – Promoting the integration of native species, habitat restoration, and green corridors to enhance biodiversity and foster thriving ecosystems.
3. Climate Adaptation – Implementing solutions to combat climate extremes, such as heat islands and erosion, through shading, carbon sequestration, and resilient planting schemes.
4. Human-Centered Design – Prioritizing the needs of communities by creating inclusive, accessible, and multifunctional spaces that connect people to nature and enhance quality of life.

By examining these strategies through case studies and practical insights, this presentation provides actionable guidance for landscape architects seeking to design efficient, resilient, and sustainable projects that respond to the complex demands of our current predicament.

Author Biography

Paulo Pellegrino, Ph.D., is a landscape architect and green infrastructure specialist with extensive experience in landscape planning and design. As a professor at the University of São Paulo, Brazil, he has led numerous studios at both undergraduate and graduate levels, focusing on integrating natural and built environments through innovative and experimental projects. At his laboratory—LABVERDE—at the same institution, he has been developing experimental projects that explore the roles landscapes can play as living infrastructures, integrating natural and built elements.

In this sense, he has developed various projects and consultancies in his area of interest: green infrastructure and landscape urbanism, high-performance infrastructure and multifunctional landscapes, urban watershed plans with the application of nature-based solutions that combine landscape ecology, urban forestry, biodiversity, mobility, recreation, public health, safety, and urban renewal, utilizing landscape architecture design tools.

He has participated in and coordinated research aimed at innovating processes and materials that can synthesize natural technologies with digital ones to face environmental challenges, social needs, and economic concerns in generating spaces that promote these opportunities and contribute to overcoming the current challenges of transitioning to post-carbon landscapes. He has also been actively involved in seeking real solutions for local issues with diverse agents and settings under social and environmental stress for scalable results.