

## Biophilic Gardens: Bringing Nature Back into Human Lifestyle

Susindhar Babu E<sup>1</sup>, \*Shakila Sadasivam<sup>2</sup>, Sona V<sup>1</sup> and Amrutha S S<sup>1</sup>

<sup>1</sup>PG Scholar, Department of Floriculture and Landscaping, SRM College of Agricultural Sciences, Baburayanpettai, Chengalpattu-603201, Tamil Nadu, India

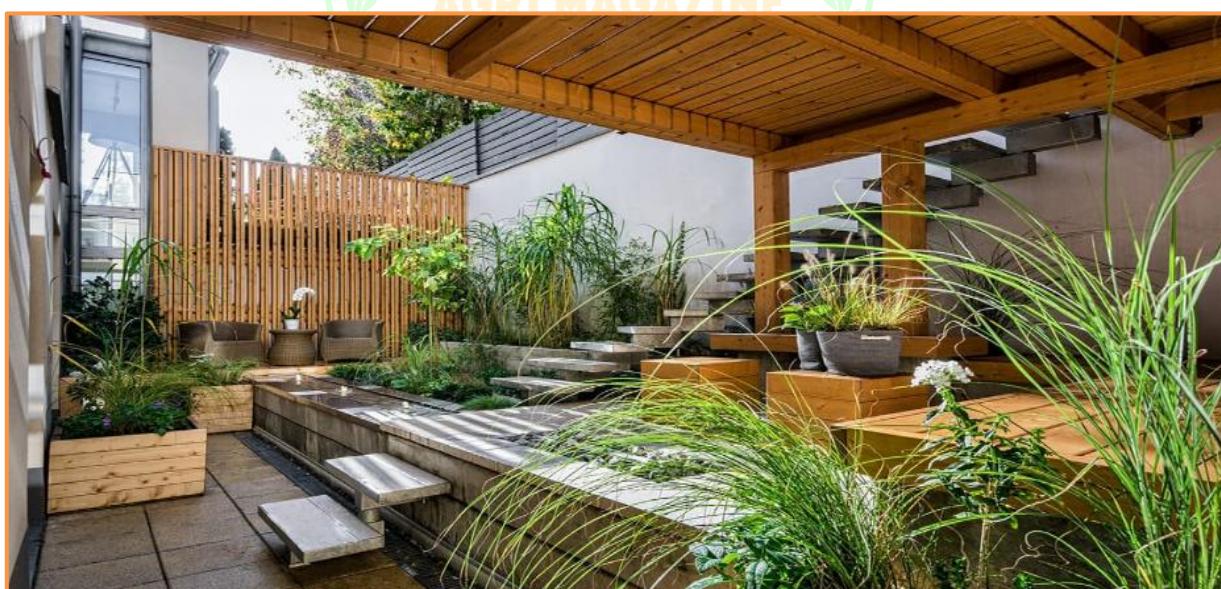
<sup>2</sup>Assistant Professor, Department of Floriculture and Landscaping, SRM College of Agricultural Sciences, Baburayanpettai, Chengalpattu-603201, Tamil Nadu, India

\*Corresponding Author's email: [shakilas@srmist.edu.in](mailto:shakilas@srmist.edu.in)

Modern urban life has silently pushed nature out of daily routine, affecting mental health more than people realise. Long indoor hours, artificial lighting and limited green spaces affect human health and well-being. That too, after COVID-19, people face stress on a long-term basis and are entirely isolated from nature. For these problems, Biophilic gardens have emerged as an effective solution by integrating the natural elements into the built environments both indoors and outdoors. Spaces where people live, work and learn by connecting with nature are a biophilia. The concept of biophilia gained significant importance, and scientists started to write about nature's connection with human physical and mental health. Based on the biophilia hypothesis, it stresses the importance of designed environments which include plants, natural light and organic shapes, for mental and physical health. Singapore's Khoo Tech Paut hospital and Milan's Bosco Verticale are two examples of Biophilic gardens that turn the place into a lively, health-promoting ecosystem that improves people's well-being and environmental resilience.

### Biophilic Gardens

Biophilic gardens are designed green spaces that incorporate live plants, water, natural light, ventilation and the addition of natural materials to strengthen the relationship between human and nature. Unlike other conventional gardens, biophilic gardens are created to improve emotional comfort, physical health, environmental quality and natural wellbeing. These biophilic spaces follow the rhythm of Nature, which changes with seasons and time.



Design of a Biophilic Garden

## Speciality of Biophilic Garden

- A biophilic garden is not just a patch of green; it is a specific planned space designed to connect people back to nature. It blends real plants, natural light, water features and materials from nature like wood and stone that anyone stepping into this garden space feels calmer and more relaxed. These gardens mimic the shape, texture, sound and rhythms of the Natural world, even though they can be developed within busy cities.
- In a biophilic garden, designing spaces with a naturalist effect becomes part of everyday life. And biophilic spaces help people feel less isolated by reconnecting them emotionally with nature.

## Primary Categories of Biophilic Garden

The framework for biophilic gardens identifies three main categories:

### i) The direct experience of nature

- Focuses on the direct and physical presence of nature. For example – live plants, green walls, Natural light, fresh air ventilation and water features.

### ii) Indirect experience of nature

- Indirect mimic or imitations of the natural look by use of different colours, shapes, textures etc., For example: wooden designs, stone textures, natural leaf patterns in wall painting, decor and art inspired by nature with blue and green colours.

### iii) The Experience of Space and Place

- These are the naturalistic spatial arrangements that appeal to our natural inclinations for particular settings. For example, mystery pathway, open prospect views, rustling patterns, cosy refuge nooks etc., The biophilic design works through direct nature, its impressions and nature-inspired spaces (Browning *et al.*, 2014).

The upstream three categories are subdivided into 14 patterns in order to explore, explain and enhance the gardens.

Nature in the space Patterns	Natural Analogues Patterns	Nature of space Patterns
<ul style="list-style-type: none"> <li>• Visual connection with nature</li> <li>• Non-visual connection with nature</li> <li>• Non-rhythmic sensory stimuli</li> <li>• Thermal and airflow variability</li> <li>• Presence of water</li> <li>• Dynamic and diffuse light</li> <li>• Connection with natural Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Biomorphic forms and patterns</li> <li>• Material connection with nature</li> <li>• Complexity and order</li> </ul>	<ul style="list-style-type: none"> <li>• Prospect</li> <li>• Refuge</li> <li>• Mystery</li> <li>• Risk / Peril</li> </ul>

## Importance and health benefits of biophilic gardens

- Humans have an inherent biological link to nature and interaction with natural settings that benefits mental and physical well-being. Research indicates that interaction with natural vegetation diminishes stress, elevates mood, enhances focus and encourages creativity.
- Biophilic gardens enhance mental health by alleviating anxiety and psychological stress. Nature-integrated settings have been found to make people more productive, help them study better and help them in social interaction.
- The biophilic spaces not only heal individuals but also improve the performance of the workspace and cities.

## Biophilic design and sustainable buildings

- Beyond enhancing people's well-being, biophilic gardens play a crucial role in environmental sustainability. This type of vegetation gives natural shading and light insulation and reduces the need for artificial cooling.
- The biophilic design includes green roofs and green facades that help regulate building temperatures, while rainwater harvesting and water-sensitive design improve the resource efficiency. By lowering energy consumption, improving indoor air quality and supporting biodiversity, Biophilic design contributes to more sustainable and climate-resilient cities.

### Examples of Live Biophilic Gardens



Singapore's Khoo Tech Paut hospital



Bosco Verticale – Milan, Italy



Apple park - California, USA



Jins Office - Tokyo, Japan



The Jewel - Singapore



Barbican Conservatory - London



The Amazon Spheres - Seattle, USA



The Amazon Spheres - Seattle, USA

## Conclusion

Biophilic gardens are not merely decorative features but essential components of healthy and sustainable urban environments. True biophilic design is a long-term relationship between people, space and nature. By integrating nature into daily life, biophilic gardens support human well-being, environmental sustainability and the creation of liveable cities for the future. "The future cities lie not in just concrete but in living, breathing green spaces.

## References

1. Infant Nijole, P., Kumanan, K., Subesh, C. R. K., Umesh, S. K., Ragunath, K. P., & Mohamed, M. A. (2025). Biophilic gardens for enhancing urban ecosystems and reconnecting people with nature. *Plant Science Today*, 12(2), 1-12.
2. Newman, P. (2014). Biophilic urbanism: a case study on Singapore. *Australian planner*, 51(1), 47-65.
3. Baka, M. M., & Demet, I. E. (2025). The impact of biophilic design into high rise building: Towards sustainable urban environment. *Int J Innov Sci Res Technol*, 10(1), 808-827.
4. Khairoowala, Z., Aslam, M. F., Ali, U., Haq, S., & Abideen Ansari, M. A. (2025). Biophilic Design and Its Implications for Human Health and Well Being. *African Journal of Biomedical Research*, 28.
5. Cabanek, A., Zingoni de Baro, M. E., & Newman, P. (2020). Biophilic streets: a design framework for creating multiple urban benefits. *Sustainable Earth*, 3(1), 1-17.