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Vertical Greenery: A Complete Package of Beauty and Health-A Review

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Abstract—In the present time, when the air around us is too toxic to be inhaled and space on the ground is limited, thanks to the rampant deforestation and unplanned urban development, there's an urgent need to address the problem and the only way of remediating is by infusing greenness in the urban architecture as much as possible. Urban gardening is a cost effective and eco-friendly technique, having air conditioning properties, thereby reducing the air temperature of the nearby areas and indoors, filtering of pollutants carried by air and abatement of noise; besides breaking the visual monotony in the urban space and adding a splash of freshness and colour, thus restoring human health and mental well being. The concept of living walls is not new in our country, yet much under-exploited compared to the other countries. The British and the North American garden city movement in the 1920s promoted the integration of house and garden through self clinging plants. Very recently, Bengaluru's first vertical garden, an initiative of SayTrees, has been creating ripples in the media. The plants in this system can be grown with or without substrate, and the plants are selected on the basis of their air pollution tolerance level. A variety of climbing ornamental plant species for e.g. Antigonon leptopus, Petrea volubilis, Quisqualis indica, Thunbergia grandiflora etc can be used quite successfully to create the green wall structure inside an urban landscape. However, the green walls can be categorized according to the systems and growing methods, Green façade (direct and indirect system) and Living walls (passive, active, Mur-Vegetal, and landscape wall).

Keywords: deforestation, urban gardening, vertical garden, living walls, air pollution, green façade.