



Landscapes

AIMING HIGH

In a world where green spaces are being crowded over by concrete monstrosities, acclaimed botanist Patrick Blanc shows us a way out – lush green walls that create a vertical garden for the space-challenged.

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The Hanging Gardens of Babylon could learn a thing or two from Patrick Blanc. Blanc is a botanist, with a deep interest in tropical plants. He works at the National Centre for Scientific Research in France. Blanc is the creator of the Vertical Garden, a widely successful technique that allows plants to grow vertically, without soil.

We've all seen plants growing out of buildings, covering walls and rooftops, so perhaps a solid case can be made for growing vegetation without soil. According to the Vertical Garden website, "Soil is merely nothing more than a mechanic support. Only water and the many minerals dissolved in it are essential to plants, together with light and carbon dioxide to conduct photosynthesis."



In tropical and temperate climates, especially, plants can thrive in a soil-less habitat, whether they are stone outcrops, caves or slopes where water is available year round.

Blanc created his first public green wall in 1988, at the Museum of Science and Industry in Paris. That was the beginning of dozens of other prestigious projects all over the world including the French embassy in New Delhi. One stunning example is in Spain at the Caixa Forum Madrid, where the entire facade of the building is covered in stunning green, which contrasts vividly with the red roof tiles of surrounding buildings.

Plants on buildings might look very charming, but direct contact with a building's surface can be damaging to the structure. Roots can seep into cracks, penetrating deep into walls and causing future erosion. The Vertical Garden totally subverts this problem by creating a 'second skin', a structure that is completely separate from the building thus allowing "plants and architecture to cope in harmony".

Patrick Blanc's Vertical Garden is made of three parts: a metal frame, a PVC layer and a layer of felt. The metal frame is versatile and can either be hung on a wall or can be self-standing.



A one-centimetre PVC sheet is riveted to the metal frame and provides stability and waterproofing. The felt layer is stapled on the PVC. This layer allows an equal and homogenous distribution of water, which is always from the top (to imitate rainwater). The roots grow on and inside this felt. Plants can be introduced either as seeds, cuttings or grown plants.

Blanc recommends watering with recycled water, including grey water and rainwater. Tap water, if used, must be "supplemented with low concentrated nutrients". Surprisingly, a Vertical Garden doesn't weigh all that much. Including the plants and metal frame, the weight is lower than 30kg per square meter, making it an effective solution for most walls.

The benefits of having plants around us are many, of course. In addition to cleaning up the air and the eco-system around it, the Vertical Garden also acts as an insulation agent, by protecting the building from the cold in winter and by shielding the walls from the sun in summer. Lower energy bills with a beautiful green wall? What's not to love?

Interestingly, the Vertical Garden also uses the felt base to suck in any pollutants in the air, which are then "slowly decomposed and mineralised before ending up as plant fertilizers."





The application potential of Blanc's work is huge. His Green Walls have graced museums, hotels and other buildings, but can you imagine how such walls would transform public spaces in India? Imagine train stations and neighbourhoods with a thriving green wall, bringing much needed green spaces into urban spaces, beautifying the area immeasurably and also improving the quality of air around us. The transformation of the Pont Max Juvenal, Aix en Provence (2008) is an eye-opener, a simple solution to concrete's ugliness.

For all the cities that have benefited from Blanc's green thumb, their vertical gardens are more than just an escape from dreary cityscapes. Blanc's gardens are a work of art, to be celebrated, cherished and commissioned for many more walls.

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