Breathing Life onto Campus: Living Walls By Annika Veeravatanayothin

Introduction

Living walls, also called green walls, are vertical vegetated wall systems that make use of hydroponics.

They can improve biodiversity and urban sustainability while making use of unused space and not affecting foot traffic. They can house urban plants and native wildlife as an alternative habitat.





There are many blank, windowless walls on campus, most notably on Salazar Hall, King Hall, Music, and Fine Arts. The space could be used for living walls to brighten up these bleak spots.



Methods

- **1.** Identify suitable areas along walls or spaces that are available for partitions.
- **2.** Develop a construction and planting | <u>Indoors</u>: plan for each decided location.
- **3.** Examples of organizations:
 - <u>Urbanstrong</u> for Columbia University.
 - <u>Urban Blooms</u> for the University of Cincinnati.

4. Requires a group for upkeep and ensuring the system is in good health, whether this be students interested in environmental science or volunteers.

New York University







Living walls can be placed both outdoors and indoors.

- quality.
- Outdoors:
- (Sheweka et al.)

- Both:

(Azkorra et al.)

• art piece





Effects

 help regulate indoor air temperature and humidity (Liu et al.)

• remove most air pollutants (i.e. VOC's, CO₂, CO, NO₂, particulate matter) (Pettit et al.) • take a portion of the workload off of air conditioning systems (Torpy et al.)

These would have a major effect on urban sustainability and indoor environmental

 improve insulation (keeping cool during) summer) relating to Urban Heat Island

• control water runoff from roofs (Wang et al.) enhancing biodiversity in urban

landscapes (Mayrand et al.)

• boost mental wellness (Gunn et al.) dampen noise levels by absorbing sound

Additional Functions! treating wastewater with removing pollutants (Wang et al.) • urban garden for produce

Conclusion

Living walls can improve our campus biodiversity and help with urban sustainability, with a variety of other benefits like being a potential garden for the food pantry and making campus more green.



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<u>Citations</u>