

Vertical Gardening for Climate Change

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ABSTRACT

Introduction: Climate change and urbanization pretense important extortions for enlarged intensity of storms, flooding, air pollution, landslides, level of dry lands and heat waves (Ji *et al.* 2022). Climate change is also expected to carry an amplified distribution of some infectious disease vectors. Acute weather events can create new health hazards and cause upset to public health services that lead to huge disease incidence (Ebi *et al.* 2021). Vertical gardening takes on an even additional vibrant role in modifying global climate change (Sowmya, *et al.*, 2024), conserving biodiversity, and caring human health.

All plants perform as natural air filters which enhance the air with oxygen, decrease smog, pollutants (Li *et al.* 2023), Volatile Organic Compounds, toxins such as benzene and formaldehyde, and dust. To attain general food supply and environmental viability, farming methods have to changed to address the provocations of crop production and environmental security. Urban horticulture plays a principal role in making cities greener and forming a additional natural environment (Sia *et al.* 2023).

An informativedrive at JUW & Local Govt. Colleges was organized on significance of vertical gardening for climate change.

Objectives:

- To inform the students and faculty that how improved air quality that protect human health and the environment.
- To aware that how reduced the carbon footprints of a building by filtering pollutants and carbon dioxide out of the air.
- To aware that how enhanced urban biodiversity and thus the urban environment.
- To aware that how reduced the urban heat island effect and smog.

Methodology:

S. No	Schedule/Phasing	Activity Plan
1	1 st Month	An informativedriveat JUW & Local Govt. colleges was arranged on significance of vertical gardening for climate change. Informative manual/brochures will be distributed.
2	2 nd Month	Free supply of low cost pots, materials & training (Informative manual/brochures will be distributed) to JUW & govt., colleges on how vertical gardening will be done.
3	3 rd Month	A exhibition of vertical gardening was arranged.

Result: By awareness campaign at JUW & Local Govt. colleges students and faculty members were understand that the eliminationof big areas of the world's plantation which perform as carbon pools, will risesurrounding CO₂ extent and cause noticeable climate change.Also understand that vertical gardeningboost air quality,CO₂depletion,arrest toxic gases (VOCs),expand biodiversity,there is also largecapacity for producing food.

Conclusion:

- Vertical gardens can minimize internal levels of volatile organic compounds (VOCs) and improve air quality.
- Increase biodiversity and generate space for urban agricultural practices.
- Also reduce Psychological and physiological stress.

Keywords: Carbon Footprints, Climate Change, Reduce Smog, Urban Agricultural, Vertical Gardening.

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