Research Article

Indian Journal of Science and Research

Pande S. *et al.,* Ind. J. Sci. Res. 2023, 3(2), 70-73

ISSN 2583 – 2913

A STUDY OF IMPACT OF GREEN INFRASTRUCTURE ON ENVIRONMENT

Shreyas Pande, Dr.Dharmendra Dubey and Dr Shweta Umale

Abstract*:* Urban development and green infrastructure are closely linked. Green infrastructure refers to a network of natural and semi-natural spaces such as parks, green roofs, urban forests, and green walls that provide multiple environmental, social, and economic benefits. Green infrastructure can help to reduce air and water pollution, mitigate urban heat island effects, enhance biodiversity, and provide recreational opportunities for residents.

Urban development, on the other hand, refers to the process of building and expanding urban areas to accommodate growing populations and changing urban needs. Urban development can have both positive and negative impacts on the environment and human health, depending on the design and management of urban infrastructure.

Green infrastructure can play a key role in promoting sustainable, resilient, and equitable urban development. By incorporating green infrastructure into urban design and planning, cities can:

Improve environmental quality: Green infrastructure can help to reduce air and water pollution, mitigate urban heat island effects, and enhance biodiversity. This can lead to improved environmental quality and a healthier, more sustainable urban environment.

Enhance quality of life: Green infrastructure can provide recreational opportunities for residents, as well as opportunities for education and community engagement. This can enhance quality of life and promote social cohesion and community resilience.

Support economic development: Green infrastructure can also support local economies by attracting tourism, supporting local businesses, and creating jobs in the green sector.

Overall, urban development and green infrastructure are closely linked, and the integration of green infrastructure into urban design and planning can help to promote sustainable, resilient, and equitable urban development.

Keywords: Environment, Infrastructure, Urban Development, Green infrastructure.

Introduction*:* The environment and human health are closely interconnected. The environment refers to the physical, chemical, and biological components that surround us, including air, water, soil, and living organisms. These components can have both positive and negative impacts on human health. For example, exposure to clean air, water, and healthy food can promote good health, while exposure to polluted air and water, toxic chemicals, and infectious agents can cause illnesses and diseases.

The relationship between environment and health is complex and multidimensional. Environmental factors can directly affect human health, such as exposure to hazardous substances in the workplace, or indirectly through their impact on ecosystems and climate change. Environmental health is concerned with the study of these interactions, the identification and assessment of environmental hazards, and the development and implementation of strategies to prevent or reduce environmental health risks.

*Corresponding author

Chhatrapati Shivaji Maharaj Institute of Technology, Panvel, Navi Mumbai, Maharashtr, India

E-mail: shreyas.pande52@gmail.com, dd15091984@gmail.com, shweta.csmit@gmail.com

Published on Web 30/04/2023, www.ijsronline.org

Environmental health issues can affect all aspects of life, including physical health, mental health, and social well-being. Some of the major environmental health concerns include air pollution, water pollution, climate change, toxic chemicals, food safety, and emerging infectious diseases. Addressing these issues requires a collaborative effort from multiple stakeholders, including government agencies, industry, health professionals, and the public.

In conclusion, the environment and health are intricately linked, and understanding this relationship is crucial for promoting good health and well-being for individuals and communities.

Effect of Urban Development of Human Health: Urban development refers to the process of building and expanding cities and other urban areas. While urbanization can bring many benefits such as economic growth, job opportunities, and improved living standards, it can also have negative impacts on human health. Some of the effects of urban development on human health include:

Air pollution: Urban areas are often associated with high levels of air pollution due to the concentration of vehicles, industrial activities, and energy production. Exposure to air pollution has been linked to respiratory diseases, cardiovascular diseases, and cancer.

Noise pollution: Urban areas are also characterized by high levels of noise pollution from transportation, construction, and industrial activities. Exposure to excessive noise can cause hearing loss, sleep disturbance, and stress.

Physical inactivity: Urban development often leads to the creation of neighborhoods with limited access to parks and green spaces, which can discourage physical activity and contribute to sedentary lifestyles.

Heat island effect: The concentration of buildings and other infrastructure in urban areas can lead to the "heat island" effect, where temperatures are significantly higher than in surrounding rural areas. This can increase the risk of heat-related illnesses such as heat exhaustion and heat stroke.

Mental health: Urban areas can also have negative impacts on mental health, including stress, anxiety, and depression. Factors such as social isolation, noise pollution, and lack of access to green spaces can contribute to these negative effects.

To mitigate these negative effects, urban planning and development should prioritize the creation of walkable neighborhoods with access to parks and green spaces, efficient public transportation, and policies to reduce air and noise pollution. Additionally, policies and regulations should be put in place to promote healthy behaviors and reduce health risks associated with urban development.

Green infrastructure help in good Environment Condition: Green infrastructure is a term used to describe natural or semi-natural features that are designed, restored, or enhanced to provide ecological, economic, and social benefits. Examples of green infrastructure include parks, green roofs, rain gardens, urban forests, and wetlands. Green infrastructure can help improve environmental conditions in several ways, including:

Improving air quality: Green infrastructure can absorb air pollutants such as carbon dioxide, nitrogen oxides, and particulate matter, and release oxygen through photosynthesis. This helps to reduce the amount of pollutants in the air and improve air quality.

Reducing urban heat island effect: Green infrastructure can provide shade and evaporative cooling, which can reduce temperatures in urban areas and mitigate the urban heat island effect.

Managing storm water: Green infrastructure features such as rain gardens, green roofs, and bios wales can help manage storm water by capturing and storing runoff, reducing the amount of pollutants that reach waterways, and reducing the risk of flooding.

Providing habitat for wildlife: Green infrastructure can provide habitat for a variety of wildlife, including birds, insects, and small mammals, helping to support biodiversity and promote ecological resilience.

Enhancing human health and well-being: Access to green infrastructure has been linked to improved mental health, physical health, and social well-being. Green spaces provide opportunities for physical activity, relaxation, and social interaction, which can promote good health and reduce stress.

Green infrastructure help in Socio Environment Condition: Green infrastructure, which refers to natural or semi-natural features designed, restored, or enhanced to provide ecological, economic, and social benefits, can have positive impacts on socio-environmental conditions. Here are some ways in which green infrastructure can improve socio-environmental conditions:

Promoting social cohesion: Access to green infrastructure, such as parks and community gardens, can promote social cohesion by providing spaces for social interaction, community gatherings, and cultural events. This can help to strengthen community bonds and foster a sense of belonging.

Improving mental health: Exposure to green infrastructure has been linked to improved mental health, including reduced stress, anxiety, and depression. Access to green spaces can provide opportunities for relaxation, physical activity, and social interaction, which can improve overall well-being.

Enhancing property values: Green infrastructure can enhance property values and attract businesses and residents to an area. Properties located near green infrastructure features such as parks and greenways are often more desirable and can command higher prices.

Creating economic opportunities: Green infrastructure projects can create economic opportunities, such as job creation in the construction and maintenance of green infrastructure features, and the development of new markets for green products and services.

Mitigating environmental justice concerns: Green infrastructure can help to address environmental justice concerns by providing access to green spaces and other environmental amenities in underserved communities. This can help to promote equity and improve the overall quality of life in these communities.

Impact of Green Infrastructure on Environment: Green infrastructure, which refers to natural or semi-natural features designed, restored, or enhanced to provide ecological, economic, and social benefits, can have several positive impacts on the environment. Here are some ways in which green infrastructure can improve the environment:

Improving air quality: Green infrastructure can absorb air pollutants such as carbon dioxide, nitrogen oxides, and particulate matter, and release oxygen through photosynthesis. This helps to reduce the amount of pollutants in the air and improve air quality. Reducing urban heat island effect: Green infrastructure can provide shade and evaporative cooling, which can reduce temperatures in urban areas and mitigate the urban heat island effect. Managing storm water: Green infrastructure features such as rain gardens, green roofs, and bios wales can help manage storm water by capturing and storing runoff, reducing the amount of pollutants that reach waterways, and reducing the risk of flooding. Enhancing biodiversity: Green infrastructure can provide habitat for a variety of wildlife, including birds, insects, and small mammals, helping to support biodiversity and promote ecological resilience. Mitigating climate change: Green infrastructure can help to mitigate climate change by sequestering carbon, reducing energy consumption through shading and cooling, and reducing the need for energy-intensive storm water management systems. Improving water quality: Green infrastructure can improve water quality by filtering pollutants and reducing runoff, which can help to protect and restore aquatic ecosystems.

Result and conclusion: Green infrastructure can provide numerous environmental, social, and economic benefits. By incorporating green infrastructure into urban planning and development, we can create more livable, sustainable, and resilient cities and improve environmental conditions for people and wildlife.

Green infrastructure can have positive impacts on socio-environmental conditions by promoting social cohesion, improving mental health, enhancing property values, creating economic opportunities, and addressing environmental justice concerns. By incorporating green infrastructure into urban planning and development, we can create more livable, sustainable, and equitable communities for all.

Green infrastructure can have several positive impacts on the environment, including improving air quality, reducing the urban heat island effect, managing stormwater, enhancing biodiversity, mitigating climate change, and improving water quality. By incorporating green infrastructure into urban planning and development, we can create more sustainable and resilient communities and help to protect and restore the natural environment

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