



Public Park as an ecosystem- a case study on its relevance in a suburban setting

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Abstract

Urban parks are far more than the 'lungs' of a city. They help to fight pollution, encourage biodiversity in city centers and help to control temperatures and humidity. Green zones in city centers are also crucial to social cohesion. Parks not only provide precious lung space for cities and improve the physical and psychological health of people, but also make cities more attractive for living and working. Many of them also provide recreational opportunities, especially for children. As they attract large numbers of people, they increase the value of the properties in the surroundings. We would try to evaluate real ground level conditioning of park in an urban residential area in Rohini, Delhi, and its effects on its surrounding.

Keywords: Urban, Parks, Biodiversity, Health

Introduction

Public Parks as an Ecosystem effects the surrounding in numerous ways by providing favorable atmosphere to various kind of flora, fauna and other human society-based activities. ECOSYSTEM is a group of self-regulating components interacting with each other and with their non-living environment exchanging energy and matter. Few of us would say that they like it because they are fascinated by nature and they love to spend their time understanding, studying and searching about nature but for most of us we like to just sit and hear life as in the form of birds,

squirrels' beautiful plants this strong connection of us humans with nature is very difficult to put into words but all of us can feel it. Even if we go back in time, we have long histories and believe of our ancestors, that how they recognized the importance of season, worshiped trees and celestial bodies like sun and Moon. They had understood that these things are so vital for us and supported our lives in the form of food, water, shelter, pleasure and off course fear.

Public park and its necessities

Today it is not that dramatic but the benefits we feel today is more personal and are not so central to life. From the perspective of health, parks enable us to relax and relieve our stress, enables us to exercise by walking or cycling. It also gives us various community benefits and act as the focal point for native people. It provides the sense of community we are familiar with. These are the places where we meet our friends;

conduct various social meets and sometime cultural events. There is no doubt that parks give us sense of bonding and provides extra strength to our community.

The initial idea of urban parks was evolved considering the industrial development and declining quality of cities in term of health and natural habitat and thus the need to introduce

green spaces were felt necessity for better and healthier life.

The early parks were laid down with the idea of building a space with considering the bonding factor of nation and the idea of a natural countryside like view, especially the grasslands, water bodies, garden and a maintained horticulture. As the time passed the use and idea of park changed with the induction of sports as the basic theme. With change in time we had also witnessed the declining phase of parks in various terms. Recently many societies, organizations and common peoples reinitiated various project and plans to bring back the beauty and essential features of parks which were depleting because of low maintenance and over exploitation of parks by public domain. Few of the reasons which are having bad effects are the noise produced by construction activities which can lead to alteration in feeding and breeding patterns and thus could be detrimental to the surrounding flora and fauna; among urban ecosystems, parks provide several services, such as water and air purification, wind and noise reduction, carbon sequestration, microclimate regulation, wildlife habitat, and social and psychological

well-being (chiesura, 2004, millennium ecosystem assessment, 2005) as per the recent research by construction blog bimhow, the construction sector contributes to 23% of air pollution, 50% of the climatic change, 40% of drinking water pollution, and 50% of landfill wastes. The noise produced by construction activities can lead to alteration in feeding and breeding patterns which could prove detrimental to the surrounding flora and fauna; Groundwater pollution can also occur from leaking sewers which has been observed for example in Germany. This can also lead to potential cross-contamination of drinking-water supplies. Spreading wastewater or sewage sludge in agriculture may also be included as sources of fecal contamination in groundwater.

The significant sources of contamination in groundwater are farming chemicals, septic waste, landfills, uncontrolled hazardous waste, storage tanks, and atmospheric pollutants, Agricultural chemicals, Septic waste, Landfills, Hazardous waste sites, storage tanks, atmospheric pollutants, underground pipes, road salts

Case study of the public parks in a sub urban area

In order to understand the importance of park and observe its ecosystem we visited the local park in a sub urban setting near the area of Rohini, sector-20, Delhi and a public park in sec-62, Noida. We observed that the condition of the park was not well maintained. As we get closer to the park we observed distorted boundary walls and dumped waste around the walls. The park was filled with stinking sewage water and as we enquired about the source of this water from the guard of the park we found that this was due to the construction of new sewage pipeline by Delhi Jal board which had temporarily diverted the sewage water to the park. As we entered the park we found that the water was acting as a huge reproduction site of mosquitoes and the rainy season was an add-on to the already worsening situation. We observed over grown vegetation, dumped garbage across the various site of park. Even after these unfavorable conditions we had observed a good number of plants animals and human population. These

Sites were also providing the opportunity to the local street food venders. We saw various cattle grazing across the field. The park was acting as a potential site for a rich ecosystem having variety of organism and rich biodiversity with the sense of high social interconnection between different species and human. Along with these all were at risk of getting malaria or dengue infection and many other health problems. Later we tried to explore the construction site which was claimed to be the reason for the accumulation of water in the park. About 2km away from the park we found the construction site which was the sole reason for the diversion of sewage water, as it was by Delhi Jal board we found series of sites in the nearby area which were digging deep holes and constructing new pipelines across the area. Each site was extended to min. length of 200 m Even the worker of the sites was unaware about the water logging in the park which was knowingly or unknowingly caused by them.

Conclusion

The public parks have been serving as a common public resource which directly improves the biodiversity and livelihood of both the flora and fauna including the humans. Though this water lodging was creating better reproductive opportunity for few organisms but creating an imbalance for the system as a whole.

Majority of because which were leading to the depleting condition of the park were man made and mainly was the constructional activity and the over exploitation of the resources. We also found that the usage of a park in sub-urban locality is so much different from that of an urban park and as a fact the amount of organism dependency

and social interference and bonding between human and other animals in these parks are much higher. It also act as an medium to improve the quality of air as a green area and do support local urban employment opportunities. The above discussion clearly indicates that public parks serves as a very important park to sustain the ecosystem of an urban space but low maintenance and over exploitation of these areas can lead to the imbalance in the ecosystem. These public parks also open up the questions regarding the environmental justice.

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