



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor (RJIF): 8.4
IJAR 2024; 10(2): 116-122
www.allresearchjournal.com
Received: 06-01-2024
Accepted: 09-02-2024

Rohit Rajput

Research Scholar, Faculty of
Commerce and Management,
Arunachal University of
Studies, Namsai, Arunachal
Pradesh, India

Dr. Setuma Rawal

Professor, Faculty of
Commerce and Management,
Arunachal University of
Studies, Namsai, Arunachal
Pradesh, India

Corresponding Author:

Rohit Rajput

Research Scholar, Faculty of
Commerce and Management,
Arunachal University of
Studies, Namsai, Arunachal
Pradesh, India

Analysis on the trend of gardens present in the hotels in Delhi

Rohit Rajput and Dr. Setuma Rawal

Abstract

This paper examines people's motives for urban gardening during the pandemic waves of 2020 and 2021. Interest in this practice has often ebbed and flowed in response to changing socioeconomic conditions and depended on positive effects in terms of social integration, community and individual health, urban regeneration, and food security. Any landscape in the hotel adds on the value to the property. Not only it adds on to the environment, but it also adds beauty to the hotel property around it. A nicely maintained garden with well-manicured lawns and lush green plants and hedges attract the guest in a five-star hotel. There are various types of garden like flower garden, woodland garden, rock garden, water garden, herb and vegetable garden and specialty garden like roof garden, scented garden, etc. This study focuses on the present trends of the type of garden present in the hotels of Delhi and the type of plants used in these gardens. The objective of the study is to analyse the characteristics of gardens present in the hotels of Delhi. To list the plants used in the gardens in the hotels in Delhi. The research design for this study was phenomenological, qualitative research. The study was conducted in five five-star hotels in Delhi. Structured Interview and observation techniques were used for data collection. Interviews were conducted for Horticulturist/Horticulture In-Charge, maintaining the gardens. Inductive method was used for analyzing data. The study focused on the characteristics of gardens and plants present in the gardens of five-star hotels in Delhi. The findings also projected a list of plants which are generally used in the landscape gardening of five-star hotels in Delhi. The results of this research will assist the Landscape Gardener and Horticulturist in developing new hotel landscape. This study will also highlight the unexplored areas where further work may be done in hotels. Not only the hotels but also the nurseries will also get benefited by getting a list of plants present in hotels so it will improve the supply of plants to the hotel and reduce the time gap which is in there for maintaining the gardens. Further research may also be done by scholars on the topics like developing ornamental gardens in hotels, irrigation and other maintenance aspects of gardening followed in five-star hotels in Delhi. An analysis of these criteria shows that historic garden management literature focuses on describing the gardens themselves, with few studies interested in the people supporting them. Future research should follow recent policy documents' lead and pay more attention to community value and involvement.

Keywords: Hotel industry, plants, landscape, horticulturist, ancillary services

Introduction

Historic gardens are precious natural and cultural heritage sites that provide many socio-cultural, environmental, and economic benefits. Because they are made up of living elements, they require constant, qualified, long-term management to ensure their survival. They also have very high fixed costs and are capital intensive. For this reason, management has continued to be one of the greatest challenges to their sustainable conservation and to guaranteeing all of the many benefits that they provide.

Gardens are the heart and soul of any hotel. They not only add aesthetic appeal to the appearance of the hotel but also provide much needed greenery in the concrete structure that most hotels are. As per a handbook of landscape published by CPWD in 2013, benefits of planting and protecting trees have environmental value, trees improve the air and water quality, planting trees cut down heating and cooling cost by as much as 12 per cent, trees help in reducing noise pollution, trees also balance the air, soil and water, plants help in controlling the extreme fluctuations, plants reduce the greenhouse effect, and increase the health value, economic value, it provides the shelter in hotter climate and above all, gardens have aesthetic value.

The criteria that shall be considered while planting design are physical and botanical characteristic of plant material, vegetation type, growth rate of plant material used; physical and chemical property of soil conditions; availability and quality of water, availability of sunlight, quality of air, maintenance and functional aspects of the garden as suggested by a handbook of landscape published by CPWD in 2013. All these aspects should be considered by the hotels before finalizing on the design of the garden in the hotel premises.

Hansen, 2016, from the Institute of Food and Agricultural Science, Florida, has published the elements and principles of design which needs to be implemented while designing gardens are: Lines, Forms, Texture, Colour, Proportion, Balance, Repetition and Unity.

As per Polat, *et al* (2017) ^[9], it has been proven through research that there are certain landscape arrangements that inspire people to be more relaxed and better. These special gardens, which are curated to make people feel better, are known as 'therapy gardens.

Brinkley and Chappell (2002) ^[4], have written in their book the gardens of colonial Williamsburg about the specifications of fences. It was imperative that each garden should have its own fence that demarcates its presence in the architectural layout of the residence. The fences were required to be minimum four and one-half feet high. In some places, the fences were found to be much higher than four and a half feet as well. Details of Colonial Garden as mentioned in Favretti (197) ^[7], the gardens were usually enclosed. Rarely the gardens were without a fence, wall, or hedge around it. Mostly, a higher fence was allowed along the sides and back of the property with a lower one specified for across the front. These gardens do not have symmetry. These gardens are near the houses and small with closed space. Planting beds are square or rectangular. Different plants were mixed in one planting bed. Central walkway is provided in the garden which leads to the focal point in the garden. Axelby (2008) ^[2], in his research on botanical garden of Calcutta mentioned that the Hooghly River, meandering gently to the south of botanical garden provided a natural border or fence on side of the garden. The remaining three sides of this botanical garden is bounded by walls. A collection of native houses has been built up alongside these three walls.

As per the website of Dumbarton Oaks research library and collection (2005), modern day gardens have been created in response to current existential problems that have enabled a cultural response to these problems. Some of the features of contemporary gardens are emerging the boundaries between art, architecture and garden design. For relaxing, water is used in gardens and for beauty, object of arts is used. Furniture is often built-in and multi-functional. As element of design, line is used in the garden and focus is on sculptures, lights like LED, hardwood, etc. Grass lawns are very popular with simple but bold plants that are repeated in the whole of the landscape. As per Akhtar (2016), some tips are mentioned for designing a contemporary garden that are simple colour and pattern, water element, light element, seating arrangement, vertical gardening and ornamental pieces.

As per Wikipedia (2018), the gardens in Japan usually create a sense of miniature landscape. These gardens are commonly known as the Zen Gardens, and in some places also referred to as the Japanese rock garden or 'dry

landscape' garden. The landscape of these gardens is created through careful arrangements of pruned trees, moss, bushes, rocks and water features. The ripples in water are represented in the garden using raked gravel or sand. Each element in Japanese gardens has its own expression: Water, expresses nature and symbolizes renewal, calm, wonder and continuity in the hereafter. There are strict rules for laying out the stones which is guided primarily by their shapes and sizes. The stones may often be laid down by pairs and by style contrast. The lantern became a prime element in the blueprint of a Japanese garden as the Japanese tea ceremony started to gain a foothold in the Japanese tradition and culture. In order to admire the beauty and aesthetics of the garden, bridges play an important role. They not only allow the admirer to linger and take in the beauty of the landscape or enjoy the air and water elements of the garden but are also highly revered as a privileged site. Mehta (2018) ^[14], has written in his blog that the Japanese gardens have a sense of mystery in them that draws in its viewers. These gardens are neither designed in a straight line nor have a single feature that dominates the layout. Instead, the Japanese usually have their buildings and garden features usually placed in such a manner wherein it is best admired either from a diagonal, or carefully hidden in a mysterious manner.

On the other hand, a typical Chinese garden has its area enclosed by peripheral walls. The prominent features include one or more ponds, trees and flowers, rock works and an array of halls and pavilions. These features are interconnected by several paths and zigzag galleries. There are four basic gardening elements in any conventional Chinese garden. These elements are architecture, waterscape, plants and rocks. Zhongxin (2015) ^[15], analyzed the characteristics of these gardening elements. The Classical gardens traditionally also have a number of halls and pavilions. These include the ceremony hall, the principal pavilion, the lotus pavilion, the pavilion facing the four directions, the pavilion of flowers and the pavilion of mandarin ducks.

As per the study done by Zadeh and Noori (2017) ^[16], the results showed that the char bagh pattern was commonly used in the painting on carpets. The Zoroastrian believed that the universe was divided into four parts, four seasons or the four natural elements, i.e., fire, water, wind and soil. Farahani *et al* (2016) ^[6], mentioned that the Persian gardens were based on the same principal of Zoroastrian division of the universe. One of the most prominent features of the Persian gardens was their geometric structure. The general idea of this layout was inspired from the Iranian division of the earth into four quarters during the pre-Islamic era which, in turn, was believed to have been inspired from the geometrical designs found in the two great ancient civilizations of Mesopotamia and Indus Valley. Abbas *et al* (2016) ^[1], in his research mentioned that there is always a close association between the natural and human elements in a Persian garden. In fact, there is no border line between the mansion and the remaining parts of the garden thereby giving a seamless continuity between the beginning and end of the gardens. Several trees are planted to provide shade. Also, these gardens had paved pathways which were usually narrow to help more of natural elements to dominate the landscape. These gardens, as per the Zoroastrian principals of universe, are divided into four sections. The irrigation system as well as the division of water streams follows the same principal. A unique characteristic of the geometry is

that all the rectangle spaces are split into four equal parts and are interspersed with two streams that intersect at the midpoint. Usually, a pond was placed as well at the center point of the intersection.

Lambert (2018) ^[17], mentioned in his article that the art of topiary was mastered by the Romans. Roman gardens were bejeweled with a large number of statues and sculptures besides the vegetation. Ornamented hedges and vines were a prominent feature in the landscape of these gardens. The wealthy Romans citizens had their houses built around a large and spacious courtyard. A colonnaded porch, a bed of flowers, fountain as well as pools adorned the courtyard. As per Wikipedia (2018), the garden walk or terrace, which was known to the Romans as the *xystus*, was a core element of the gardens. The *xystus* often overlooked a lower garden, or ambulation. A large variety of trees, flowers and plants bordered the ambulation. These gardens were used commonly for a leisurely stroll after a meal, a casual conversation between friends or relatives and/or other recreational activities. A shaded avenue, known as 'gestation,' also featured in these gardens. This was primarily used by the master of the house, who could either be carried by his slaves or ride on a horseback. The gestation more often than not encircled the ambulation or, on certain occasions, was constructed as a separate space, which was generally oval shaped. The gardens were also dotted by a number of several pathways. Many A large number of ornamental objects, including sculptures, sundials and frescos also featured in the Roman gardens. Pagan (2016, had mentioned that archaeological evidence allowed to categorize Roman gardens into three types, depending on their relationship to the adjacent architecture:

(1) gardens that surround a structure; (2) gardens that are attached to a structure and are more intensively planted; and (3) gardens located within an architectural structure.

As per the website vaastushastra.com, 2017, several guidelines have been given for the layout of gardens.

- Tall trees were meant to be planted in South-West side of the plot. Although there was no restriction on the direction in which the tall trees should not be planted, it was recommended that these trees should not be too close to the building.
- Large trees, such as mango, were advised to be planted in South or West side of the house. Like tall trees, the large trees were also advised to be planted away from the building. It was also recommended to sow them at a place where they could get sufficient sunlight and at the same time, not block away the sun from the residents of the house.
- Tulsi or Basil, a prominent feature of the ancient Indian civilization, was best meant to be planted in the North, North-East or East direction.
- Creepers were advised to be planted on the exteriors of the building. It was recommended that these plants should have their own support and not use the wall or the building for the same as it could damage the structure.
- Fruit bearing trees were meant to be planted in the Eastern side.
- Flower bearing plants such as Rose, Marigold, Jasmine etc. were to be planted in the South-Western side. Except for Rose, thorny plants were not recommended for household gardens.

- Recommended direction for flowerpots is North or East however the compound wall should not be used for keeping pots.
- Waterfall, benches and swings should be on North or East direction.
- Whereas stones sculpture and rock gardens should be in Southwest, South or West direction.

Current scenario

As per website of Morphis design (2019) ^[8], the article on emerging trends in landscape hospitality design mentions that the current scenario of landscape gardening in hotels has included wellness as an important feature into the designing of the landscape gardens. To include wellness into the garden following trends are coming up like place for conducting classes for yoga, martial arts, watsu, meditation, herbal massage therapy and hot spring. Morphis designers also mention that in hotels the work of landscape garden is to connect the guest with the nature. Now a days developers of the hotels are not only focusing on the aesthetics but also to create performance landscape for example developing habitat hotels, migratory bird attraction, kitchen gardens with 'field to fork' culinary delight and for people looking for urban heat island effect solution. New landscape gardens are also having facility of Wi-Fi connectivity which gives outdoor working scape.

Barraza (2017) ^[3] has mentioned about the unique gardens features in Hotels across world. Bodysgallen Hall and Spa has walled garden with lily pad pond and to delight the guest garden tour is also offered by the hotel. Dar al Hossoun hotel features most rare and unique plants in their garden. The Gardens Hotel in Florida has white Gazebo with diverse plant life. In Ston Easton Park Hotel uses flowers from its garden for flower arrangement in the hotel and 60 per cent of the vegetables used in the hotel are from the Kitchen Garden. Hotel Bel-Air in California has Swan Lake whereas Mckittrick Hotel has garden rooftop bar. In Kyoto Heian Hotel, Japanese style garden exist. Hotel La Aldea is at the entrance of the National Park situated in the Chiapaneca jungle.

In the literature review, types of gardens have been discussed which includes Colonial type, Contemporary type, Persian type, Japanese type, Chinese type, Roman type and Garden designed as per Vastu shastra. There is lots of material available on these types of gardens but not much has been done in analyzing the elements of garden design which are in Hotels. Studies are not done on the trends of the garden in hotels, types of plants, types of hedge, types of ornamental structure used in the gardens, etc. The purpose of this research is to analyse the elements of the hotels garden. The gardens have health benefits and add to the aesthetic appeal to the hotel. By analyzing the elements, the students pursuing the landscape gardening get to know the trends of the hotel gardens and it is also beneficial for the landscape gardener while they are planning the gardens in new hotels.

Research question for the present study is: How are the hotels developing their gardens?

To cover the research gap and answer the research question the study is analyzing the characteristic of the gardens which are in the hotels in Delhi. The objectives of this research are: To analyse the elements of the garden present in the hotels in Delhi and to list the plants used in the gardens in the hotels in Delhi.

Methodology

This study is on a qualitative technique where phenomenological method is used. The qualitative approach has been selected for this study because it is empirical in nature as the field survey of the gardens in the five-star hotels was done on the observation. The survey was done on five five-star hotels of Delhi from 15th October 2018 to 07th November 2018. The hotels were selected on the basis of location and star classification. The hotels selected for this research was on Convenience sampling method. Five five-star hotels were sent an official mail from the Institute of Hotel Management, Pusa, New Delhi, so that the visit to the hotels may be organized. The reason for selecting five five-star hotels was to do intensive study on the gardens and this can be taken as a study which explains the trend present in the gardens of the five-star hotels of Delhi. All the hotels responded positively and gave date and time to visit the hotels.

The data collection tool used was one on one Interview and Observation. On reaching the hotels, Horticulture in-charge was met. The Horticulture in-charge allowed to visit the gardens of the hotel and answered the questions pertaining to the research. All the hotels cooperated and supported in answering the questions. All the horticulturists were male.

The interviews were conducted in the gardens itself, it took about one hour on an average on each interview and along with the interview photographs were taken to support and analyse research.

For analyzing the data, inductive method is used. The inductive method is used where narrative analysis is to be done. This method condenses varied raw data and helps in establishing links between various variables within the data.

Findings

Five five-star hotels of Delhi were visited to analyse the elements/characteristics used in gardens and the popular plants used in the hotel gardens. The horticulturist of the hotels were asked the following questions: Popular plants used in their hotel, Type of fence / hedge used in the hotel and its height, mixing of plants are done in one bed, types of furniture used in the garden, flooring / tiles used in the garden, lighting system used in the garden, vertical gardening practiced in the garden, ornamental objects used in garden, does the garden have rocks, water body, bridge in the garden and does the garden have topiary.

Based on the above question and observations following answers were given by the horticulture in-charges:

Table 1: Response Received and Observations Made

Question asked and observations made	Response - Hotel 1	Response - Hotel 2	Response - Hotel 3	Response - Hotel 4	Response - Hotel 5
Popular plants used in the garden	Anarmi plant Dwarf Syngonium Ficus benjamina Fox Tail Palm Rubber Fig Golden duranta Ficus variegata Jade plant Frangipani Table palm Cycas palm Monstera deliciosa Selection one Grass Barilla Epipremnum aureum Furcaria plant Sansevieria plant Dracaena	Ocimum Tenuiflorum Barilla Anarmi Selection One grass Chinese Oragne Hyophorbe lagenicaulis Golden duranta Ficus Combretum Indicum Fox Tail Palm Furcaria plant Jade Plant Spider Lily Table Palm Akalifa plant Dracena Frangipani Bougainvillea Iresine Chamaedorea Seifrizii	Anarmi plant Dwarf Syngonium Ficus benjamina Fox Tail Palm Rubber Fig Golden duranta Ficus variegata Jade plant Frangipani Table palm Cycas palm Monstera deliciosa Selection one Barilla Epipremnum aureum Furcaria plant Sansevieria plant Dracaena Saraca asoca Bougainvillea Barilla	Anarmi plant Dwarf Syngonium Ficus benjamina Fox Tail Palm Rubber Fig Golden duranta Ficus variegata Jade plant Frangipani Table palm Cycas palm Monstera deliciosa Selection one Grass Barilla Epipremnum aureum Furcaria plant Sansevieria plant Dracaena	Anarmi plant Dwarf Syngonium Ficus benjamina Fish Tail Palm Golden duranta Ficus variegata Jade plant Frangipani Table palm Cycas palm Monstera deliciosa Selection one Grass Epipremnum aureum Furcaria plant Sansevieria plant Dracaena Saraca asoca Bougainvillea
Types of fence/ hedge and its height	Hedge are made of Anarmi Plant and Ficus Heights are 1 feet, 2.5 feet and 9 feet	Hedge are made of Anarmi, Akalifa and Ficus. Various heights were seen: 1.5 feet, 2.5 feet and 4 feet	Hedge are made of Anarmi Plant and Ficus Heights are 1 feet, 2.5 feet and 9 feet Hedges are straight and in wave	Hedge are made of Anarmi Plant and Ficus Heights are 1 foot and 2.5 feet	Hedge are made of Anarmi Plant Heights are 1 feet, 2.5 feet and 4 feet
Type of furniture used in the garden	Wrought Iron	No garden furniture is used	No garden furniture was used	No garden furniture was used	Benches made of stone
Mixing of plants in one bed	Yes, mixing of plant is done. Especially with seasonal flowering plants	Mixing of plant is done in one bed	Mixing of plant is done in one bed	Mixing of plant is done in one bed	Mixing of plant is done in one bed
Flooring/ Tiles used in the garden	Sandstone tiles are used in the pathway. Patterns of tile laying are: jack on jack type	Sandstone is used in the pathway. Modular Flooring pattern is used for laying tiles.	Red Sandstone is used in the pathway. Pathways are surrounding the lawns. Tile laying	Red Sandstone is used in the pathway. Pathways are surrounding the lawns.	Red sandstone is used in the pathway. Modular Flooring pattern

	and diamond. Pathway are surrounding the lawns	Pathways are in the center of garden.	pattern is Jack on Jack.	Tile laying pattern is Jack on Jack.	is used for laying tiles.
Lighting system used in hotels	LED bulbs fixed in lamp post (1 feet height) with focus on plants For general lighting, 1.5 feet lamp post are used along the pathway	General lighting is used.	General Lighting is used. Some places task lighting technique is done using LED focus light.	General lighting is used.	Task lighting technique is done using LED focus light.
Vertical Gardening	No vertical gardening is done	No vertical gardening is done	No Vertical Gardening is done	No Vertical Gardening is done	No Vertical gardening
Ornamental objects	No ornamental objects are used in the garden	Ornamental vase is used. Made of sandstone	Ornamental structure is used in the garden.	Ornamental Fountain used	Ornamental vase is used. Made of sandstone
Presence of rocks	Rocks and cascading water is used as a combination White pebbles are also used at different locations	White pebbles is used at different places	No white pebbles used	White pebbles is used at different places	White pebbles is used at different places
Water Body	Water body was part of the garden with cascading effect.	Water body with fountain and step cascading effect is used	Fountain is next to the lawn	Water body with fountain	Water body with fountain present
Bridge in the garden	No bridge was present in the garden	No bridge was present	No bridge was present	No bridge was present	No bridge was present
Topiary present in the garden	Topiary made of Ficus was present. Topiaries were representing shapes. Topiary did not have shape of animals or objects.	Topiary made of Ficus was present. Topiaries were representing shapes. Topiary did not have shape of animals or objects.	Topiary made out of Ficus and Ashoka tree are present. Geometrical shape topiary was seen.	Topiary made of Ficus was present. Topiaries were representing shapes.	Topiary made of Ficus was present. Topiaries were representing shapes.
Special element	Herb Garden	Using Vastu guidelines for plantation	Hydronuematic system	Herb Garden	No special feature

Data analysis and Discussion

The main purpose of the Inductive Qualitative data analysis approach is to draw the findings from the frequent or

significant characteristics present in raw data. Inductive approach draws conclusion from the raw data.

Table 2: Common Plants and Characteristics

Question asked and observations made (coding)	Common Plants/ Characteristics in the above 5 five-star hotels
Popular plants used in the garden	Following are the common plants which are observed in the five- star hotels in Delhi: <ul style="list-style-type: none"> Anarmi- This plant is used as the hedge in the premises. Golden duranta – This plant is used as the hedge Fox Tail Palm Jade plant Frangipani Table palm Dracaena Furcaria plant Sansevieria plant Selection one Grass Barilla ground cover
Types of fence/ hedge and its height	Live hedge -Anarmi and Ficus. Various heights depending on its placement. No Fence of garden.
Type of furniture used in the garden	Nothing Common
Mixing of plants in one bed	Mixing of plants is done in all the hotels.
Flooring/ Tiles used in the garden	Stone based tile used in pathway. No common tile laying pattern seen.
Lighting system used in hotels	No common method of lighting.
Vertical Gardening	No Vertical gardening is seen
Ornamental objects	Ornamental structure may or may not be present.
Presence of rocks	Rocks/ pebbles may or may not be present.
Water Body	Water body is present in all the hotels
Bridge in the garden	No bridge present in any of the hotels
Topiary present in the garden	Topiary present. Ficus used for topiary. Only Geometrical shapes used.
Special element	Special elements present which make them unique.

Common Plants used in gardens of the hotel are: Grass: - Selection one, Ground Cover:- Barilla, Hedge:- Ficus and Anarmi, Plants:- Fox Tail Palm, Golden Duranta, Jade plant, Frangipani, Table palm, Furcaria plant, Sansevieria plant and Dracaena.

Here are some characteristics of the plants which are used in the gardens of the five-star hotels in Delhi. Foxtail palm is a fast-growing plant and can resist drought. Golden Duranta is a shrub which has yellow green colour and grows in warm condition. It is a versatile plant. Jade plant is easy to maintain, can be propagated from single leaf, prefers summer climate. Frangipani plant has white coloured highly fragrant flowers, it is a tropical hardy plant. Table palm, this is also called Chinese fan and grows in tropical climate with loam-based soil. Furcaria plant has sword shaped leaves, cultivated in tropical regions with well-drained soil. Sansevieria plant commonly called as Mother – in – law’s tongue cannot resist overwatering and thrives well in warm temperature. Dracaena grows in subtropical climate and requires well-drained soil.

As per the ICAR, Soil Survey and Land Use Plan of Delhi Territory Report, 1979, the soil of Delhi in most of the regions is sandy/ loamy in texture, which has a high drainage. As per Wikipedia, 2018, Delhi falls under the humid subtropical climatic zone. Most of the plants mentioned above like Foxtail palm, Furcaria, Sansevieria, Dracaena require well-drained soil to grow. Whereas Golden Duranta, Jade Plant, Frangipani plant and Sansevieria are the plants which require warm temperature. Therefore, the conditions available in Delhi facilitate the growth of these plants naturally and hence, most hotels prefer these plants. Since the weather and the soil supports the growth of the above-mentioned plants. It requires less maintenance efforts by the hotels to grow these plants.

Most of the hotels avoid using hedges and fences made of wood or wire and rather prefer using plants for their hedges. This not only increases greenery in and around the hotel but also helps in cooling down the surrounding environment. One of the hotels under observation had covered the complete compound wall using tall Ficus hedge measuring height of nine feet as mentioned in Table 1. Although this kind of trend was not seen in any other hotel which were under observation. The common practice amongst hotels observed was short heighted live hedges.

As per the research done in Poland, by Wilczek *et al* (2005)^[18], hedges and fences made of shrubs and trees also increase the biodiversity, create suitable conditions for many animals, improving the recreation and education value of region.

There is no common factor in terms of usage of furniture and lighting system. Each hotel has its own idea and theme and uses the furniture and lighting system in accordance with the same. Two of the hotels under study were having garden furniture one hotel had furniture made of wrought iron whereas the other was made of red sandstone. The reasons for not placing furniture in the gardens may be that these gardens are used for open banquet parties where the seating arrangement and set up is different for different banquet functions.

No common methods of lighting system and fittings were used by the gardens of the hotel. In one of the hotel low height light fittings were installed along the pathway in the garden. In three of the hotels the general lights were used in the garden and the lights were installed which were

highlighting the building of the hotel. The reason may be the gardens are used for banquet parties. So, the lighting is done as per the requirements of the banquet functions. Although the lights were used to focus on the sculpture and to highlight them, in one of the hotel lights were used to highlight the plants and topiary. It can be concluded that no common trend is seen when it comes to lighting techniques and light fittings used in the gardens. Hotels have unique way of lighting gardens as per their requirement and layout. More than one plant is grown in one bed, as seen in all the five hotels under study. This may be to improve the aesthetics. As different height, texture and colour plants may be grown in one bed to create variety, as per the principles of design. Since in hotels the gardens are meant for improving the overall aesthetics, so the emphasis is on establishing the principles of design by mixing colours, texture and shape. Moreover, the beds for plantation is on the periphery of the garden therefore tall plants are placed towards the wall and the short plants are towards the garden side. The reason for the placement of beds is on periphery is because most of the hotels utilize these gardens for banquet functions.

The material used for making pathway in the garden or lawns is sandstone. As per Wikipedia (2018), 90 per cent of the sandstone availability is in Rajasthan. So, it is economically easy for Delhi hotels to procure sandstone which is available in state just next to it and India is the leading country when it comes to the export of sandstone. Most of the hotel building also have exterior made of sandstone, so to match with the exterior sandstone is used in the pathways. Since, it is a porous stone, so can easily be maintained in the exterior of the building.

No vertical gardening and bridges were seen in the hotels. As Delhi has tropical climate so vertical gardening is difficult to maintain. High temperature may lead to the drying of the plants. Similarly, there was an article by Sharma (2018)^[10], published in Hindustan Times which mentioned that NDMC (New Delhi Municipal Corporation) had initiated vertical gardening at various locations in Delhi to beautify it, but in nine-month time the ornamental plants dried up leaving behind the plastic pots exposed. That is the reason in hotels in Delhi vertical gardening is not seen at all. Although all the hotels under observation had water body in some forms or the other but none of them had bridge as these water bodies were not too big.

Ornamental objects were not a common feature it was dependent on the areas available for garden within the premises. The hotels have areas dedicated to the Ornamental objects like statue, ornamental vase, etc. Some of the hotels used white pebbles in the garden as well as in the indoor plants for ornamental purpose; however, it was not seen in all the hotels.

All the hotels under observation had water body present in the gardens. Water body adds on to the aesthetics of the garden. All the five hotels, under study were having fountain in the exteriors. Out of the five hotels, two of them were having cascading water body along with the fountain. So, water body is one of the common features present in the gardens.

Topiary was a common thing seen in all the hotels. Similar kind of topiary was seen. In all the five hotels, Ficus plant was used in topiary and geometrical shapes was seen.

Each of the hotel has a unique point of emphasis in their garden for example, one of the hotel had herb garden which

may be visited by guest, another hotel had implemented vastu guidelines in their garden whereas another hotel had used sustainability as their uniqueness.

Conclusion

To conclude, plants which are easy to maintain; requires good drainage, soil and tropical climate are common in the hotels in Delhi. The common characteristics in the gardens of the hotels in Delhi are: live hedge made of Ficus plant or Anarni plant; mixing of different plants in one bed; pathway made of sandstone; no vertical gardening and bridge in the gardens; presence of water body; similar topiary in terms of plant and shape and addition of special element to create uniqueness.

References

1. Abbas MY, Nafisi N, Nafisi S. Persian Garden, Cultural Sustainability and Environmental Design case study Shazdeh garden. *Procedia - Social and Behavioral Sciences*. 2016;222:510-517.
2. Axelby R. Calcutta botanic garden and the colonial re-ordering of the Indian environment. *Archives of Natural History*. 2008;35(1):150-163.
3. Barraza R. 9 garden design ideas to steal from hotels around the world [Internet]. 2017 [cited 2022 Jan 14]. Available from: <https://www.elledecor.com/life-culture/travel/g9114028/hotel-garden-ideas/>
4. Brinkley MK, Chappell GW. A Williamsburg Perspective on Colonial Gardens [Internet]. 2018 [cited 2022 Jan 14]. Available from: <http://www.history.org/almanack/life/garden/garintro.cfm>
5. CPWD. A Handbook of Landscape [Internet]. 2013 [cited 2022 Jan 14]. Available from: <https://cpwd.gov.in/Publication/LandscapeBook.pdf>
6. Farahani LM, Motamed B, Jamei E. Persian Gardens: Meanings, Symbolism, and Design. *Official Journal of International Association for Landscape Ecology, Landscape Online*. 2016;46:1-19.
7. Favretti RJ. *Arnoldia, Colonial Gardens*. 1972;145-170. Available from: <http://arnoldia.arboretum.harvard.edu/pdf/articles/1971-31-4-colonial-gardens.pdf>
8. Morphis Design. Emerging trends in landscape hospitality design [Internet]; c2019 [cited 2022 Jan 14]. Available from: <http://www.morphisdesign.com/morphis-emerging-trends-in-landscape-hospitality>
9. Polat AT, Gungor S, Demir M. The Design Principles of Therapeutic Gardens. *International Journal of Landscape Architecture Research*. 2017;1(2):37-42. E-ISSN: 2602-4322. Available from: <http://dergipark.gov.tr/download/article-file/403197>
10. Sharma V. At vertical Gardens, dried up pots and empty pots [Internet]. 2018 [cited 2022 Jan 14]. Available from: <https://www.pressreader.com/>
11. Ville de Montreal. The Elements of Japanese Garden [Internet]. 2018 [cited 2022 Jan 14]. Available from: <http://m.espacepourelavie.ca/en/elements-japanese-garden>
12. Misra S, Goyal AK. A Study on the Trend of Gardens Present in the Hotels in Delhi: A Qualitative Study. *Amity Journal of Management Research*; c2022.
13. Akhtar F. 6 tips for designing a contemporary garden [Internet]. 30 November 2016 [cited 2022 Jan 14]. Available from: <https://www.99acres.com/articles/6-tips-for-designing-a-contemporary-garden.htmls>
14. Mehta SR, Bainey KR, Cantor WJ, Lordkipanidzé M, Marquis-Gravel G, Robinson SD, *et al*. 2018 Canadian Cardiovascular Society/Canadian Association of Interventional Cardiology focused update of the guidelines for the use of antiplatelet therapy. *Canadian Journal of Cardiology*. 2018 Mar 1;34(3):214-33.
15. Zhong X, Dai Z, Qin F, Li J, Yang H, Lu Z, *et al*. Ag-decorated Bi₂O₃ nanospheres with enhanced visible-light-driven photocatalytic activities for water treatment. *RSC advances*. 2015;5(85):69312-8.
16. Noori-Zadeh A, Mesbah-Namin SA, Saboor-Yaraghi AA. Epigenetic and gene expression alterations of FOXP3 in the T cells of EAE mouse model of multiple sclerosis. *Journal of the Neurological Sciences*. 2017 Apr 15;375:203-8.
17. Lambert B. A student's guide to Bayesian statistics. *A Student's Guide to Bayesian Statistics*; c2018. p. 1-520.
18. Wilczek F. In search of symmetry lost. *Nature*. 2005 Jan 20;433(7023):239-47.