

The Rich Heritage of Landscaping in India: from 'vanas' to Green Cities

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Abstract: Gardens have been in existence for a long time and evolved over time. The oldest types of garden were probably the "forest garden" of the pre-historic period. The 'Agni Purana', written about 4000 years ago, mentions that human should protect trees to have material gains and religious blessings. In India, the history of gardening dates back to the Indus Valley Civilization, which flourished between 2500 BCE and 1500 BCE. The Aryan's epics (Ramayana and Mahabharata) of the vedic period have also reference to palaces which had beautiful gardens, trees, flowers, fruits and lakes filled with lotus flowers. During the Buddhist period, the gardens were commonly called as 'vana'. The great emperor Asoka (273-232 BC), developed arboriculture as well as avenue plantation in his time. During the Gupta dynasty, Kalidas (about 57 BC) had written a famous play 'Shakuntala' in which there is a mention of pleasure garden, whereas, 'Amarakosha' a thesaurus of Sanskrit considered as encyclopedia of nature, which covers investigation of plants and gardens, was also written by scholar Amarasimha. The Chola Dynasty was also fascinated towards gardens and flowers and made gardens around their palaces. In Acharya Sarngadhara's Sarngadhara-Paddhati (1300 AD), a whole chapter is dedicated to 'The Upavana-Vinoda', a Sanskrit treatise on Arboriculture. With the arrivals of Mughal rulers in India, Mughal garden in formal style of gardening was introduced. Some of the magnificent formal gardens viz., Aram Bagh, Nasim Bagh, Shalimar gardens were created. Apart from Mughals, other major contribution was from Firoz Shah Tughlaq who developed gardens around Delhi and also Sher Shah Suri, who planted avenue trees on both sides of Grand trunk road made by him. The Rajput kings were also great admirer of gardens. King Man Singh began the famous garden at Amber Fort which was later finished by Jai Singh II (1699-1743 A.D.). Raja Abhai Singh (1724-1749 A.D.) designed The Mandor garden near Jodhpur whereas Suraj Mal built the garden palace at Deeg, Rajasthan, which had fountains and also water courses. At Orchha (in Madhya Pradesh), The Rai Praveen Mahal overlooks the large garden i.e. Anand Mahal Bagh. The Ahhichatragarh Fort (Nagpur) also had beautiful garden with lotus pools and water tanks. The long history of gardens and aesthetic sense which evolved later during the British India and after independence particularly evolving of green cities in modern India has been compiled in this paper.

1. INTRODUCTION

Gardens have been in existence for a long time and evolved over time. The oldest types of garden were probably the "forest garden" of the pre-historic period. The forests or vanas had close association with the culture of the people living in them. The trees were revered by them and certain trees had religious values. The 'Agni Purana', written about 4000 years ago, mentions that human should protect trees to have material gains and religious blessings. Later on, the plants were domesticated and the focus was on cultivation of plants for food. But still, the trees and plants had their religious values and sacred groves were planted around the temples. Gautama Buddha some 2500 years ago preached that a tree should be planted every five years. Further down the timeline, herbs and other utility plants were grown in the garden and eventually ornamental gardens came into existence which was associated with the wealthier sections of the society initially. With the passage of time gardens, which were thought of only aesthetic and beauty value have now become essential to fight the global warming associated with climate change and to save the earth. Urban landscaping has become the need of hour for the urban society for a sustainable living. The important periods in the evolution of gardens in India have been mentioned below.

Indus Valley Civilization

In India, the history of gardening dates back to the Indus Valley Civilization, which flourished between 2500 BCE and 1500 BCE. A plant on the seal from Mohenjo-daro has been identified as the Pipal (*Ficus religiosa*) tree. Similarly, a seal from Harappa civilization has a Weeping willow (*Salix babylonica*) tree on it.

Vedic Period

The next major civilization in India after the decline of the Indus Valley Civilization by 1400 BC was the Vedic civilization (1500 BC and 600 BC). The Aryans of the Vedic age were notable people and known for the four Vedas viz., Rig Veda, Sama Veda, Yazur Veda and Atharva Veda. They were fond of trees and flowers. Lotus has special mention in the Vedic Sanskrit scriptures. The Atharva Veda and Rig Veda have mention of the Ashvattha tree, the Peepal (*Ficus religiosa*) tree having attractive foliage. The Aryan’s epics (*Ramayana* and *Mahabharata*) have also reference to palaces which had beautiful gardens, trees, flowers, fruits and lakes filled with lotus flowers. *Plant diversity has been discussed in detail in the* Valmiki’s *Ramayana* which has mention of about 182 plant species (Murugesan, 2014). The *Bala kanda* in *Ramayana* mentions forests and plants of the region, whereas, *Kishkinda kanda* discusses the forest and biodiversity of the Pampa lake area and the *Aranya kanda* describes the foliage in the Sage Agasthya’s shelter. The name ‘Asokavana’ where *Sita* (wife of king *Rama*) was kept captive by the king *Ravana*, derives its name from the Ashoka (*Saraca indica*) trees itself. Some of the trees and flowers which have been mentioned in this epic are:

S.No.	Hindi Name	Botanical Name
1	Bargad	<i>Ficus benghalensis</i>
2	Peepal	<i>Ficus religiosa</i>
3	Ashoka	<i>Saraca indica</i>
4	Sal	<i>Shorea robusta</i>
5	Champa	<i>Michelia champaca</i>
6	Arjun	<i>Terminalia arjuna</i>
7	Palash/Dhaak	<i>Butea monosperma</i>
8	Amaltas	<i>Cassia fistula</i>
9	Neem	<i>Azadirachta indica</i>
10	Nagkesara	<i>Mesua ferrea</i>
11	Kewda (Screwpine)	<i>Pandanus odorifer()</i> ,
12	Taala palm	<i>Botassus flabellifer</i>
13	Khair	<i>Senegalia catechu</i>
14	Ashvakarna/Gurjun	<i>Dipterocarpus turbinatus</i>
15	Gaub	<i>Diospyros malabarica</i>
16	Patala	<i>Bignonia suaveolens</i>
17	Bael	<i>Aegle marmelos</i>
18	Ber	<i>Ziziphus mauritiana</i>
19	Mogra (Arabian jasmine)	<i>Jasminum sambac</i>
20	Madhumalti	<i>Combretum indicum</i>

Similarly, in the Mahabharata's ‘Sabha Parva’, detailed descriptions of the pleasure gardens, parks, and lakes surrounding the palaces in Indraprastha region of their kingdom are given. Some of the common plants mentioned are Lotus (*Nelumbo nucifera*), Ashoka (*Saraca indica*), Amaltas (*Cassia fistula*), Champa (*Michelia champaca*), Mango (*Mangifera indica*). Special mention is of Kadamba (*Anthocephalus cadamba*) tree, which is closely associated with Lord Krishna's life and also of Parijat (*Nyctanthes arbor-tristis*). Actually, the Pandavas were moved to Khandavaprastha which was in a desert. They beautified the place as a second heaven where a number of beautiful gardens were constructed around the city with several trees bearing fruits and flowers (Tatavarthy *et al.*, 2017).

Buddhist Period

During the Buddhist period, gardens were made around the monasteries and *stupas* and there were beautiful gardens in Nalanda and Taxila cities. Lord Buddha was born (563 BC) under the Ashoka tree (*Saraca indica*), attained enlightenment under a Peepal tree (*Ficus religiosa*) and spread his preaching in the shade of Banyan (*Ficus benghalensis*) and Mango (*Mangifera indica*) trees, and died in a Sal (*Shorea robusta*) grove. Various literatures have also mentioned other trees associated with

Budha viz, Kadam, Albizzia, Palash, Amaltas, Neem, Chandan, Aonla, Bel etc. Some of the forests (*Vana*) directly related to Lord Budha are *Jetavana*, *Nyagrodhvana*, *Mahavana*, *Venuvana* etc (Bidari, 2022).

Mauryan Period

Chandragupta Maurya was the visionary founder of the Mauryan Empire (300 BC), who understood the importance of the forests and appointed a high level officer to look after the forests. Kautilya (also known as Vishnugupta and Chanakya) was his advisor whose treatise states the importance and development of flower garden and fruit orchard in area lacking water. The great emperor Asoka (273-232 BC), also called as Asoka-the-great, developed arboriculture as well as avenue plantation in his time (Gupta *et al.*, 2000). Trees were planted on both sides of the road during his period. His son Prince Mahendra planted a sapling of the great Bodhi tree (*Ficus religiosa*) brought from India to Anuradhapur in Sri Lanka where he was sent as missionary to spread message of Budha.

Gupta Dynasty

During Gupta dynasty, Kalidas, probably the greatest Sanskrit poet and dramatist, flourished during the reign of king Chandragupta II, also known as Vikramaditya. Kalidas (about 57 BC) had written a very famous play 'Shakuntala' in which he mentions the pleasure garden having a bower of the madhavi lata creeper (*Hiptage benghalensis*) and trees like Kachnar (*Bauhinia varieagata*), Ashoka (*Saraca indica*), Arjuna (*Terminalia arjuna*), Kadamba (*Anthocephalus cadamba*), Maulsari (*Mimusops elengi*), Parijat (*Nyctanthes arbor-tristis*) and Palash (*Butea monosperma*). Similarly, during the Gupta period, 'Amarakosha' a thesaurus of Sanskrit which covers investigation of plants and gardens, woods, crops, fertilizer etc. was also written by scholar Amarasimha and is considered as encyclopedia of nature. The plants that are revealed in the Amarakosha can be classified into huge trees, edible fruit trees, shrubs, herbs, creepers, water plants, grasses, pulses, cereals, wild cereals and others (Boddupalli, 2020)

Harshvardhana Period

Emperor Harshvardhana, appeared as a strong and capable ruler in North India (606-647 AD) who integrated the Northern India after the decline of Gupta dynasty. He made Kannauj his capital and the city, had beautiful gardens, large buildings and water tanks. It had many monasteries and temples with sacred trees and plants.

The Chola Dynasty

The Chola Dynasty was the greatest among all the south Indian dynasties. The festivals celebrated during their period had rituals in which religious offerings were done with a cascade of flowers. Meetings were held under tamarind or some other big trees. Also, committees were made to look after gardens. The king Rajadhiraja Chola II (1166-1178 AD) was known to have raised flower gardens around his big palace.

Sarngadhara and Arbori-horticulture

In Acharya Sarngadhara's encyclopedic work (1300 AD) *Sarngadhara-Paddhati*, a chapter 'The Upavana-Vinoda' is a Sanskrit treatise which deals on Arbori-Horticulture. The *Sarngadhara-Paddhati*, is enough to persuade that the documented science of Arbori-horticulture had developed in India in an early age.

Mughal Period

Babur, a Mughal emperor who conquered India in 1526 was fond of gardens, and he made gardens at Panipat and Agra. Aram Bagh at Agra is still being well maintained by the Archeological Department. His favorite garden was *Bagh-i-Wafa* (Garden of Fidelity), and *Bagh-i-Safa* (The Garden of Purity) in Kabul, Afghanistan. The greatest contribution of Mughal kings in the Indian gardening was designing of Mughal garden in formal style of gardening. Babur introduced the Persian rose in India. Another important contribution was the introduction of exotic plants like cypress, carnation, narcissus, daffodils, lilies, tulips, etc. Akbar (1556-1605 A.D.) was also fond of gardens and his new capital at Fatehpur Sikri had beautiful gardens, trees and flowers. He established Nasim Bagh garden near Dal Lake in Srinagar. Akbar's tomb garden at Sikandra is an exemplary Mughal garden of that period. Jahangir and his wife Nur Jahan was great admirer of gardens and flowers. The gardens at Shalimar,

Achhabal and Verinag in Kashmir were created by him. The tomb at Itimad-ud-Daulah in Agra, in memory of his father-in-law, was also Jahangir's creation. Shah Jahan period (1627-1658 A.D.) marks the apex of Mughal garden architecture and floral design. He designed the Taj Mahal garden in Agra, which was built in memory of his queen Mumtaz Mahal. The Shalimar garden in Lahore, now in Pakistan, was his best creation. One of his governors laid the foundation for the Chashme Shahi garden in Kashmir.

Famous Gardens made by Mughals in India

Name of the garden	Establishment Period	Established by
Mehtab Bagh, Agra	Early 1500s	Babur
Aram Bagh, Agra	1526	Babur
Humayuns Tomb, New Delhi	1569-1570	Bega Begum
Nasim Bagh, Srinagar	1586	Akbar
Tomb Garden of Agra	1605-1613	Jahangir
Shalimar Bagh, Srinagar	1619	Jahangir
Achhal Bagh, Kashmir	1620	Jahangir
Nishat Bagh, Srinagar	1633	Asif Khan (elder brother of Jahangir's wife Nur Jahan)
Verinag Garden, Anantnag	1619-1620	Jahangir
Khusro Bagh, Prayagraj	1622-1625	Khusro (Elder son of Jahangir)
Taj Mahal Garden, Agra	1653	Shah Jahan
Red Fort, Delhi	1648	Shah Jahan
Chasme Shahi Garden, Srinagar	1632	Ali Mardan Khan
Yadavindra Gardens, Pinjore	1658-1707	Nawab Fidai Khan

However, before the Mughals arrived in India, Firoz Shah Tughlaq (1351-1388 A.D.) had developed about twelve hundred gardens around Delhi and also made canals. Sher Shah Suri (1540-1544 A.D.), who after defeating Babur ruled briefly in India made a significant contribution by building the Grand Trunk Road (GT Road) and planting avenue trees on both sides. Another significant contribution is from the last Nawab of Oudh, Wajid Ali Shah (1847-1856 A.D.), who founded the Sikandar Bagh which is now the National Botanical Research Institute (NBRI), Lucknow.

Rajput Kings

The Rajput kings apart from their valor were also great admirer of gardens. King Man Singh (1590-1615 A.D.) began the famous garden at Amber Fort near Jaipur which was later finished by Jai Singh II (1699-1743 A.D.) which has three terraces and a pool in this garden. Jai Singh II (1727 A.D.) also established the Jaipur city and constructed a palace in its heart with beautiful gardens. The Mandor garden near Jodhpur was designed by Raja Abhai Singh (1724-1749 A.D.). Suraj Mal built the most beautiful gardens ever developed by a Rajput king, the garden palace at Deeg, Rajasthan, which had fountains and also water courses. At Orchha (in Madhya Pradesh), the capital of the Rajput state of Bundelkhand from 1531 to 1783, The Rai Praveen Mahal overlooks the large Anand Mahal Bagh, a garden divided into two halves, each enclosed by high walls (Fairchild, 2014). The Nagaur fort (Ahhichatragarh Fort) also had beautiful garden with lotus pools, water tanks and also a Baradari. The Chitra Shali Palace garden at Bundi (Rajasthan), the palace of the Chauhan Rajput Kings had a large garden terrace with a central water pool. In gardens made by Rajputs, *ghats* (steps) and *chattris* (pavillions) were built around a lake or pond, because in Hindu tradition immersion in water is both spiritual and a body cleansing ritual. Lakes and ponds are not seen in gardens established by the Mughal, who preferred running water in channels as Islamic practice has washing in running water, but not immersion.

British Period

The British (17th Century to 1947) tried to replicate their home environment by creating gardens in India of their taste. These gardens consisted of herbaceous borders, gravel walks, and well-trimmed lawns. They were fond of annual flowers like dahlias, sweet peas, hollyhocks, phlox, carnation, verbena, dahlia, larkspur, chrysanthemum, geraniums and preferred them over the scented trees, shrubs, climbers, and bulbs used in various gardens of India at that time. They developed beautiful gardens in their bungalows with well-trimmed lawn and seasonal flowers. Gardening for English women was a hobby which kept them busy and brought with them the exotic annual flowers from

England. With the introduction and spread of automobiles, avenue plantations, roundabouts, flower beds and greenery also enriched. One of the significant contributions of British was the building of public parks and also the botanical gardens.

Botanical gardens developed by the British in India

- Horticulture Research Institute, Saharanpur in 1750.
- Indian Botanical Garden, Shibpur, Kolkata in 1787.
- Government Botanical Garden, Ooty in 1848.
- Agri-horticultural Society Garden, Kolkata in 1872.
- Sim’s Park, Conoor, Tamil Nadu by J.D. Sim in 1874
- Llyod Botanical Garden, Darjeeling in 1878.
- Botanical Garden, Coimbatore, 1908.
- Bryant Park, Kodaikanal, Tamil Nadu in 1909
- Forest Research Institute, Dehradun in 1934

One of the historic contributions by British India in gardening was the establishment of Rashtrapati Bhavan Garden (Mughal type garden) in New Delhi which was designed by Edwin Lutyens on the advice of Lady Hardinge in 1929. Some other important persons who were forerunners in the development of gardens in British India are Edward Clive, Wellesley and later on Lord Curzon. Bengaluru city also developed a lot of greenery during the British period particularly during the time of Hyder Ali and Tipu Sultan. Later on, large numbers of trees were planted during British rule and a lot of greenery was developed. Maharaja Krishna Raja Wodeyar of Bengaluru along with Mirza Ismail, Diwan of Bengaluru and Mysore, built many parks and small gardens in the city. Mirza Ismail had a good aesthetic sense and he played an important role in the beautification of both Bengaluru and Mysore. Now, this capital city of Karnataka is also nicknamed the ‘Garden City’ for its gardens and parks. The city has lot of greenery, much due to its moderate climate throughout the year.

However, during this British period, the Indian kings also contributed in the evolution of gardening. Maharana Sajjan Singh in the 1850s designed the Gulab Bagh also known as Sajjan Niwas Garden, on the banks of Pichola Lake, Udaipur, Rajasthan. It derived its name because it had numerous varieties of roses. King Hyder Ali established the Lal Bagh garden, Bengaluru in 1760 which was finished by his son Tipu Sultan. King Bhupinder Singh and his son, Yadavindra Singh of Patiala, were also fond of gardening and horticulture and are credited with the established the Baradari garden at Patiala and fruit orchard at Chail in which they introduced latest improved varieties of fruits and flowers etc.

2. FROM GARDEN CITIES TO GREEN CITIES

Hanging Garden, Mumbai

Hanging Garden, Mumbai also known as Pheroze Shah Mehta Gardens, was built by Ulhas Ghapokar in 1880 and renovated in 1920. It is a terrace garden built on multi-level stone terraces and that is why it is named as hanging garden. It has many animal-shaped hedges and topiaries, flower clock and sundial. From this garden one gets the amazing view of the Arabian Sea.

Brindavan Gardens, Mysore

It is located below the Krishnaraja Sagar Dam across the Cauvery River. The beautification of the dam complex was conceived by Sir Mirza Ismail, the Diwan (Prime minister) of Mysore. As the garden is a Mughal type garden, it has a number of terraces, parterres, fountains, running and cascading water channels, water chutes, lush green lawns, flower beds, shrubs and trees. This garden may also be said to be the best-illuminated terrace garden in India with musical fountain.

Post-Independence Period

After independence, much of the gardening was still influenced with the Mughal and British type of gardening but with the passage of time, gardening also developed through the heritage conflicts and evolved from mere ‘gardening’ to the present day ‘landscape architecture’. In what can be said to be

the first attempt to develop big size well planned gardens after independence, Japanese garden expert Mr. K. Mori was invited to India in 1960-61, to advice on creation of Japanese gardens in India and thus, Roshanara Garden and Buddha Jayanti Park, New Delhi were developed as Japanese gardens.

Some of the important gardens developed post-independence are:

Malampuzha Garden, Palakkad, Kerala

This garden situated on the front side of the Malampuzha Dam in Palakkad district Kerala was inaugurated in 1955. It is also called the Brindavan of Kerala. It also has the only rock-cut garden in South India made by Nek Chand. The garden is made from broken pieces of bangles, tins, used plastic cans, tiles and other waste materials. It also has a massive Malampuzha Yakshi (female vampire) sculptor. The garden has ornamental trees, flower beds, grasslands, rose garden and artificial water bodies.

Rock Garden, Chandigarh

Rock Garden was designed and established by Nek Chand which was inaugurated in 1976. This garden is made up of waste materials and discarded items such as light fixtures, terracotta pots, broken lights, bulbs, toilet pots, glasses, bangles, tiles, ceramic pots, electric waste, broken pipes by use of which sculptures and art pieces have been made. It also has artificial interlinked waterfalls and water bodies.

Zakir Hussain Rose garden, Chandigarh

Zakir Hussain Rose garden or commonly called as Chandigarh Rose Garden, is located in Chandigarh and was developed by Dr. M.S. Randhawa in 1967. It is also said to be Asia's largest Rose Garden which has thousands of rose plants (about 1600 different species) and also medicinal trees and yellow gulmohar trees.

Jawaharlal Nehru Botanic Garden, Sikkim

Jawaharlal Nehru Botanic Garden is located near Gangtok close to the Rumtek Monastery in Sikkim. It was established in 1987 in the foothills of Eastern Himalayas in Sikkim which has orchids, rare plants, tree species and dense Oak forest.

Auroville Botanical Garden, Tamil Nadu

This garden started in the year 2000. It is divided into formal gardens, conservation gardens, arboretum, tropical dry evergreen forest conservation area and plant nursery. Conservation and preservation of the Tropical Dry Evergreen Forest (TDEF) of the Coromandel Coast, south India, is the Botanical Garden's focus.

Tulip Garden, Srinagar

Tulip Garden also known as Indira Gandhi Tulip Garden, is the largest tulip garden in Asia that is spread over an area of around 30 ha at Srinagar in Kashmir. It was established in 2007 to promote floriculture and tourism in Kashmir Valley. Apart from tulips, many other species of flowers like hyacinths, daffodils and ranunculus can also be seen there. It offers a very beautiful view of Dal Lake.

Eco Park, Kolkata

Eco park located in Kolkata, West Bengal, is one of the biggest urban gardens in India. It was established in the year 2012. The park has ecological zones and theme gardens and also butterfly garden, bonsai garden, cactus walk, bamboo garden and mist house.

Cactus Garden and Valley of Flowers, Statue of Unity, Kevadia, Gujarat

Statue of Unity of Sardar Vallabh Bhai Patel was inaugurated in the year 2018 which has a cactus garden near it which houses several cacti and succulents from different part of the world. It also has a valley of flowers which consists of over 100 different types of flower species. The flowers are aligned in a way that it looks like a rainbow on earth which includes colorful grasses, shrubs, ornamental trees, climbers Tecoma, Bougainvillea, Nerium etc.

From Garden Cities to Green Cities

With the modernization of cities in India, the concept of gardening also started to change. With the development of big cities the concept of garden cities (concept given by Sir Ebenezer Howard) also came to India. The garden cities had generous green space, surrounding belt of countryside to prevent unplanned sprawl, well connected and biodiversity rich public parks, high quality gardens, avenue trees in streets and open spaces. Also, beautifully designed homes with gardens in the wealthy communities gained importance in urban India. However, with the rapid growth of cities and fast pace of urbanization in India in the late 20th century the concept of green cities started. Green cities improve the environment, ensure rich biodiversity, water storage, help cooling down in warm periods and reduce air and noise pollution. Greenery is also essential for a climate-proof and sustainable environment. In addition, there is a positive effect on the health and social connections of people living, working and recreating in a green environment.

Some of the garden and green cities developed after independence in the modern India are:

Chandigarh

Chandigarh, the capital of Punjab and Haryana is India's first planned city after independence. This green city was designed by Le Corbusier, a Swiss-French architect and urban planner.

Jamshedpur

Founded by the late Jamshedji Tata, Jamshedpur also known as Tatanagar, is the first well planned industrial city of India located in Jharkhand. Jamshedji Tata wanted the city to have wide streets planted with shady trees, every other of a quick-growing variety. Therefore, the city has plenty of trees and space for lawns and gardens with public leisure places such as the Jubilee Park.

Bhubaneswar

Modern Bhubaneswar was designed and planned by Otto. H. Konigsberger, a German architect in 1946. Along with Jamshedpur and Chandigarh, it is one of modern India's first planned cities. It is a well-planned city with wide roads, multiple gardens and parks. The city has green belts and water bodies to maintain the ecological balance within the city. The State Botanical Garden and Regional Plant Resource Center (*Ekamra Kanan*), has a large collection of exotic and regional fauna. It also has Nandankanan Zoological Park.

Gandhinagar

Gandhinagar was planned by architect Mr. H.K. Mewada and his assistant Mr. Prakash M Apte, who worked as trainees under architect Le Corbusier on Chandigarh project in the 1950's. It is covered by an extensive green belt. It has beautiful avenue plantation. Gandhinagar is one of the green cities.

Noida

Noida is one of the best systematically planned city of India which is located in Uttar Pradesh and is a satellite city of Delhi and a part of the National Capital Region (NCR) of India. It is considered as one of greenest city in India with about 50% green cover, highest in any city of India.

Naya Raipur

Naya or Nava Raipur, now renamed as Atal Nagar is a completely planned city of Chhattisgarh which is claimed to be the world's first integrated smart and eco-friendly city. Naya Raipur is being developed as a sustainable, modern 'green city' with major eco-development projects such as rain water harvesting and solar energy. Majority of the total land of the city is being used for afforestation, parks, water bodies, green belts and Asia's largest man-made jungle safari.

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