

Landscape Gardening and Environmental Restoration: Concerns in Mughal Kashmir

Mumtaz Ahmad Numani

Abstract Landscape gardening ecology is definitely emerging as an ideal concept of art between science and the social sciences. It, today, has become an interdisciplinary significant subject of study. Any artist is, today, a specialist, with varied but favourite and specialised questions. Were the Mughals had been acquainted and conscious of this form of significant art? Or, had landscape gardening been the result of their taste for leisure and pleasure so far as presented and argued? Or, it were neither of these? Besides, what is now set forth as an ideal is an inclusive maintenance of ‘biodiversity’ that actually aims to highlight the concept of ecologically ‘environmental sustainability’. Hence, a school that calls its approach ‘Historical Ecology’ is insisting to look upon the ‘past’ in order to insight the ‘present’ and guide the future. Thus, in-brief, of several, but two objectives may remain principal to define this paper. One, what was the Mughal perception of Kashmir ecology? Two, what was their contribution in landscape gardening and environmental restoration in Kashmir.

Keywords History · Ecology · Landscape gardening · Sustainability
Kashmir · Mughals

Landscape Garden Ecology

In pursuit of garden ecology, good sense prevails. Landscape gardening is definitely emerging as an ideal concept of study. It, today, has become an interdisciplinary significant subject of study between science and the social sciences. Any artist is today a specialist, with varied but favourite and specialised questions. Although, the word, ‘landscape’ has received multiple connotations over the passage of time, but, here in this paper, ‘landscape’ simply refers to the human–earth relationship. Thus, of several but a few select important questions immediately follow about. One, does

M. A. Numani (✉)

Centre of Advanced Study in History, A.M.U., Aligarh, India
e-mail: mumtaznumani@gmail.com

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landscape garden expresses personal and cultural values? Two, does landscape garden reflects deeper environmental concerns? Three, what role Mughal gardens do play in both?

Source and Methodology

Mughal rulers kept detailed memoirs and chronicles. They had a flourishing tradition of history writing (Thackston 1999). Kashmir became a part of the Mughal Empire under Emperor Akbar in the year 1586. Unlike Babur and Jahangir, although, Akbar personally did not take interest in writing for more than one reason, but he was best chronicled by his courtier Aalami Abu'l Fazl. The other two celebrated official historians (Muhammad bin Muhammad entitled Jalala-i-TabatabaZawariUrdistani and Muhammad Amin bin AbulQasimQazwini) under Shahjahan provide detailed descriptions of the land of Kashmir. They accompanied the imperial entourage to Kashmir and recorded their first-hand impressions. The accounts of Qazwini and Lahori contain descriptions of the ecology of the valley for which the pattern was already set by Emperor Jahangir. So far, the ecological concerns of Mughals are concerned, Jahangir is the most interesting character to be explored at length. And our best textual source on Jahangir is Jahangir himself in his *Jahangirnama (Tuzuk-i-Jahangiri)*, an autobiography in which he reveals his multifaceted persona as a sovereign, naturalist-cum-ecologist, hunter, aesthete, patron of the arts and a collector (Jahangir 1624; Khan 1863–1864). The importance and complexity of this text begins only now to be fully understood by modern historians, has been earlier pointed out by C. Lefevre-Agrati, and subsequently highlighted by Koch (2009). Indeed, the interdisciplinary discourse between natural scientists and art historians is brought about by Jahangir himself to explain the advantages of a combined method, written and visual, in representing natural phenomena, and sees in it an improvement of his ancestor Babur's approach. Ebba Koch goes on to point out that: scientists have explored the *Jahangirnama* for its observations on biology, botany, geology, ornithology and zoology. And art historians have analysed how Jahangir directed his artists to turn his observations of natural phenomena into nature studies. If we consider Jahangir's methodology, we notice that, as a scientist, he has a selective approach; he investigates, observes, records, depicts, measures, enumerates and tests what he considers as noteworthy and outstanding (Koch 2009). All of which showcase that he was fond of 'scientific' experiments of his own devising. Jahangir had, for instance, the valley of Kashmir remeasured, to clarify the measurements of Abu'lFazl in the *Akbarnama* (Jahangir 1624; Thackston 1999; Koch 2009). Koch further adds that, if we compare Jahangir with Rudolf II, we note that Jahangir's scientific experiments were something of a one man show; he did not have a circle of scientists and scholars at his disposal. His personal involvement and his achievements thus deserve more admiration, and more importantly, Jahangir has come closer to what Frances Bacon saw in practiced science as a means to sharpen

the faculties of a ruler to see through things and evaluate behaviour and situations, 'to rule with a clear understanding of nature and mankind' (Koch 2009).

In-short, here, of several but two closely different reasons identified: might engaged Mughal Emperors' towards the landscape ecology of Kashmir. One, the landscape of Kashmir valley exhibits both: rich flora and fauna, which provides an ideal reason for its ecological concern. Two, the topogeographical outlook of the valley resembling too much with that of Central Asia, seen in the past, provided motivation to the Mughal emperors' concern towards Kashmir.

Mughal Concerns

One insightful vision of Mughal Emperors' and their nobles have been seen in their keen interest of laying flower gardens, maintenance of springs and waterfalls which got them closer to the holistic idea of preserving the treasure of Kashmir landscape ecology. Such a deep concern is visible in their choice of 'selection', 'observation' and 'planning'. In brief, say for example, the landscape architectural design that the Mughals' have applied in the maintenance of springs and gardens is significant for more than one, but two important reasons. One, it channelises the abundance of water with an appropriate movement and direction. Two, it prevents soil erosion. Both these ecocentric techniques thus serve an example of their attempt for 'ecological landscape gardening and environmental protection'. Therefore, the Mughal Emperors' did not look upon Kashmir just as a pleasure ground (the opposite of which so far has been argued widely), but their continuous intellectual engagement with its natural heritage suggests a deeper concern with what now constitute core 'environmental issues'.

The relevance and significance of the theme continuing can further be substantiated in the words of James Wescoat. He views that, although climate was not a major topic, which is a significant point of negative evidence, some hydroclimatic incidents were recorded that led to infrastructure and policy adjustments. For example, the first Mughal ruler Babur complained bitterly about the climate, waters and culture of Hindustan immediately after the conquest in 1526 CE. To counter these deficiencies, he ordered the construction of waterworks, gardens and baths to make the capital city of Agra resemble the landscape of Kabul. Three decades later, Mughal documents began to present a favourable perspective on the climates of India (Wescoat 2013). Unlike other Subahs (provinces) of the Mughal empire, warm climate and the deficiency of water although was not an issue with Kashmir, despite that the descendants of Babur showed a deep ecological concern towards the Subah of Kashmir.

As said earlier, Kashmir became a part of the Mughal Empire under Emperor Akbar. But, proper emphasis on garden aesthetics returned with his son and successor Jahangir, who, like his great grandfather Babur, was keen naturalist, listing the flora and fauna of his travels which, in the words of Wescoat, were partly the basis for his garden projects. Also, like Babur, he kept a private journal that shed light on his personal reflections and aspirations (Wescoat 2011).

In the case of Kashmir, Jahangir improved the spring at Virnag (Fig. 1), the crystal clear source of the Jhelum River, in which he ornamented fish with pearl rings. Water flowing from the spring was directed down terrace gardens (Wescoat 2011). The following passage has come from Jahangir.

He writes: ‘The source of the **Bahat** [Jhelum] is a spring in Kashmir called **Virnag**, since I [Jahangir] had heard that the depth of this spring was over a man’s head, I told them to throw a rope with a stone tied to it into the spring. When it was measured, it turned out that it was no more than one and a half times the height of a man. After my accession I ordered the perimeter of the spring encased in stone, a garden made around it, straight waterways made, and porticos and chambers constructed around the spring. Thus, a place was created the likes of which few travellers can point to (Jahangir 1624; Khan 1863–1864; Thackston 1999). What can be written of the purity of the canal or of the greenery and the plants that sprout below the spring? Bitter herbs, aromatic herbs, various dark green and pale green herbs all grow together. One bush that was seen was as multi-coloured as a peacock’s tail and shimmering like wavy water with isolated flowers blooming here and there. (...), it was ordered that plane trees should be planted on both sides of the canal’ (Jahangir 1624; Khan 1863–1864; Thackston 1999).

Like Virnag, Jahangir also praises Achabal Spring (Fig. 2) which is located 58 km from the capital city Srinagar and 45 km from Virnag. For example, Jahangir says: ‘The Achabal spring has even more water than the others, and it has a beautiful waterfall. Around it are fine plane trees and elegant poplars whose top branches have grown together. Delightful places to sit have also been provided. As far as the eye could see a splendid garden with Ja’fari flowers is in bloom. You would say it was a patch of paradise’ (Jahangir 1624; Khan 1863–1864; Thackston 1999). Certainly, the Mughal Emperors’ had a vision for the development of the natural heritage of Kashmir. But, unfortunately and sadly so, the trees (mostly fruit bearing) have largely disappeared and Achabal is a garden of open spaces now.

Jahangir also built the terraced garden that came to be known as Shalimar (Fig. 3), which stepped down from its hillside water source toward the level of Dal Lake, which it ultimately reached by a long perfectly straight canal. NurJahan, writes Wescoat, was said to have initiated the manufacture of the *otto* (essence) of

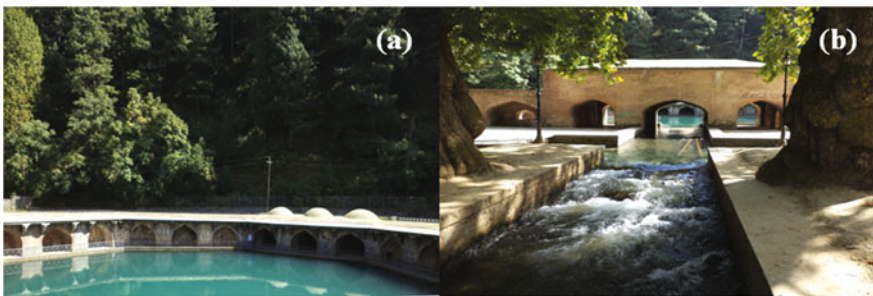


Fig. 1 Virnag Spring. Photograph by author



Fig. 2 Achabal Spring-cum-Garden

rose at Shalamar garden (Wescoat 2011). The following passage has thus come from Jahangir.

He records: ‘In March 1620, these two or three days I [Jahangir] got into a boat and enjoyed touring and looking at the flowers in Phak and *Shalamar* (Phak, Jahangir informs, is the name of a pargana on the other side of Dal Lake). Shalamar is also adjacent to the lake and has a beautiful water channel that comes from the mountain and empties into Dal Lake. My son Khurram [later Shahjahan] ordered the waterfall to be stopped up, that to create a waterfall one might enjoy. And this spot is one of the scenic delights of Kashmir’ (Jahangir 1624; Khan 1863–1864; Thackston 1999). Moreover, the Emperor called his garden *Bagh-i-Farah Bakhsh* and *Bagh-i-Faiz Bakhsh*. The following passage from the pen of Qazwini (official historian of emperor Shahjahan) bears testimony.

He writes: ‘In Kashmir, there are number of gardens the aesthetic beauty of which appeals to the heart and mind of every person. I [Qazwini] will explain the characteristics of few of them. The Farah-Baksh garden is beautiful and living. Its green plants immediately remind the Sidrah and Toubah. Its lively fountains are adding beauty to the water passage around. Its buildings imitate the symbol of real paradise. This garden [Farah-Baksh] has been constructed by Emperor Jahangir. Earlier it was popular by the name of Shalimar. Actually the foundation of Farah-Baksh was laid fourteen years ago when Emperor Jahangir was a prince. Its beauty consistently increases year after year. It was only when Emperor Jahangir came to see this paradise like garden; it was named Farah-Baksh. And hence it became familiar by this name. From the beginning to the end of this garden is a road of thirty yards (30 gaz) wide. During the days of prince Khurram (later Shahjahan) the workers of Emperor Jahangir had planted Chinar and Safaid (poplar) trees at a distance of two gaz between on the both sides of this road. Now when the emperor came to this garden again these plants have flourished well. A ten gaz wide water canal was also laid on by the name of “Shah-Nahr” which enters into the Farah-Baksh garden from the backside, and thus continues flowing further through the middle of the garden by passing a Villa (building). A thirty gaz houz (pool) built nearby of this Villa, has also got an extension of Chabutra (tower like structure) and a beautiful fountain in the middle of it. There are four other beautiful



Fig. 3 Shalamar garden. Photograph by author

fountains situating at the four corners of this houz. On the other side of the same Villa is a similar kind of houz from which three more water passages of thirty gaz wide run into Dal Lake. But Shah-Nahr is sixty two gaz wide. The like of which doesn't exist anywhere. There are chinar trees on both sides of the Shah-Nahr situating at equal distance from each other. On the backside of Farah-Baksh, Emperor Jahangir laid the foundation of one more garden known as Faiz-Baksh. And it was decided, a road would be constructed around the water canal through the midst of which Shah-Nahr also flows. Moreover, one houz (40 into 40 gaz) and one Villa (80 into 10 gaz) would also be constructed and then the periphery to be encased with stones from all sides' (Qazwani; Jafari 2009; Khan 1990).

In view of Francois Bernier, the most beautiful of all the gardens of Kashmir is the one belonging to the King, called Shalamar. In his journey to Kashmir, he therefore records: 'The entrance from the lake is through a spacious canal, bordered with green turf, and running between two rows of poplars. Its length is about five hundred paces, and it leads to a large summer-house placed in the middle of the garden. A second canal, still finer than the first, then conducts you to another summer-house, at the end of the garden. This canal is paved with large blocks of freestone, and its sloping sides are covered with the same. In the middle is a long row of fountains, fifteen paces asunder; besides which there are here and there large circular basins or reservoirs, out of which arise other fountains, formed into a variety of shapes and figures' (Bernier 1656–1668).

Asaf Khan, brother of NurJahan, built the nearby Nishat Bagh in Srinagar (Fig. 4), which had a single pavilion at the top and a magnificent set of terraces overlooking Dal Lake. Unlike the gardens of the plains, or those of Kashmir today, water supplies were abundant for these gardens, which, writes Wescoat, led to a shift away from narrow channels with subtle bubbling fountains and rippling cascades, and towards dramatic cascades and fountain displays. Wescoat further adds that, spatially, these Kashmiri gardens had extensive prospects with no visual boundaries, perhaps like the earliest Mughal gardens of montane Central Asia and



Fig. 4 Nishat garden. Photograph by author

Afghanistan (Wescoat 2011). The following passage from the pen of Qazwani records:

‘There is one more garden constructed by Yaminad-Daula Asaf Khan on the south side of the Dal Lake known as Nishat Bagh. First, there was constructed a Villa (building) in this garden which was faced by the Dal Lake on one side and garden by the other side. The periphery around has got nine terraces one after the other and each terrace has got its own water fall (Aabshar). At the base of the mountain, one large Villa on the margins of Nishat was also constructed to which an extension of Chabutra (tower like structure), and nearby a large pool were set up. After Farah-Baksh, Nishat-Bagh is the most beautiful garden’ (Qazwani).

Other Notable Gardens Established Around Dal Lake

Besides the existing world famous Mughal gardens of today, we are been told that there were hundreds of notable but lesser known gardens constructed either by the emperors themselves or by the princes/ princesses or nobles and other officials of the Mughal court in Kashmir. Out of these hundreds of notable gardens, many of them were laid out around the periphery of Dal Lake, which, however, physically have disappeared on ground with the passage of time unfortunately. The below cited long passage translated from the contemporary principal sources thus bears testimony for their existence during the Mughal period.

It says: ‘Among the Emperor’s gardens, there is one more garden known as “Behr-Ara Bagh”. It is divided into two parts. One part of it situates on high slope and the other situates near Dal-which has four chinar trees situating in the midst. Two beautiful Halls passing through these chinar trees have been built. There is one more garden known as “Daulat Khana Aali” which is famous by the name of “Noor Afza”. One can hardly find an example of its beauteous scenery, cleanliness and flourishing flowering plants anywhere else on the earth. The garden of “Aish Abad” also situates at the banks of Dal Lake. It too has got a good number of chinar trees in it. Similarly, “Baghi Illahi” which was laid out by Mirza Yousuf Khan Mustahdi at the corners of canal Lar has one large chinar tree in it. And the canal of Lar flows

in the midst of this garden. A throne like wooden platform has also been raised in front of the roots of this chinar tree. Nearby a 10 into 10 gaz pool has been constructed—which has a beautiful wide water passage connected-through which water flows out. There are three more gardens which belong to the princess Jahaniyan Begum [Jahan Ara]. The first one garden is known as “Jahan Ara” which situates at the middle of Dal. It was laid out by Khawaja Sara Jawahar Khan—one of the eunuchs of the princess. Moreover, for the construction of buildings and the plantation of flowering trees, Jahan Ara appointed Firasat Khan—who performed his duty with great care. The second is known as “Noor Bagh” (also called Bagh-i-Noor Afshan) which situates at the banks of river Jhelum and was constructed under the sponsorship of Noor Jahan Begum. An accomplished beautiful Villa has been constructed in it. Also on the banks of the river stood beautiful maple trees—the appearance of which to the viewer is not less than the exact replica of heavenly garden. The third one is known as “Safa Bagh” which is constructed on the northern side of the city at Safa-poor-seventy Krohs away from the city. Also on the eastern side of the garden situates a three Kroh pond. Among the gardens constructed by princess and workers, one garden is known as “Bagh-i Shah Abad” (also called Karna). This Bagh was bestowed on Dara Shikoh. The structure and construction of which can hardly be described in words. It also situates at Dal. The second garden is known as “Bagh-i Moraad” which is associated with sultan Moraad Baksh. It too situates at Dal. One more garden is known as “Bagh-i Naseem”. It was constructed by Azam Khan on the northern side of Dal Lake. One more garden is known as “Bagh-i Afzal Abad” which was constructed by Afzal Khan near to Bagh-i Naseem. Both these gardens possess different varieties of flowering plants in them’ (Qazwani; Jafari 2009; Khan 1990). Besides these, Inayat Khan informs that his father Zafar Khan had constructed two notable gardens known as Bagh-i Zafar Abad and Bagh-i-Husn Abad. The Bagh-i Zafar Abad cost three lake rupees in its construction during the 12 years of Zafar Khan’s government in Kashmir. It was laid out on the margin of the lake Zadibal-overlooking the environs of the Eid’gah (Khan 1990).

Of Water and Plants in the Mughal Gardens of Kashmir

Besides the other components, the known fact is that: water and flowering plants remain the most important ingredients of the ecosystem. These two remain the basis for sustaining the landscape of any territorial unit. Thus, two things are important to deal with. One, what was the principal source of water to the Mughal gardens of Kashmir? And how did the Mughals channelise it? Second, what kind of plant material did the Mughals plant in the gardens in Kashmir?

Significance of Water and the water Channels

In their pioneering research of Mughal gardens, garden historians have put it right that: Mughal gardens in Kashmir are the natural terraced garden type. Thus, unlike Mughal gardens of other places in India, in Kashmir, the principal source of water to the gardens was natural springs. This fact can also be corroborated by a brief description of Bernier, who in his visit to Kashmir writes: ‘from the sides of all these mountains gush forth innumerable springs and streams of water, which are conducted by means of embanked earthen channels even to the top of the numerous hillocks in the Valley; thereby enabling the inhabitants to irrigate their fields of rice. (...), the numberless streams which issue from the mountains maintain the Valley and the hillocks in the most delightful venture. Thus the whole kingdom wears the appearance of a fertile and highly cultivated garden’ (Bernier 1656–1668). But it has to be borne in mind, in Kashmir, the Mughals were not the earliest rulers who laid out canals to water their gardens (Khuihami 1885), but they were indeed the first to make better use of the old canals and to build up the new ones in order to sustain the world famous gardens constructed by them in Kashmir. For example, Hassan Khuihami, the well-known author of *Tarikh-i-Hassan* reports that before the coming of the Mughals many canals (like; *Lar-Kol-Nhr*, *Dab-Kol-Nhr*, *Ara-Kol-Nhr*, and *Zikr-Kol-Nhr*) were laid out in Kashmir either for the use of irrigation or for the general use of public. For example, sultan ZainulAbidin dug the canals named *Lar-i Nhr* (which prospered the Safapur Village) and *Shah Ju-i Nhr* (the waters of which was used for the gardens and for the use of general public) (Khuihami 1885). Later on, under the sponsorship of the Mughal Emperors’ the nobles repaired the *Shah Ju-i Nhr* and brought its waters to the gardens of *Bagh-i Ilahi*, *Bagh-i Bahr Ara*, *Bagh-i Gulshan*, *Darshini Bagh* and *Bagh-i Inayat* into the Zafarabad (Khuihami 1885). Moreover, a few more canals laid out are worth to mention here. For example, a canal was laid out by Emperor Jahangir from the upper hills of Harwan to water Shalamar garden, and Asaf Khan, the governor of Kashmir during the reign of Shahjahan, carried out it further to water Nishat garden (Khuihami 1885). Jahangir also sponsored thirty thousand rupees to Haydar Malik to reroute the stream from *Lar* (Sind) to *Nur’afza garden* (Jahangir 1624; Khan 1863–1864; Thackstan 1999). During the reign of Shahjahan, an official decree states that Asaf Khan was allowed to take a branch of the canal/stream named *Shah Nhr* to Nishat garden on the condition that it should not cause trouble to the peasants of Dachigam and adjacent villages by reducing their share of water for irrigation (Khuihami 1885).

Thus to connect the streams/canals with the gardens, it was given a considerable amount of attention by the Mughals and their nobles. If the garden historians further search (or research) for the ‘water-architect theory’ of the Mughal gardens of Kashmir in depth, they would indeed figure out that the Mughals were highly conscious about what we call now, ‘landscape water architecture’.

Conclusion

In this age or before, one can hardly think of a natural system that has not been considerably altered, for better or worse, by human culture. The contemporary reports so far documented are replete with references in this matter. And Mughal Emperors like other human fellows do not provide a place of exception in this regard. They also have brought some immense changes in the landscape of Kashmir. But these changes (especially in case of landscape gardening) are visible for better than worse. However, an irony of the fact is that, mediaeval Indian scholarship so far has understood, interpreted and appreciated the Mughal landscape gardening concerns in Kashmir as only their pursuit of 'leisure' and 'pleasure', which, however, completely negates the richness of their intellectual wisdom, and therefore, say in modern terms, underplays their character of attempting 'ecological landscape gardening and sustainable environmental development in Kashmir'. In other words, the Mughal Emperors' did not look upon Kashmir just as a pleasure ground, as has been so far exaggerated, rather their persistent ecological engagement with its landscape suggests a somewhat deeper concern with what now constitute core 'environmental issues'. These gardens, if one has to count for, aesthetically, functionally, symbolically and ecologically, reflect deeper 'environmental concerns' in our age of 'environmental crisis'. Therefore, one must not fail to recognise the continuity and proximity of Mughal landscape gardening attributes in this age of 'environmental crisis' everywhere.

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