CHAPTER – 1

Jat Locality: Geography of the Jat Area
Relevance of geography

The Jats formed a large chunk of population in northern India. Our concern is their growing power over a considerable area which raised them from peasants into zamindars. They later adopted activities of freebooters. They started creating disturbances in close proximity of the capital. During the later Mughal period they gradually became turbulent and the source of Imperial concern.

A perusal of the geography or physical features of the area would make our study more comprehensive and to find out that why the Jats of that particular area became more powerful than their brethren living in the other parts of the country. The role played by the geographical layout or physiographic condition of the region responsible for this development would also be discussed.

The geography furnishes us important information such as condition of the soil, course of rivers, location of hills, forests, rainfall, climate, its vegetation, which reveals their deep economic interest lies in this area. A tussle ensued to gain control over this area among the Jat, the Raja of Amber and the Mughal Emperor himself which sustained for a considerable time.

The geographical layout also shows the fact that the Jats were expanding towards north-eastern direction as on the other three sides there were mighty powers of the Raja of Amber, the Mughal Emperors and the Marathas (see map). Or we can also explore the fact that whether the geographical condition was suitable for their expansion towards this direction.

The geographical condition also alludes the reason that the Jats were able to sustain their revolt for long time as it was difficult to chase them in thick and thorny jungles and in uneven terrain. It therefore seems pertinent to discuss the geography of the area, as it played a vital role in their revolt.

Sources

The sources utilized in this chapter are Kapad Dwara Records and the other archival materials such as Vakils Report, Arzdashts, Khatoots, Muwazana Dahsala Pargana Hindaun, Taqsim Dahsala Pargana Amarsar preserved in Rajasthan State Archives, French traveler F. Wendel’s account ‘Memoirs Des Jats’, also throw good
information about the Jats. Persian sources like Chachnama, Ain-i-Akbari, Iqbalnama, Shahnama Munawwar Kalam, and the other works like Census Report of 1961 of Rajasthan, Vir Vinod, and geographical dictionaries such as James Rennel’s ‘Memoirs of a Map of Hindoostan, or the Mughal Empire; Nundo Lal Dey’s ‘Geographical Dictionary of Ancient and Medieval India’ are also utilized.

Clans Composition of the Jats

Despite the fact that Arhsatta and Awarija documents refer to Jats, unfortunately they do not focus the clannish composition of the Jats and because of this reason we have to rely on recent works. The basic profession of the Jats was agriculture and they were tied with rural economy as well as its different customs and traditions. Regarding their social status Wendel observes that the Jats were socially equal to Gujars, another zamindar class of that time. Their position is lower than Badgujars and higher than Gauruas and Ahirs, stand next after the Brahmans, Rajputs and Baniya.¹ The Jats spread over the large area of suba Agra as mentioned in Ain.²

The Jats were broadly divided into two sections:- Hele and Dhe as classified by A.H.Bingley. According to him this Scythian race migrated to India, settled in the valley of Indus and thence further expanded towards north. Among them this Hele or Deswali were the descendants of original migrants. But Dhe or Pachhade were the recent arrivals of beyond 18th century extended over the area belonging to river Jamuna and Chambal, where they formed the ruling house of their own.³

While Bingley observes that the Jats belong to the race of purely Hindu origin, other historians like R.P.Rana opines that the Jats did not belong to any particular religious tradition and they were also not the high caste Hindus.⁴

The Jats were further divided into different clans. Most of the time these clannish divisions were based on social status or sometimes on the basis of religious practices, sometimes they were also called by the name of the place to which they belong.

³ History, Caste And Culture of Jats And Gujars, op. cit. p.29-30.
⁴ Ibid. p.92; Rebels to Rulers, op. cit., p.122.
Though Abul Fazl gives the detailed account of the Jat zamindars living in and around suba of Agra however information about the clans of the Jats is lacking. Only at singular instance in sarkar of Narnol at a place Chalkalianah mentions Jats of Sangwan clan.\(^5\)

J.H.Hutton points out that the Jats are the one of the thirty-six clans of Rajputs but regarded as the lower caste. He says that the distinction between the Jats and Rajputs is more social than racial.\(^6\)

The kinship ties among the Jats were very strong. Mostly they also had matrimonial relations among themselves.\(^7\) Besides this, they also had tribal bondage and because of this reason they got the large scale support of the peasants of their own caste when they defyied the Mughal authority in 18\(^{th}\) century.\(^8\)

Bingley furnishes much information regarding different clans of the Jats living on both sides of Jamuna in each district separately. The clans like Deswali, Pahal, Dalal, Man, Tenua etc. were the dominant clans found in many districts, while other clans like Ghatwal, Jatkar, Nain, Puniya, Sangwan, Bhainiwal, Chahil, Malik, Goha, Rathi, Dhankar, Dahia, Hudah, Kadian, Ahlawat, Sahrawat, Jaglan, Ghaughas, Kharat, Narwal, Nandal, Kundu, Kali rammi, Phor or Dhaliwal, Bainwal, Lathir, Kadian, Dahan, Daunchak, Kalher, Sire, Dhus, Mor, Tewatia, Katamia, Rawat, Tanwar, Raibdar, Dahar, Pokhwat, Uthwal, Ahlawat, Jhar, Nahri, Suraui, Penwar, Punia, Khokhar, Dhaka, Kali, Soran, Chakora, Bora, Kakran, Salahu, Kunthel, Dangri, Kudar etc. were also found.\(^9\)

Interestingly enough one come across the areawise division of the Jats like on the name of Sinsini they were called as Sinsiniwar Jats, Sogharia Jats of Soghar and Rauriya Jats of Rarah, Nohwars of Noh.\(^10\) The ruling class of Bharatpur, situated in eastern Rajputana, belongs to Sinsiniwar clan.

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\(^5\) Ain-i-Akbari, op. cit. f.93.
\(^8\) Rebels to Rulers, op. cit. p.169-172.
\(^10\) \textit{The Intensity of Peasant Movement in Braj Region Between 1686-1695}, op. cit. p.105-109.
The other states of the Jats in Eastern Rajputana are Dholpur and Karauli. The Jats of these places claim their origin from the Jadu clan of Rajputs, divided into six leading gotras (clans) called Dung. The six leading goras were Sinsiniwar, Kunthal, Chahar, Nohwar, Saterwar, Manga.\(^{11}\)

**Jat Belt in Northern India**

The Jats of Northern India who raised sedition against the later Mughal Emperors along with the zamindars of their respective areas\(^{12}\) stretched over a large tract of land in this region.\(^{13}\)

The question arises as to why this phenomenon appeared particularly in this period and in this area. In order to discuss a segment of the society it is necessary to shed light on their origin also.

Regarding the origin of the Jats one can discern that the Jats of Northern India – Doab and Eastern Rajasthan, migrated from Sindh to seek refuge from the brunt of foreign invasions.\(^ {14}\) However, Wendel, French traveler, refute that the Jats of lower Sindh and that of Northern India shared the same origin.\(^ {15}\) We also do not have other information about origin of the Jats. Historians tend to believe that it was the Northward migration of the Jats of the Sindh that they form the large chunk of the Jat population in North India.\(^ {16}\)

However, from scrutiny of information contained in *Ain-i-Akbari* it appears that there was the large population of the Jats in suba Agra and its neighboring plane, Ajmer and even in the Mughal capital Delhi.\(^ {17}\) It has its Northern boundary up to Gurgaon and Punjab (now Haryana), on the east, its boundary was up-to Agra, on

\(^{11}\) History, Caste And Culture of Jats And Gujars, op. cit. p.44.

\(^{12}\) Rebels to Rulers, op. cit. p. 170-172.

\(^{13}\) James Rennel, Memoir of a Map of Hindoostan, or the Mughal Empire, W. Bulmer & Co. London, MDCCXCII, p. CXVIII-CXIX.


\(^{15}\) Memoirs of Wendel, op. cit., p. 84.

\(^{16}\) Role of the Jats and Rajputs in the Mughal Court, op. cit., p. 42; William Irvine, The Later Mughals (Edited and Augmented with the History of Nadir Shah’s Invasion By J.N.Sarkar), Vol I, Oriental Books Reprint Corporation, New Delhi, 1971, p. 321; Memoirs of the Map of Hindoostan, or the Mughal Empire, op. cit. p. CXVIII-CXIX.

\(^{17}\) Ain-i-Akbari, op. cit., ff. 85-94.
North-East up-to Mathura in South up-to Karauli including Dholpur within its boundaries, on South-West Jaipur and on the West Alwar was situated. These states were mostly flanked on the both sides of Yamuna, where on all sides up-to 30 kms inhabited by the Jats, also the fertile area of the Doab, starting from Ganga, on North-West of Delhi up-to Sutlej and 200 kos South of the Sutlej beyond the Gwalior up-to river Sind.

Fortunately there is extremely rich information about the Jat Belt and its environs in Rajasthani sources also preserved in Rajasthan States Archives, Bikaner. The Vakil Reports, i.e. the Arzdashts of the Vakil or the agent of the Raja present at the Mughal court, provides graphic information about the areas under Jat Belt. (See Map of Jat Area).

The areas like Au and Sinsini were claimed by the Jats as their watan jagir besides this they also had indirect control over a large area of Braj and Mewat region.

Jats gradually expanded from their homeland towards East. The reason of their eastward expansion was that they were pressed by the mighty powers on the other three sides namely the Kachhwahas on the west, Mughal on the north and the Marathas on the south (see map). However, the Mughal administration was weak in the suba of Agra and hence the geographical conditions along with other causes provided them opportunity to sustain themselves.

One can divide these parganas as watan and non-watan areas. The areas lying on the east and west side of Jamuna on the basis of their characteristics such as the fertile nature of soil and physical features of the area contained in our documents.

The areas under direct influence of the Jats are Au, Sinsini, the watan of Sinsiniwar clan of the Jats, Soghar, the watan area of Khem Karan Sogharia, Khair, Jawar under Amar Singh Jat. These areas are more volatile in nature as fall in the

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watan area of the Jats. Besides this there are large number of area falls under the Jat Belt as mentioned archival records. (See Map: Area under Jat Resistance)

Physical Features

Study of physical features enables us to make our study more comprehensive. Physical geography reveals systematic treatment of the physical features and their relation to one another.\(^\text{23}\) According to Abul Fazl "the excellence of its climate is

almost unrivalled" and "Agra is a large city and possessed a healthy climate." At that time most of the Jat areas belong to suba Agra. Good climate condition also effects the other factors like agriculture.

If we look, particularly, on the western side the climate is semi-arid and to some extent dry. But good rains make it suitable for agriculture. During summer there scorching heat and hot winds were blowing and in rainy season the whole area was poured in with water.

The main city of Bharatpur is inhabited on low land and the southern part of it consisted the areas of Dholpur, Bari, Baseri etc. have sandy soil, but it is fertile because of good rains. On the eastern side the soil is very fertile especially in Doab, between Ganga and Jamuna, where continuous inundation takes place. We also find the large fields of green grass on the banks of river Jamuna.

The main rivers of this region are Ganga, Jamuna, Chambal, Banganga (Utangan), Gambhir, Khari, Parbati, Kakund, Ruparel etc. Besides this there were several lakes, ponds and wells to facilitate water. We will subsequently discuss the rivers in detail under irrigation facilities.

Another important physical feature is the thickly wooden tract and dense forest of the region. The taqsim document provides very detailed information regarding the geographical condition of the region also. It helps us to understand the extent and nature of the forest under different parganas of the Mughal Empire. It also depicts the area occupied by forest under each village. The classification of the forest area of pargana Udehi in taqsim papers helps us to estimate the forest area of the

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24. *Ain-i-Akbari*, op. cit., f. 84.
25. Ibid. ff. 84-94.
30. *Ain-i-Akbari*, op. cit., ff. 84-85; *Memoirs of the Map of Hindoostan, or the Mughal Empire*, op. cit., p. CXVI.
31. *Ain-i-Akbari*, op. cit., f. 84.
region and different kind of trees. Tuzuk-i-Jahangiri mentions the Nuh forest near Kol and in Rupbas where he went to hunt antelope which shows the extent of forest area there. Around Bharatpur and the south of it there were very dense jungles. It spread upto 7 miles in length and 1.25 in width; which helped the Jats to seek refuge when they became rebellious against the Mughal Empire. Wendel says that there was actually, in whole of the Jat land, forest area is not found. However, the plains of this region were completely filled with bushes which were very thick at some places, extended over a large area almost upto 8 kos on all side of Bharatpur, which he very realistically illustrated in his map also. (See Map)

Showing the Expanse of Forest Around Bharatput

Source: F. Wendel

The hills were there especially in western region like Bharatpur, Deeg, Bayana etc. belonged to Aravali range. The hills were small in size and mostly situated on the south of Bharatpur. The hilly area near Bayana is known as Daang through which many drains were passing. The fort of Bayana was also built on high hill extending upto *pargana* Rupbas.

Besides this there were many hills on the north of Bharatpur but the highest one in Bharatpur is the hill of Alipur in *pargana* Akheygarh, known as ‘Kaala Pahad’. The other hills are ‘Chhapra’ in *pargana* Pahari, ‘Damdama’ in Bayana, ‘Rasiya’ hill of *pargana* Nagar, ‘Usira’ hill of *pargana* Rupbas and ‘Madhon’ hill of *pargana* Bharatpur. The stone slabs which were used to build houses were utilized for roofing the buildings as in Bayana. Here we find beautiful white and red marbles, which were transported to Fatehpur Sikri, Bharatpur, Deeg and Wair to construct buildings.

**Agricultural Economy**

The description of geography seems to be incomplete without throwing some light on agricultural condition or agro-economic significance. The study of geography helps in the assessment of agricultural productivity because the successful economic execution depends on physical features, climatic conditions and distribution of resources like land, rivers, lakes, agricultural cooperation, forest and minerals. The economic geography also helps us to study the production and distribution of raw materials and the influences, both physical and political, which operate on man’s economic life. All these factors help us to determine as to where improvement could be possible or understanding the significance of a particular region relevant for agriculture.

While dealing with the agricultural condition of Eastern Rajasthan one can not forget the contribution of S.P.Gupta who introduced to us the importance of regional records in the field of Rajasthan which provides us exhaustive information. He has conducted remarkable research on the agrarian condition of eastern Rajasthan dealing

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41 Vir Vinod, op. cit., pp. 1635-36.
42 O.P.Verma, Geography Teaching, op. cit., p.15.
43 Ibid. p. 13.
with almost every aspect of agrarian condition of the region which provides a base for our study also.

Climatic Condition

Chachnama mentions the Jats as agriculturists. Wendel also says that the Jats from the very early time were engaged in agriculture. The term Jat means ‘the one who ploughs the soil’ or peasant. Shah Waliullah says that ‘the cultivators of the villages between Delhi and Akbarabad areas of the Jat caste’ which reveals that among the peasants of the region, Jats were significant agricultural caste who were working on their fields.

Abul fazl observes that the climate of suba Agra was such that it was perfect for agriculture. He says that Agra is a large city and possessed healthy climate for agriculture. It can also inferred by the magnitude of revenue collected from this region. The whole revenue of suba Agra accounted to 191,819,265 dams. Tuzuk also mentions that Agra is on the boundary of second climate. The air of Agra is warm and dry.

Crops

Both Rabi and Kharif crops were sown. S.P. Gupta in his work mentions about the variety of crops in our region such as bajra, jowar, pulses, moth, urad and moong as kharif crops. Chola, sugarcane, cotton and makka were occupying larger area while kodon, til, vegetables, indigo, bari, madhwa, tobacco and paddy were also of some significance. Among rabi crops wheat, barley and gram were the significant crops and mixed crops such as baijhri, gojhai and gochani were also significant. Various vegetables, cheena (arzan), tobacco and ajwain were also grown. R.P. Rana talks about the number of crops in each region in both the seasons. For example, Arhsatta mentions thirty two crops for kharif and thirty four crops for rabi in pargana Khohri. In pargana Hindaun forty eight crops were produced in kharif and thirty three in rabi.

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45 Memoirs of Wendel, op. cit., p. 84.
47 Ain-i-Akbari, op. cit. ff. 84 and 86.
48 Tuzuk-i-Jahangiri, op. cit., p. 4, 5.
season. And in two parganas not less than sixty crops were cultivated in a year. The number of crops mention in Ain for Agra suba is forty one.49

Mentions is made about the main crops as Wheat, Barley, Gram, Jawar, Bajra, various kinds of pulses, good variety of mangoes, orange, beetle leaves, lemon, melon grapes, pineapple, sweet scented oil, variety of flowers and fruits, melons, grapes, henna, sugar-cane, indigo, moong, moth, and urad etc.50 Abul Fazl gives areawise distribution of crops in suba Agra. Wide fields were also occupied by meadow (wide fields with grass), orchard, mines etc. There were also the reference of cash crop, that is Indigo in Bayana in Ain.51 Tuzuk-i-Jahangiri also infers that melons, mangoes and other fruits grow well in Agra and its neighbourhood and many thousands of pineapple produced every year in Gulafsha garden at Agra at that time.52 So, with the variety of food crops various kind of fruits were also grown.

Besides agriculture there was also agricultural based industries. For example, sugar was manufactured especially in Kalpi, Bayana and Toda Bhim.53 This region also had rich mines and minerals. In Ain there was information of the mines copper and turquoise in Toda Bhim, iron mine was also there. The state of Alwar produced glass and wooden carpets as mentioned by Abul Fazl.54

Muwazana Dahsala and Taqsim Dahsala

Muwazana Dahsala of pargana Hindaun provides detailed information about the agro-economic condition from V.S. 1790-99 (A.D. 1733-42). The total area of pargana Hindaun given in the document is 699,527 bighas and out of total measured area, the cultivable area is 433,000 bighas. Instead of taking pargana Hindaun as a whole if we conduct the villagewise study of muwazana documents, we will find new trends of agricultural condition prevalent at that time such as the proportion of cultivable area in each village separately which the significance of particular villages or certain important pockets in whole pargana, size of the village, uncultivated area occupied under different heads like sor kalar (saline) etc., category of unassessed

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49 Rebels to Rulers, op. cit., p. 53-54
52 Tuzuk-i-Jahangiri, op. cit., Vol I, p. 3 and 5.
54 Ibid.
villages such as ina’am, puniya udik, ujaad, varhdar (watchman) etc. These documents also throw adequate light on the condition of soil also.\(^{55}\)

The other document utilized here is *Taqsim Dahsala* of pargana Amarsar from 1758 to 1767. The total measured Area of *pargana* Amarsar is 1,20, 610 bighas and out of total area, the cultivable area is 1,07,693 bighas and uncultivable is 12, 917 bighas. The *taqsim* also provides the same nature of information as we find in *muwazana* documents for the cultivable area. It also gives us the villagewise information. The villaged of *pargana* Amarsar are arranged in alphabetical order in the *taqsim* document. The castewise distribution of villages can clearly be noticed in pargana Amarsar. For example the name of the villages are like Ahirvaas, Igravaas, Amaurayi Charan Ka Vaas, Turkvaas, Charanvaas, Gujarsi Ka Vaas, Gaudvaas, Beldarpur etc. However the name of the villages found to be associated with person’s name also like Tilakpur, Raichand Pura, Ramchand Charan Ka Vaas, Raipur, Kishorevaas, Kalyanpur etc. In *pargana* Amarsar we do not find any village under ina’am, puniya udik or remained ujaad as the figures of cultivabler area is available for each village.

To draw few conclusions pertaining to agricultural condition of *pargana* Hindaun I have taken the sample of 192 villages out of 245 villages and the 146 villages of *pargana* Amarsar. In Amarsar thirty four village are mentioned as *dakhli* (attached) villages. Each village mentioned in the documents separately provides information about the agricultural, economic and geographical condition.

The total measured area (*raqba*) as well as the name of the village is mentioned in the *muwazana* and *taqsim* documents. In Hindaun the total area is further divided into cultivable (*baqi bigha*) and uncultivable waste (*sor kalar*). Further break-up for uncultivable waste is given as *sor kalar* (saline) and *qasur gaz-i-ilahi*. The considerable amount of saline area is mentioned for each village of pargana Hindaun. And under the head of cultivable area, figures of *rabi* and *kharif* as well as the total of both is mentioned for every ten year. There was only one village called Bishan Nagar for which figures are not available only the break-ups of *rabi* and *kharif* were mentioned. In pargana Amarsar the total area (*raqba*) was divided into cultivable (*layaq-ul-zarait*) and fallow or uncultivable (*parat*) and like Hinduan, the

\(^{55}\) See Appendix I
cultivable area is divided into rabi and kharif. This exhaustive nature of statistical information will surely help us to draw certain conclusions about agricultural economy of the region.

If we obtain the percentage of both the rabi and kharif crops separately, we can clearly notice in Hindaun that the percentage of kharif is always higher than rabi and sometimes the difference is much more noticeable as in case of village Ghosla in the year 1790 the kharif is 100% of the total, in village Ghatanserka in the same year kharif is 100%. Likewise in mauza Nawagaon from 1797-99 kharif is 93% of the total. In mauza Neeburayee for the whole of ten years kharif crop is 100% probably because out of the total area of the village which is 1014 bighas, 794 bighas were occupied by sor kalar (saline) that amount to 78% of the total area. So the rest of the cultivable area must have some salinity in the soil which is not conducive for rabi harvest. In Hafeezabad from 1796 to 1799 kharif harvest is 100% though the saline area in this region is 63 bighas out of 638 bighas in total. So there must be some other factors besides condition of the soil. This is the condition in most of the villages that kharif crop is higher than rabi.

Though there are few villages where percentage of rabi is higher than kharif in the particular years such as in Ghatanserka, Pratap Pur, Palhadi, Bishan Nagar, Reenvaas, Hudaheli, Ajaibpur etc. The rabi crop is 100% of the total production which means that kharif crop has not been sown or assessed due to any reason. For example, in village Ajaibpur kharif crop was given to varhdar (watchman) and not assessed because of this reason. In mauza Palhadi and Bishan Nagar rabi crop was higher than kharif only after the land remained ujaad (desolated, deserted) for few years. There were other villages also like Tahapur, Telona, Padeli, Pargaon etc. where percentage of rabi ranged between 70% to 90%. But such villages were very few.

S.P. Gupta is of the opinion that the cultivation of rabi crops in Eastern Rajasthan, especially wheat and barley required far greater investments than kharif like bajra and jowar. He further says that there was increase of cash crops in kharif harvest with the decrease of bajra and pulses.56 This can be one of the reasons for

increase in *kharif* production. Another explanation regarding Pargana Khohri is that because of it being the arid area it was unable to produce *rabi* crops.57

In *pargana* Amarsar if we see the average of ten years we find that out of 146 village in 89 villages the percentage of *rabi* is higher than *kharif*, while in 57 villages the percentage of *kharif* is higher. Another noticeable feature is that the village where percentage of *kharif* is higher among them in 11 villages the percentage of *rabi* is almost negligible such as Maalkala (4.27%), Laavi (2.05%), Kahau (10.18), Jalpawali (4.94%), Charanvaas (7.75%), Tahervaas (3.43%), Maharjo (3.18%), Khalivaas (0.00%), Gaudvaas (2.00%) and one village whose name is briddled in the document has 0.45%. It shows that *rabi* crops were not sown in these villages because of some reasons. Whereas, we do not find this tendency vice versa.

The size of the village varies considerably in Hindaun and Amarsar both. In Hindaun some villages were very small in size, some were very large while most of the villages were average in size. Villages like Nilauti (657 bighas), Fazeelabad (342 bighas), Paalivaas (501 bighas), Bilai (552 bighas), Mudaiil (413 bighas) were very small in size while the villages like Jagaar (12150 bighas), Dhedhora (11241.5), Mehamwa (16854 bighas), Syaroli (13000) were very big in size.

In *pargana* Amarsar also the villages like Haibukavaas (800 bighas), Madho Ka Vaas (350 bighas), Amaurayi Charan Ka Vaas (800 bighas) are smaller in size. Whereas, villages like Aalisar (24,000 bighas), Vachahri (40,000 bighas), Varhvaas (25,000 bighas), Tehervaas (40,000 bighas), Dasnuala (35,000 bighas), Khejnausivaas (28,000 bighas) are much bigger in size. The reason for having acquired large area by some villages is that these villages also have *dakhli* villages attached to it.

Further, if we look at the percentage of the cultivable area out of the total area, we see that out of 192 villages in Hinduan, which were sampled out here we find that two villages namely Ghusahti (6.44%) and Aalhani (5.50%) have only five to six percent of cultivable area out of the total. One can clearly notice the reason behind it that in Ghusahti out of 2166 *bighas* of land 2010 *bighas* were occupied by *sor kalar* (saline) and in *mauza* Aalhani out of 9600 *bighas* 9010 *bighas* were under saline. So it was because of the salinity of the soil only 5 to 6% of the area remained under

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cultivation. The other villages like Neeburayee (19.43%) and Chaurauti (26.90%) also have smaller area under cultivation because of the salinity of the soil. Besides nine villages have 30 to 40% of cultivable land, twenty nine villages have 50 to 60% cultivable area, thirty nine villages have 60 to 70%, sixty seven villages have 70 to 80% and twenty six villages have 80 to 90% of cultivable area of the total area (raqba). And the village Nandgaon had the largest area (93.09%) under cultivation. We see that the largest number of villages fall under the category of 70 to 80% of cultivable land while only five villages have upto 30% of cultivable land. On the above investigation it can be said that pargana Hindaun had better agricultural condition.

But in comparison to pargana Amarsar, Hindaun has less area under cultivation. In Amarsar out of 145 villages 1 village has 60% area under cultivation, 7 villages has 60 to 70% area under cultivation, 21 villages has 70 to 80% area under cultivation, 90 villages has 80 to 90% of cultivable area while 20 villages has 90 to 100% area under cultivation. The figures of cultivable area is not available for seven villages. It shows that Pargana Amarsar was very fertile.

One finds that the villages which were exempted from assessment were also mentioned in muwazana of pargana Hindaun with the assessed villages. These are the villages given as ina’am, puniya udik (charity), varhdar (watchman) or the villages that remained ujaad (desolated or deserted). And there are nineteen such type of villages given in charity (puniya udik), nine villages remained ujaad, nine given to varhdar (watchman), twelve given as ina’am and no revenue figures for these villages are mentioned.

If we work out the average of the whole pargana, it can be said that pargana Hindaun and Amarsar had considerable percentage of agricultural land. Large number of villages had excellent cultivation despite the vast area being occupied by the saline soil in Hinduan even then it had more than 60% land under cultivation, while Pargana Amarsar had 89% area under cultivation. However in order to estimate the total revenue of the pargana one should be attentive to exclude the villages which were exempted from assessment but mentioned under cultivable area in Hinduan. Another important aspect is that the area unassessed or sor kalar and nabud is not totally waste. Recent researches have highlighted the importance of uncultivable waste.
regarding *pargana* Udehi. Taqsim documents highlights that it contribute in many ways to the productivity of the fields as it also includes wells water channels, salt pans, trees, rivers etc.\(^{58}\)

The area occupied under *kharif* and *rabi* crops do not match with the cultivable area of the village. Sometimes it was less than the total area of a village and sometimes it exceeds. It indicates that in some villages there were the portions of land waiting to be brought under cultivation while other kind of villages showing the tendency of double cropping where the total area of a village was less than the cultivated area in both harvests.

The rich documents like *taqsim* and *muwazana dahsala* are available for so many areas under study like that of *pargana* Hindaun, Pahari, Bahatri, Udehi, Amarsar etc. Pargana Udehi (V.S. 1800-1809) has 3,82,542.16 bighas of land out of which 50,339.07 was uncultivable and 3,32,203.1 bighas of land was cultivable. In *pargana* Pahari (A.H. 1124-1133) total area (*raqba*) was 1,98,125.19 bighas (Todarmal *Bigha*) out of which 54,023.03 bighas were uncultivable (*vadi sor kherna*) and cultivable (*baqi bigha*) was 1,44,102.16 bighas. In *pargana* Amarsar (1758-67) total area was 1,20,610 bighas out of which uncultivable land was 12,917 and cultivable land was 1,07,693 bighas.\(^{59}\) In *pargana* Bahatri the total area was 1,52,021 bighas out of which 1,29,854 was cultivable and 22,167 bighas were uncultivable.\(^{60}\)

**Realisation of Revenue**

The *muwazana* and *Taqsim* document of *pargana* Hindaun and Amarsar does not provide information about the magnitude of land revenue demand. Regarding the revenue Abul Fazl says that out of 2,78,62,189 bighas of land of the Agra *suba* the 54, 62 50304 dams of revenue was assessed.\(^{61}\) Irfan Habib opines that it was the regressive nature of revenue which compelled the peasants to revolt against the ruling

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\(^{58}\). *Agrarian Landscape of a Mughal Paragna : Studying Udehi from Taqsims*, op. cit., p. 175-186.


\(^{60}\). *Rebels to Rulers*, op. cit., p.64

Shah Waliullah, contemporary Persian source informs us that the area came under Jat belt has approximately the yield of Rs. 1,00,00,000. S.P. Gupta gives information that the state’s share of revenue varied within each pargana from year to year and also it varied according to the fertility of the soil. He says that the standard revenue demand in jinsi crops as 2/5ths of the produce on polaj and ¼ of the produce on banjar was universally accepted.

So, it can be seen that the amount of revenue levied by the state falls heavy on the peasants and the statement of Irfan Habib seems to be correct for the Mughal period, that it was the burden of the revenue that the peasants defied them.

Irrigation Facilities

The Muwazana and taqsim documents provides rich information about rivers (nadi), ponds (talab), water channels (nala), wells (kuwo), tanks (howd) etc. in each pargana which greatly helps us in estimating the irrigation facilities in each parganas.

In Ain we find that there was naturally irrigated vast land in suba Agra because of river Jamuna, Ganga and Chambal which made these areas extremely fertile and this information was supported by other sources also. On the western side, river Banganga, Kakund, Ruparel, Gambhir, Khari etc. were flowing but none of them was perennial.

The large fertile tract between Ganga and Jamuna is called ‘Doab’ contains the areas of suba Agra. The course of Jamuna river starts above Delhi dividing modern U.P. from Rajasthan going downwards towards Madhya Pradesh.

64. Agrarian System of Eastern Rajasthan, op. cit. p. 59.
65. See Taqsim and Muwazana documents of various areas.
66. Ain-i-Akbari, op. cit., f. 83-93; Memoirs of the Map of Hindoostan or the Mughal Empire, op. cit., p. CXVI and 169; An Atlas of the Mughal Empire, p. OA, 8A.
69. An Atlas of the Mughal Empire, p. 8A
70. Memoirs of the Map of Hindoostan or the Mughal Empire, op. cit., p. 169.
River Chambal flows on the south of the Jat territory, in middle of suba Agra and meets with Jamuna between Itawa Bhind in Agra suba.\textsuperscript{71}

River Banganga is coming from Jaipur passess through Bhusawar parganas village Kamalpura, Rupbas, Bayana, Uchhain, Kheragarh and in Dholpur it is known as Utangan. The river provides the facility of irrigation to these areas as in most of the wells of this region there was salty water. One channel of Banganga passes through the city of Bharatpur and its surrounding areas reach in the dams and canals provide water to local people. The river moves forward upto Fatehpur Sikri.\textsuperscript{72}

Another river Gambhir is also coming from Jaipur, passing through pargana Bayana at its middle in the villages Karsada towards east and then towards north in the hills of Bayana meets Banganga at village Kurka.\textsuperscript{73}

River Kakund comes out Bayana and flows downward from high hilly land into village Morchha where water was always available. The source of water of river Kakund was hilly water coming through narrow channels. It meets with river Gambhir at the village Sadabad.\textsuperscript{74} 1961 census also indicates Kakund coming from Sawai Madhopur into Bayana and then to Rupbas.\textsuperscript{75}

It enters into Bharatpur from Alwar near qasba Sikri. From the dam of Sikri, where it enters into Bharatpur, the river divided into two parts, one goes to Gopalgarh and Pahari and the other towards Deeg, Kumbher and Bharatpur. In the north, because of the obstruction in its path, in rainy season the water stored between Kama and Pahari upto 11 miles and diverts towards Mathura. The water of this river also forms lake near Deeg, Khoh Jheel and Mali Jheel of Bharatpur. And then meet with Oreen river (a channel of river Khari) and moves forward towards Fatehpur Sikri.\textsuperscript{76} There was one river Parbati flowing in Dholpur and Rajkhera.\textsuperscript{77}

Major population of this region was engaged in agriculture, so there were more sources of irrigation which were manmade besides the natural water resources.

\textsuperscript{71}. An Atlas of the Mughal Empire, p. OA; Vir Vinod, p. 1653; Memoirs of Wendel, op. cit., p. 199.
\textsuperscript{72}. Vir Vinod, p. op. cit., 1636-37, 1653; An Atlas of the Mughal Empire, p. 6A.
\textsuperscript{74}. Vir Vinod, op. cit., p. 1636-37.
\textsuperscript{75}. Census of India 1961, Rajasthan, op. cit., p. 132-33.
\textsuperscript{76}. Vir Vinod, op. cit., p. 1636-37.
\textsuperscript{77}. Census of India 1961, Rajasthan, op. cit., p. 140-43.
Rain water was stored in ponds and dams. The wells were also dug to facilitate water to the crops at the time of sowing. While it is observed that rainfall is meager and the main source of irrigation were the wells, tanks and natural drainages etc. Bunds were also constructed but not perennial.\(^7\) (see map).

\[\text{Map of the Network of Rivers}\]

Source: Atlast of the Mughal Empire, Enriched by Archival Material

\(^7\) Agrarian System of Eastern Rajasthan, op. cit., p. 38.
Dams and Lakes

Dams were constructed to retain the water but these dams completely dried-up during summers and poured with water during rainy season. In Bharatpur alone there were 116 dams and some of them are of big size extending upto 8-9 miles in length. Most of them were concrete and the longest one is Azaan Dam (9 miles long).^79

There were some ponds in Dholpur also. These are more than 33 and most of them were dug during the time of Mughals, and repaired later on. Though some of them were constructed later on. Agriculture in this area was mostly dependent on these ponds.^80

Wendel has also discussed the problem of paucity of water in the context of Kumbher that there was no well containing fresh water. Wells used to be dug and filled with water in rainy season only. There was also a big sized pond near the fort of Kumbher, for the protection of it, there was a small garhi was constructed.^81

Though the water was available at some places but mostly it was salty. There was lack of sweet water for irrigation purpose as well as domestic consumption.

Jat forts

The geography of the Jat area reveals that in whole of the ‘Jat-Belt’ there were so many big and small forts were laid out in a very strategic manner. These were built by the Jats in order to safeguard themselves form the military attacks and make them more bold and resourceful in their recalcitrant activities because of the geographical condition of the region discussed before.

Kapad Dwara Records and maps gives us a better understanding of these areas as it gives the geographical layout of the forts. There were certain characteristics of the Jat forts like they built these forts in so thick jungles, sometimes these forts were strongly fortified, high and massive walls and strong bastions which made them more impregnable. Besides, a very deep ditch was also dug all around like in the fort of Thun and they keep these ditches always full of water so that no one could dare to

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enter. They also built chain of forts at one place to take refuge if they were attacked at one place. Most of these forts were built in uneven terrain.  

Wendel also points out some weaknesses of the Jat forts like the danger of fire, the paucity of water, excessive high walls and wrongly placed cannons on these walls.

There were many big forts like Thun, Sinsini, Bharatpur, Sonkh, Pinghor, Soghar, Dig, Kumbher, Kasot etc. which came under the serious concern of the Mughals as these were very big and strong forts.

There were some small forts also such as Khair, Raisis, Bhatoli, Badgaon, Rohere, Baren, Bawali, Sonkher, Jagsana, Kihrari, Barah, Kama, Au, Mahua, Ratanpur, Jawar etc. which works as a satellite forts of these big forts as well as for one another. These forts were situated in the dense jungles at strategic points.

Many military expeditions were sent against these forts especially under Bedar Bakht, Bishan Singh and Sawai Jai Singh, which proved cumbersome to the invading army because of its geographical condition. We will discuss in detail in chapter 4 about the role played by geography in fortifying the Jat villages and in building these forts.

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82. Kapad Dwara Documents, Vol II.