

Ethno-Archaeobotanical and Traditional Agricultural Survey in Southern Rajasthan with Special Reference to Udaipur, Banswara and Dungarpur Districts



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Backdrop of Ancient Phase

Southern-Eastern Rajasthan, with special reference to Udaipur, Banswara, and Dungarpur, is known as 'Vagad' or 'Vagar'. The concepts of traditional knowledge systems and hydraulic engineering have been practised since historical times and the pre-Muslim period. The region's history dates back to the Stone Age, which belongs to the Mesozoic era. The south Rajasthan region exhibits tremendous geological and ecological diversity, which has led to a rich development of water harvesting systems. According to legends, our ancestors created various water systems for different purposes; for example, people preferred water from nalas or tap springs for drinking, while open water bodies were developed for animal use, irrigation, and washing clothes. Water scarcity is not a new phenomenon for South Asians. The Indian subcontinent mostly lies in semi-arid zones where perennial drinking water resources are not available everywhere. As water is essential for life, this scarcity led ancient cultures and civilizations to thrive in certain geological pockets.

Ethno-archaeology

Ethno-archaeology involves the use of analogy, which is knowledge derived from contemporary social groups; the ethnographic present is also used in explaining past societies. It aims to explain attributes and traditions of past socio-antiquity systems, such as the functional and symbolic aspects of material culture, subsistence strategies, associated technologies, land use, settlement organization, social structures and hierarchies, craft specialization, trade and exchange networks, religious traditions,

and reutilizations [1]. Analysis of ethno-archaeology is often divided into three age systems: the Stone, Bronze and Iron Ages. In 1865, C. J. Thomson outlined ethno-archaeology in his book, describing 'prehistoric times and ancient remains. According to him, prehistory forms the basis of ethno-archaeology and archaeological sources. Present communities are typically pastoral or agricultural, which helps in understanding the environment they live in. They are aware of both the physical environment and biological facts, such as plants and various animals, which can be useful for food and medicine. These communities have a good understanding of environmental factors and have different names for geographical features and environmental attributes. Seasonal factors, including rainfall, temperature, and wind velocity, influence seasonality, and tribal communities possess extensive knowledge of typical climate seasonal variations. Ethnographic communities have evolved certain approaches to studying ethno-archaeology. They reflect on how they adapt to their ecological setting, how they manage land, and how seasonal changes affect them. In primitive communities, much land was preserved for them to secure their rights. Analogy involves relating biological differences and temporal variations. When studying ethno-archaeology in the field, researchers examine contemporary communities, focusing on tools, weapons, settlement patterns, and every aspect of human life. Ethnography encompasses nearly all parts of human life, including religious practices. Therefore, the scope extends to various aspects of human behaviour, which are studied through ethno-archaeology.

Geology-Geography

There are Debari groups in the Aravali super group zone. Soil is brownish-red in colour and hard in texture according to the geological map of Rajasthan, which is modified after Gupta et al. (1981) and the Geological Survey of India in 1979. The site has average rain fall around 700 to 950mm, whereas the average rainfall is around 650-700mm in southern Rajasthan. More river basins have good, fertile land. Here, a big drought in 1898-99 and a flood in 1875 took place. It reached a very high level, which was around the third floor of the Devsornath temple. Bhil tribes are settled in the Aravali hill ranges, and they do *khudai* agriculture. This is an ancient technology of agriculture that is still being used in remote areas. They use water from wells and ponds, which are located near the agricultural field. This technology is known as Valara (Vallar) and is used especially for rice cultivation. Black soil land is known as "Sirma" [2]. There are two types of crops, such as *Kharif* (Siyalu) and *Rabi* (Unhalu).

Karwani Technology of Water Uses

Karwani means the use of water is offered to Gods and Goddesses for the protection of crops and agricultural fields from insects like white ants. Rice is also offered to Gods and Goddesses to fulfil one's desire. According to villagers, the Kalika Mata temple (regional mother Goddess) requires a sacrifice of a male goat for good rainfall during monsoon time. Sacrifice of a male goat and cock is made three times in a year, i.e., on Tuesdays and Saturdays. One explanation offered for animal sacrifices based on the interpretation of mythologies of various communities is that the history of religions knows Gods who disappear from the surface of the earth. The violent death of these divinities is creative [3]. The temple of Kalika Mata (Mother-Goddess) (23°56'002 N, 73°51'413 E) is located 3.5km away from Devsornath (23°56'360 N, 73°51'841 E) towards the southwest. *Hawan* is done for good rain, and a Saint is invited to Lasuriya village once a year, and occasionally the Saint comes to the Devsornath temple on *Hariyali Amavasya* day, and the highest gathering of people is around 1500. They come on the fourth day of the *Kartik month* (after *Diwali*) and on every Monday of the *Shrawan* month. People also visit it as a "Holy place". It is situated on the left bank of the Som River. People visit and worship the Shiv temple and the Hanuman temple, especially during the monsoon. Maharawal Laxman Singh of Dungarpur controls these temples.

Medieval Temple Architecture

Some dates came from the temple's sculptures and pillars, they are 1755, 1762, 1781, 1789, 1791 and 1926 *Vikram Samvat* of the 11th day of *Kartik Sudi* month 1554 and Redan Rathore are engraved on the outer second shaft of the right pillar. 1693 *Vikram Samwant* was engraved on the dwarpaal pillar of the temple and on the first entrance pillar shaft of the temple; '*magh sudi* in 1598 *Vikram Samwant* is graved. Outside the Devsornath temple, there is an inscription dated 1645 V.E. *posh sudi* 13 (1588

of 20th December AD). It shows the donations made for the temple in chronological order. The oldest date mentioned is 1550 *Kartik Sudi* 11 V.E. (1493 of 12th October AD). There is a cemetery of a king that belongs to the 1530 Vikram era (1473 AD). On the *aasad sudi 7 ravivar* of the vikram era 1522 (30th June 1465 AD), the *toran* of the temple was established by Maharawal Somdas. Inscription of Desa (Daisa) village's step-well was engraved in 1453 Vikram era (1396 AD) by Dungar Singh, and Naulakha step-well of Dungarpur was engraved by Rani Premal Devi, wife of Maharawal Askaran, in 1643 Vikram era (1587 AD). During the time of Maharawal Somdas in 1459 AD, written in "Tarikh Firistha" (Firishtha Jild), the Sultane of Mandu, Mahmood, said his son Gayasuddin had been attack on Bhil and Koli, and that he destroyed the Somnath Temple. On behalf of that, Maharawal Somdas forwarded two lack rupees and 21 horses.

Mythology

God Varuna, in the later Vedic period, along with Agni, Yama and Vishnu, is often balanced with Mitra, the Sun God. Ahur and Mithras are the corresponding deities in the Avesta. The association of Indra and Surya, the Sun god, particularly highlights the symbolism of 'rain-semen fertility'. The association of Varuna and Surya also projects similar symbolism [4]. Drought can be a major factor in terminating life in a landscape. Starvation is more than dehydration; it is the main cause of death during drought. It is a known fact that under such conditions, all types of animals tend to concentrate around any available water sources in the vicinity. Animals are even known to travel long distances in search of water bodies. Eventually, it may turn into death on a mass scale, representing a diverse skeletal assemblage around the water bodies. Today, the Rebari community of Marwar and the Godwar region of south Rajasthan are travelling across the Mewar and Vagad upto Malwa region with goats and sheep.

Agriculture

Rice (*Oryza sativa*) is the major crop of this zone of Rajasthan. Wild rice (*Oryza rufipogon*) is grey or blackish in colour, also pronounced as *Ropadi* and *Kaali-Saal*. This wild rice was used by people of the early medieval period. It is vegetation looks like wild grass. According to local legend, this rice can grow automatically if rainfall is around 800mm or more and is mostly grown in villages like Dawadi and Roadwadiya. Plain rice crop is locally known as '*Saal*', '*Roap*' and '*Kudra*'. The *Kaali-Saal* is also used as a medicine. Two spoons of black rice paste and half a glass of un-boiled milk of a white cow are used as an energy dosage. This is knowledge of life span, and it doesn't include more than what is commonly taken to be medicine. The archaeological record suggests that *Oryza sativa* has been the most popular cereal in South Asia, and nomads cultivate this wild form of rice. All BP dates are based on 5568 years half-life of radiocarbon. Calibration ages are given in BC/AD [5]. In the Dungarpur and Banswara regions of South Rajasthan, several rituals related to rice are performed, which

appear to be quite similar to the rituals of the Ganga Valley and Eastern India. For example, people believe that rice has a soul and it is worshipped as a deity. On some auspicious day like *Hariyali Amavasya* in the month of August, villagers sacrifice a goat to please the local deity (rice deity) after wet transplantation. Villagers sprinkle the blood of the sacrificed goat in their rice field to protect their crop from insects and natural calamity [6]. Generally, ancient folks settled closer to the perennial water sources, such as rivers and streams. But there are numerous examples where ancient sites are located away from the source of natural water. At such sites, people must have built a variety of water structures for their survival [7,8]. According to the following persons, today rice has mainly such types as those listed below:

a) Ram Lal s/o Peem Meena (Ahari), Age- 45, Village- Rayani, V.P.O. (panchayat)- Oadwadiya, Tehsil- Dhawali, District- Dungarpur.

b) Mahesh s/o Deva Ram Meena, Age- 25, Village- Rayani, V.P.O. (panchayat)- Oadwadiya, Tehsil- Dhawali, District- Dungarpur.

1.1. Types of local Rice

a) *Desi Suttar*- This type is time-consuming (4-5 months) and takes around to grow. It is short in size and also needs plenty of water. The height of the crop is around 6 feet.

b) *Gujarat Suttar*- This is mixing type of Gujarati basmati rice and regional rice. It needs less water and grows in a short time, and it is also 6 feet in height.

c) *Jaljira*- This takes a long time (4 months) to grow. It is short in height, but the amount of water is more than average, around 500mm of rainfall.

d) *Ratna*- This is the last variety of local rice and is different from other types of rice. This is the most famous crop among farmers; it is also a cash crop. This crop does not require an extra labour charge and is also easy to farm. Its height is around 2 feet. While plantation there should be 8 inches of distance between every root of rice.

Rice has to be wet one day before farming. Here, mostly Rajput, Patel, Bhil and Garasiya community people are farmers, whereas Suthar and Brahmin are merchants and traders. According to Ishwar Singh Chouhan, Age- 59, Village- Vada Kundali, V.P.O. (panchayat)- Sakani, Tehsil- Aspuri, District- Dungarpur.

47 years ago, the cost of $\frac{3}{4}$ bigha land was rupee 300. Earlier farmer or astrologers used to stand at a particular place in the field and then throw a stone in any direction, where this stone dropped, that place was selected to dig a well. They themselves dig well; during drought time, they were able to dig an average of 4 meters a day. At present, Rajput and other community farmers are hardworking. In the medieval period, they were employed at the palace of the Maharawal or royal or erstwhile family. According

to Bhawani Singh Chouhan, Age- 52, Village- Vada Kundali, V.P.O. (panchayat)- Sakani, Tehsil- Aspuri, District- Dungarpur.

Says when his great-grandfather was alive, at that time Maharawal Laxam Singh, Dungarpur, came to the embankment of the village pond. That anybody can get land, however much they require for agriculture, but Rajputs (warriors) replied that "we are servants and doing service and don't want land". According to Narayan Lal Joshi, Age- 45, V.P.O.- Saredhi Vadhi, Tehsil- Gadhi, District- Banswara.

He was a teacher at U.P. School. Among Brahmin, Ksatriya and Vaisya (varna class), any five villagers take drum and articles used in worship to "Charan" (man of Mangadh-Bhagedodha). There is a pond, which have sea level of 166m. Articles used in worship were *Bhoj Patra* and a leaf of any grass. That grass is useful for agriculture and protection from animals' diseases. On the other hand, one must also be critical of attempts at finding explanations for phenomena within one tradition by subjectively and uncritically drawing developments, a danger natural, especially in structuralized approaches to the study of traditional systems. There is one medium-sized dam with 15 steps of embankment.

According to Mr Dhita Bhai, Age- 62, V.P.O.- Saredhi Vadhi (Partapur), Tehsil- Gadhi, District- Banswara. Other people of the same community are Mr Khatu Lal, Mr Prem, and Mr Gotam Nathu.

They say that tribal people give a sacrifice of a male goat at Mati Ji temple (23° 39'09 N, 74°13'785 E). They consider blood as an effective tool to protect fertile land from insects and indoctrination. In agricultural field farmers established *kachha* temples with a statue of a god-goddess and outside 1 2 or more tridents for a good crop, according to tribal people. The local communities had the right of ownership and first use over the local natural resources. The State recognized this right. As this right gradually eroded over the last century or so, the traditional structures started to disappear [9]. But what actually is 'Indian' about traditional 'Indian' medicine? Though various medicinal system was or are current in India, several of these are clearly not indigenous and can thus obviously not be considered in this respect, even though one today at times finds a lack of awareness for the foreign origins of some of these systems e.g., Greek medicine, Hahnemannian homeopathy, in recent time also various forms of new age or "Natural medicine" [10]. Another deity in the Egyptian pantheon also appears as the cow, the mother Goddess, known as *Hathor*, who was later. Every day she gave birth to a calf that grew into a bull, 'the bull of heaven' that symbolized the sun. The bull was also identified with the king; the idea that the king was a strong bull, the victor over his enemies, is attested as early as the very beginning of writing in Egypt [11]. The problem connected with the determination of autochthony, we find that what scholars as a rule seem to mean when they speak of traditional 'Indian' medicine is not just any seemingly indigenous system; there are, for instance, various so-called folk medicine or, to use the more modern term, ethno-medical systems in use in India.

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