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Tribal Traditional Practice “Halma” in Jhabua District, Madhya Pradesh, India towards the Water Conservation & Sustainable Rural Development

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Abstract

This is an outcome of my purposeful visit to Jhabua district in Madhya Pradesh, India where I was invited as a guest by a Trust running NGO, working there for social service, to experience the performance of Halma Tribal Tradition by being a part of it. So this paper is purely based on the participant observations and interviews. This abstract focuses on the tribal traditional practice known as "Halma," which is prevalent in the Jhabua district of Madhya Pradesh, India. Halma is a community-led practice that involves digging trenches and pits to conserve water and promote afforestation. The practice is rooted in the cultural traditions of the Bhil tribe and has been in existence for generations. The Halma is called in the presence of a deity during a village-level meeting, and individual households are informed of the venue, date, and time of the Halma through 'notras.' Since 2009, an annual Halma has been organized on Hathipawa hills, where community members gather to collectively dig trenches and pits. The practice has several benefits, including the conservation of groundwater and the promotion of afforestation, leading to sustainable rural development. However, conducting field studies on the Halma can be limited by factors such as a limited sample size, cultural differences, and environmental factors. Nevertheless, experts emphasize that water conservation is crucial for securing our future, and the Halma serves as an important example of community-led water conservation practices that can be adopted in other areas. Connecting people with a cause is the missing element in the current development and conservation paradigm. If we identify this connection, then even the last person also gives 100% to uplift self, society, and nation. Reviving a tradition with a new mandate in society is a paradigm shift in the scientific language of Social Sciences.

Keywords: Halma, indigenous ritual, water conservation, ecology, sustainable rural development, *earth mates*

Introduction

Sunita Narain, Environmentalist and Director of the Centre for Science and Environment says "Water conservation should be an integral part of our daily lives. Simple measures such as fixing leaks, turning off the tap while brushing teeth, and using water-efficient appliances can go a long way in reducing water wastage. Rajendra Singh, Water conservationist and Magsaysay Award winner.

Quotes to emphasize on water conservation that "Water conservation is not just about saving water; it is about securing our future. We need to understand that water is a finite resource, and we must use it judiciously to ensure its availability for future generations." Dr. Veena Srinivasan, Senior Fellow at the Ashoka Trust for Research in Ecology and the Environment said "The key to water conservation is awareness and education. We need to create awareness about the importance of water conservation and educate people on simple water-saving practices that they can adopt in their daily lives. Upmanu Lall, Director of the Columbia Water Center"Water conservation is not just the responsibility of individuals; it is also the responsibility of industries and governments. Industries must adopt water-efficient technologies, and governments must invest in water

infrastructure and implement policies that promote water conservation." Speaking in a program Sadhguru Jaggi Vasudev, Founder of the Isha Foundation drew the attention of all on water conservation said "Water conservation is not a choice; it is a necessity. We must take urgent action to conserve water and protect our planet. Every drop of water saved today will ensure a better tomorrow."

We all know that groundwater conservation is an essential aspect of water management in India, given the significant dependence on groundwater for irrigation, drinking, and other uses. India is the largest user of groundwater in the world, with around 60% of irrigation and 85% of rural drinking water supply dependent on it. However, over-extraction, poor management, and lack of awareness have led to depletion and contamination of groundwater resources in several parts of the country. To conserve groundwater, India has implemented various measures such as rainwater harvesting, artificial recharge, groundwater regulation, and community participation. The government has also launched several programs such as the Atal Bhujal Yojana and Jal Shakti Abhiyan to promote sustainable groundwater management practices.

Geography of Jhabua District

Jhabua is surrounded by Panchmahal and Vadodara districts of Gujarat, Banswara district of Rajasthan and Dhar and Ratlam districts of Madhya Pradesh. Narmada River forms the southern boundary of the district. The terrain is hilly, undulating typically known as "Jhabua hills topography". In this Jhabua hill topography the difference between the highest and the lowest points varies between 20 to 50 meters. But this difference goes on increasing as one moves towards south of Jhabua. In the Alirajpur division which is in the south of Jhabua the areas is almost a hilly and intersected by narrow valleys and low Vindhya Mountain ranges covered with jungles. But most part of Jhabua is without any forest cover because of low fertility of land and soil erosion. Climate is generally moderate and seasons are well defined. The summers are hot, winters are short and the monsoon season is generally pleasant.

Demographic Profile of Jhabua District

Jhabua Town Population Census 2011-2023 Jhabua is a Municipality city in district of Jhabua, Madhya Pradesh. The Jhabua city is divided into 18 wards for which elections are held every 5 years. The Jhabua Municipality has a population of 35,753 of which 18,375 are males while 17,378 are females as per report released by Census India 2011. Population of Children between the ages of 0-6 is 4811 which is 13.46% of the total population of Jhabua (M). In Jhabua Municipality, Female Sex Ratio is 946 against the state average of 931. Moreover Child Sex Ratio in Jhabua is around 921 compared to Madhya Pradesh state average of 918. Literacy rate of Jhabua city is 86.08% higher than the state average of 69.32%. In Jhabua, Male literacy is around 90.74% while female literacy rate is 81.16%. Jhabua Municipality has total administration over 7,270 houses to which it supplies basic amenities like water and sewerage. It is also authorized to build roads within Municipality limits and impose taxes on properties coming under its jurisdiction. Jhabua Caste Factor-In Jhabua (M), most of the (M) population is from Schedule Tribe (ST). Schedule Tribe (ST) constituted 36.78% while Schedule Caste (SC) were 6.72% of total population in Jhabua (M). Literacy Rate-Jhabua district. The total literacy rate of Jhabua district was 43.3% in 2011 which is less than the average literacy rate of 69.32% of Madhya Pradesh. Population-wise, out of total 352,081 literates, males were 214,582 while females were 137,499. Also the male literacy rate was 52.85% and the female literacy rate was 33.77% in Jhabua district-The Sex Ratio of Jhabua district is 990. Thus for every 1000 men there were 990 females in Jhabua district. Also as per Census 2011, the Child Sex Ratio was 943 which is less than Average Sex Ratio (990) of Jhabua district.

Ground Water Levels: An Estimation

To understand the concept we have to give an eye to the ground water levels variation as groundwater levels in an area is an important component of the hydrological cycle because it is a physical reflection of aquifer systems. To monitor the seasonal and annual change in quantity and quality of groundwater. According to a report published by Central Ground Water Board, North Central Region, Bhopal has set up a network of monitoring wells spread over the state in different hydrogeological conditions, consisting of 1182 dugwells and 300 piezometers, which are being monitored four times in a year. The periods of monitoring are-January 1st to 10th, May 20th to 30th, August 20th to 30th and November 1st to 10th. Water samples are being collected for

analysis during the month of May. The groundwater level monitored in the May is the pre-monsoon water level and the water level as it stands at the end of the ground water year after all the inputs and outputs have taken place. It is the resultant ultimate/deepest water level. Depth to water level (DTW) during May 2021 ranged from 0.42 to 46.62 metres below ground level (mbgl) in Madhya Pradesh. About 3.58% percent of the wells in the state recorded a water level up to 2 m bgl, 18.46% between 2-5 m bgl, 46.34% between 5-10 m bgl, 28.37% between 10-20 m bgl, 3.09% between 20-40 m bgl and 0.16% in more than 40 m bgl. Depth to water levels between 5-10 m bgl is the most prominent over the entire State. The groundwater level or head is subject to change both due to natural and manmade causes. Comparison of November 2021 water levels with that of May 2021 shows that there is a rise in the ground water level in about 87.43% of the wells due to monsoon recharge and only 12.57% of wells show decline in water level. Rise in the order of 0-2 m is seen in about 25.40% of wells in the state. 25.57% of wells show a rise in the order of 2-4 m. About 36.46% wells recorded a rise of water level by more than 4 m. About 8.86% of the wells show a decline in water level up to 2 m, 2.70% of the wells show a decline in water level between 2 to 4 m and 1.01% wells show decline more than 4 m. Around 47% of monitoring wells are showing declining water levels while 53% monitoring wells are showing rising groundwater level trends. The rising trend more than 0.3 m/year has been observed in a small pocket in Barwani, Kargone, Dhar, Mandsaur, Neemuch, Sheopur, Shivpuri, Narsinghpur, Damoh, Balaghat, Damoh, Betul and etc. Declining trend at a rate less than 0.3 m/year is observed in patches in many parts of the state. The declining trend of pre monsoon water levels reflects the groundwater developmental activities in an area, whereas the rising trend indicates that either the developmental activities have reduced, or that, recharge due to sources other than the rainfall, such as applied irrigation has increased. Post monsoon depth to water level rising trend is most prominent over West Madhya Pradesh as compared to East. Rising ground water level trend in the range of 0.3 to 0.6m/yr is mostly observed in the form of patches in the North West part of the state and also distributed in the form of small patches in the few districts. Depth to water level declining trend less than 0.3m/yr is more prominent towards east and north part of the state, Alirajpur, Barwani and Jhabua.

Objective of the Study

This decline in water levels made local residents of the area take initiatives to save their future generations. For this they started organizing Halma in the hill area of Jhabua district with the help and support of an NGO. Thus the chief objective in this paper is to vindicate the role and importance of 'Halma' tradition in its new form in water conservation. The average rainfall of Jhabua district is 900 mm, which is a decent amount, but the district has lost its ability to harness the rainwater. It is due to this reason, that the district has one of the highest rates of outmigration in the country. In 2008, Shivganga Samagra Vikas Parishad, a Jhabua based NGO that consisted of local leaders, called for youths in 'Vananchal Youth Empowerment Camps' to recall and recognise the pains of their villages. The persistent water crisis emerged as the most stressful one, and hence the youth started a movement for water conservation. Various rounds of discussions were held with the community, regarding the probable course of action to solve the water crisis. During one such discussion, 'Halma' emerged as a possible way to

collectivize the community for water conservation efforts. The annual Halmas organized by Shivganga, led the tribal community to revive and revisit their own tradition. These events gave rise to small-scale intervillage Halmas, called by the tribal community members to create water harvesting potential in their villages. Halmas are called by community members from March through June to enhance the water harvesting potential.

Review of Literature

As the literature available in this regard are newspaper reports, online statuses. The secondary sources I have used to collect the knowledge are newspaper reports published by onlookers. One of them that guided me is-it How over 12,000 people gathered in Madhya Pradesh to help the state conserve water Written by Shatakshi Gawade, <https://www.thenewsminute.com/article/how-over-12000-people-gathered-madhya-pradesh-help-state-conserve-water-79680>

Tribal volunteers weave green magic with rainwater pits on barren hillocks Written by THE ASIAN AGE. | RABINDRA NATH CHOUDHURY Published: Aug 12, 2017, This report is also helpful in conceptualizing the observations. <https://www.asianage.com/india/all-india/120817/tribal-volunteers-weave-green-magic-with-rainwater-pits-on-barren-hillock.html>

Input for the Thematic Report on Tourism of the UN Special Rapporteur on the Rights of Indigenous Peoples WRITTEN ON 08 MARCH 2023 <https://www.iwgia.org/en/resources/publications/5032-iwgia-aipp-input-thematic-report-unsrip-tourism.html> 40k tribals to come together in Jhabua for Halma TNN/Feb 26, 2023, report wrote good hand out for getting the vocabulary used for the expression.

I refer to the Ethnomethodology of Garfinkel, H. (1974) 'The origins of the term ethnomethodology', in R.Turner (Ed.) Ethnomethodology, Penguin, Harmondsworth, pp 15-18. Garfinkel, H. (1984) Studies in Ethnomethodology, Polity Press, Cambridge. To understand ethnographic study and its implication while field study.

A website addressed as unnat bharat abhiyan, i referred and reviewed to know the actual Halma tradition of Bhils of Madhya Pradesh <https://unnatbharatabhiyan.gov.in/blog/index.php/halma-a-great-bhil-tradition/>

Methodology

The research study is a type of qualitative research. To understand the concept in the present study I followed the multidisciplinary approach but chiefly the whole understanding of the concept was focussed through Ethnomethodology. Ethnomethodology's field of investigation allows us to understand the topic of study as the social practices of real people in real settings, and the methods by which these people produce and maintain a shared sense of social order. Harold Garfinkel's perspective on people's everyday life activities the most crucial assumption of ethnomethodology is that social reality exists only through the everyday activities of a given society's members. Ethnomethodology is the study of how social order is produced in and through processes of social interaction in its most radical form, it poses a challenge to the social sciences as a whole, its early investigations led to the founding of conversation analysis.

The approach in the study is Holistic as The holistic approach in ecology and environmental science derives from the idea proposed by Harrison Brown that "a precondition for solving [complex] problems is a realization that all of them are interlocked, with the result that they cannot be solved piecemeal.

For data collection and interview I followed the *participating observation and Interview* methods and for the interview I followed the snowball method to select my interviewees. So here with the permissions of the interviewees did not find any difficulty in writing the interview transcriptions with the original names

The Concept-“Halma” The Tradition of Bhil Tribe of India

The Bhil tribe is one of the largest indigenous communities in India, with a population of around 12 million. They are mainly concentrated in the states of Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, and Chhattisgarh. The Bhils have a rich cultural heritage, which includes their unique customs, traditions, and practices. The Bhils are predominantly an agricultural community, and farming is their primary occupation. They practice both subsistence and commercial agriculture, cultivating a variety of crops such as wheat, maize, sorghum, and cotton. The Bhils are known for their expertise in dry land farming, which involves using traditional methods to grow crops in arid and semi-arid regions. The Bhils are also skilled artisans, known for their intricate beadwork, embroidery, and weaving. They use locally available materials such as cotton, wool, and silk to create a range of textiles, including saris, shawls, and blankets. The Bhil community has a rich oral tradition, and their folklore is replete with stories of gods, goddesses, and heroes. The Bhil language is primarily spoken in the Bhil-dominated areas and is a part of the Indo-Aryan language family. The Bhils have a unique social structure, with a system of clans and sub-clans. The clans are further divided into exogamous groups, which means that individuals must marry outside their own clan. The Bhil society is also characterized by a strong sense of community, with the welfare of the group taking precedence over individual interests. The Bhil community has a long history of resistance against oppression and exploitation. They have been subjected to discrimination and marginalization by the dominant castes, leading to several uprisings and movements for their rights. The Bhil movement, led by social reformer Govind Guru, was one such movement that sought to mobilize the community and fight against the oppressive caste system. The Bhils have a rich tradition of music and dance, which is an essential part of their culture. The traditional dance forms include Ghoomar, Raika, and Bhavai. These dances are performed on various occasions, including weddings, festivals, and religious ceremonies. The Bhil community faces several challenges, including poverty, illiteracy, and lack of access to basic services. The government and non-governmental organizations have launched several programs to address these issues, including schemes for education, health, and livelihoods. In conclusion, the Bhil community of India is a vibrant and diverse group with a rich cultural heritage. They have contributed significantly to the country's agriculture, art, and folklore. Despite facing several challenges, the Bhils have shown resilience and continue to fight for their rights and dignity. The Bhil community is a vital part of India's cultural mosaic and needs to be celebrated and supported. Among the Bhil tribal societies of Madhya Pradesh, Rajasthan and Gujrat

there is a tradition of working together, living together, learning together, doing together. Remove sorrow, fill happiness.

All of you must also participate in Halma. "When a person of the Bhil tribe is in trouble, he cannot get out even with his best efforts, then he calls *Halma*, and all work together with a sense of social responsibility to get him out of trouble. This Halma tradition, today has become a huge mass movement for environmental promotion in Jhabua. Shivganga has been coordinating the Halma event for the past 10 years. In the first year (2008), 900 people participated. The number rose to 1,600 the following year, then 2,500 in 2010-11, and jumped to 10,000 in 2012. From 2008, Halma has been called every year. Thousands of tribal villagers participate in this movement. They come with their Geti (pickaxe) and 'Phawada' (spade). They prepare contour trenches on hill, dig pits for plantation. All this is for the society and not for any individual benefit. The tradition of Halma is simple-when a member of the community needs help, the entire village chips in. Over the years, Halma has been called for agricultural work and the building of houses, among others. Broadly we can say that Halma is a system of communal labor that involves villagers coming together to work on a particular task, usually related to agriculture or infrastructure development. The tradition of Halma is deeply rooted in the Bhil culture, and it reflects their collective spirit of cooperation and mutual assistance. The Halma tradition typically involves a group of villagers working together in shifts, with each household taking turns to provide food and refreshments for the workers. The task may range from ploughing the fields, constructing or repairing village roads, cleaning up water bodies, or any other activity that requires collective effort. Apart from promoting cooperation and social cohesion, the Halma tradition also has practical benefits such as reducing the labor burden on individual households, increasing agricultural productivity, and improving infrastructure in the village. The tradition also serves as a platform for sharing knowledge, skills, and experiences among the community. In recent years, the Halma tradition has gained recognition and support from the government and non-governmental organizations as a means of promoting sustainable development and rural livelihoods. It is an excellent example of how traditional practices can be harnessed to meet contemporary challenges while preserving the cultural heritage of a community.

The tradition, and its underlying principle, is now being applied to involve the tribals of Jhabua and parts of Alirajpur district to conserve water by way of contour trenches, ponds and earthen dams. The focus is on environmental sustainability through indigenous community methods. This two-day activity is a kind of sanskar in mind to take self-initiative in their own villages. Every year thousands of people assemble on the Hathipaon hill of Jhabua and make many water structures. This year "Halma" happened on February 25-26, 2023 at Jhabua. 40,000 people from Madhya Pradesh, Rajasthan, Gujarat have participated in this and built 1 lakh contour trenches. Some of the views collected during the observations & interview-Please note names published here are decoded.

i). Surbhan 60yrs and Babu 45yrs from Chaburkhanda village 45 kms away from Jhabua, they said that they have been participating in Halma since the last 9-10 years. They came and took it as service to humanity. Holding their Gyeti (Pickaxe) dug the trenches. Surbhan belongs to Bhil and Babu belongs to bhilala tribes. They said that

they are coming on their own, not by any force. They came here to offer their contribution for mother earth and prakruti (mother nature)

- ii). Sajjan a 33 year young man deftly swings the geyti (pickaxe) to deepen the contour trench on Hathipaon hill, the sun beats down on his back, but he keeps digging. The intensity with which he works shows his purpose: the trench will trap water and increase the water reserves in the nearby areas.
- iii). Kailas verma 26yrs. hailing from Umaria Darbar, a village 30 km away, it is the matter of self-motivation for community service that brings him to Hathipawa hills, as it has every year for six years. This spirit of community service, called 'Halma',
- iv). Dulha bhil 52years, a farmer from Khandiya Khal village, has been doing the Halma for about 12 years. He told us that every year we come and learn techniques here and implement them back in our village. We dig lakes or take up plantations through Halma in our village," This was surprising for us to see that not only the aged and youngsters were the part of Halma, even the children of 09-14 years were also participating equally digging and making the trenches of 2*2 depending on their enthusiasm and self-motivation. This is how the socialization process is going on among the tribals of Jhabua district. Children told that no one is left behind in their house in their village except a few who were lean old and unable to walk.
- v). Anta 12 year old boy a class 7 student from Kheda village, he added "I came for the Halma because it will benefit everyone," Similarly Women holding their infants and gyeti simultaneously with a smile on face were participating equally shoulder to shoulder to their male partners. We all walked together at around 6 in the morning on 'Hathi Pawa hills' where all the tribals gathered to make rainwater harvesting structures. After 3 hours of this exercise and interaction with tribals on the hill, knowing their motivation behind coming together was amazing.

They told us that there is a well-laid down process on how to call a Halma, in whose presence can it be called, etc. Halma was devised by the Bhil tribal community in a way, so as not to cause embarrassment to the person seeking help. The Halma is called in front of a deity in a village-level meeting. Thereupon 'notras' are sent out to individual households of a village detailing the venue, date and time of the Halma, along with the details of the help sought. During the monsoons, the tribal community members call for yet another Halma drive, to plant saplings on community sacred groves. These sacred groves known as, 'Matavan', (community-protected forest areas), are another tradition of the Bhil tribal community, which calls for the protection of the forest ecosystem. Each Bhil village has at least one such Matavan with an average size of 5 acres. During the monsoon Halmas, saplings are planted at Matavans in huge plantation drives. Tribal villagers take the responsibility to nurture every planted tree. If a sapling planted dies, the villagers replace it, increasing the survival rate manifold. 120 such Matavans have been revived by the tribal community-managed Halmas

The important thing to notice was that the management to arrange these 40,000 people to do their tasks in three hours efficiently was wonderful. The zones were marked by different colored flags. We might consider them uneducated but my perception here was shattered, they were way more

disciplined and intelligent in what they did. I have been a fest organizer during campus times and I remembered how difficult it was to handle events to such a scale. There is a tale told by a group of tribal people sitting and chit chatting that, the Shivganga organization calls for Lord Shiva's Halma to satiate the thirst of the earth, based on Bhagirath's story of bringing Ganga river on the Earth. This instantly connected with the community. The Halma, traditional system of seeking help, has several benefits for the Bhil tribe in India. Here are a few of them: Groundwater conservation: The Halma is primarily used for ground water conservation. By digging contour trenches on hills and pits for plantation, the Bhil tribe is able to conserve groundwater and ensure that it does not go to waste.

Promotes Afforestation: The Halma also promotes afforestation by encouraging community members to collectively plant trees in the pits that they dig. This helps to increase the green cover in the area and also helps to combat climate change.

Community Participation: The Halma is a community-driven initiative that encourages the participation of both men and women from the Bhil tribe. This helps to strengthen the community bond and also ensures that everyone works towards a common goal.

Cost-effective: The Halma is a cost-effective method of ground water conservation and afforestation. It requires minimal resources and tools, and the community members can carry out the work themselves without the need for external help.

Preservation of Traditional Practices: The Halma is a traditional practice that has been passed down through generations of the Bhil tribe. By continuing to practice the Halma, the Bhil tribe is able to preserve their cultural heritage and keep their traditions alive.

Conclusion

The article explains that the Bhil tribal community has a well-established process for calling a Halma, a traditional system of seeking help. The process involves calling the Halma in front of a deity during a village-level meeting. Details of the Halma, including the venue, date, and time, are then sent out to individual households in the village seeking help, so as not to cause embarrassment to the person seeking assistance. Bharat-a nation that has proposed "Vasudhaiva Kutumbakam" or "One Earth, One Family, One Future," and there is no better expression of this than in the tribal traditions. We are proud to share our learnings from these experiences, especially the traditions of sustainable living and give a humble call that lets us learn from the tribal people, their traditions, and their values, which are humanity's epitome. It is time to embrace these lessons as we move towards a sustainable future for all. The article explains that since 2009, an organization has been calling for an annual Halma to be held every year, and the tribal community has been participating in large numbers. The annual congregation takes place on the Hathipawa hills, which is one of the most important hills of Jhabua. Men and women carry their traditional tools, such as 'geti' (pickaxe), 'phawda' (spade), and 'tagari' (pan), and gather in large numbers to collectively dig contour trenches on the hills and pits for plantation. The purpose of the annual Halma is to conserve groundwater and promote afforestation. Many activists and NGOs have learned this lesson when attempting to use western ideas to assist remote societies. Reviving the practice of *halma* is one attempt to utilize an indigenous concept in order to assist the

Bhil people of Jhabua District, Madhya Pradesh More than 110 villages revived their Mata nu van with plantations of more than 50,000 trees. Sixty-five (65) ponds were constructed by people in their respective villages. This has helped them to solve problems of drinking water and irrigation in some areas. More than 141,000 contour trenches were dug and constructed by people through shramdaan on community land. Halma is very Indian-from concept to execution to post programme activities. It is entirely based on the Indian philosophy of community initiative for self-development. Government and all others will support but the community should take the lead. Halma represents this very philosophy which was the source of prosperity in India. Connecting people with a cause is the missing element in the current development and conservation paradigm. If we identify this connection, then even the last person also gives 100% to uplift self, society, and nation improves the water-retention capacity of the landscape, leading to a severe scarcity

Suggestives: Halma for water conservation should happen everywhere, especially in the highlands where water levels are considerably low so that there's no water problem. Jhabua district has set an exemplary model towards water observations, especially reversing the groundwater under the soil to increase the water levels underground. The Halma model must be promoted by policy formation especially for the deserts and hill areas where no other options are available to stop the rain waters.

Limitations of Study

Every research has its limitations that somewhere are unavoidable parts. In this research I find myself bound to some language constraints as my limits while interviewing the sample, but no issue the sole aim was to understand how Halma performed by the true earthmates with their limited resources and by the gods grace it was achieved to all extents. Also it was scorching heat in the hills with less human facilities. Post Covid-19 restrictions and guidelines were also somewhere limiting the study as the huge mass of 40,000 people were there at a place. Although there are several limitations to consider when conducting field studies on the Halma in the Bhil tribe of India. Here are a few of them: Limited sample size: Field studies on the Halma may be limited by the sample size of the study. The Bhil tribe is spread across several states in India, and it may be difficult to include a representative sample from each of these areas. Cultural differences: Conducting field studies in the Bhil tribe requires an understanding of their unique culture and traditions. Researchers from outside the community may not have this understanding and may not be able to accurately interpret their observations. Time-consuming: Field studies can be time-consuming, and it may take several years to collect enough data to draw meaningful conclusions about the impact of the Halma on ground water conservation and afforestation. Environmental factors: The success of the Halma is also influenced by environmental factors such as soil type, rainfall patterns, and topography. Researchers may need to consider these factors when conducting field studies. Resource constraints: Field studies may require resources such as funding, personnel, and equipment, which may not always be readily available. Ethical considerations: Researchers must consider ethical considerations when conducting field studies, such as obtaining informed consent from participants and ensuring that their privacy and confidentiality are protected.

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