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Eco-Friendly Phytotherapy Practices and Indigenous Trusts in Southern Rajasthan Hilly Regions and the Need for its Protection for Sustainable Development

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Abstract: ***Many cultures are on the verge of disappearing due to the knowledge of medicinal plants. The ethnic peoples of the study area are religious. They worship plants, ponds, rivers, and even the Sun. Up to now, most common medicines still use traditional methods. Herbal remedies are used for people of different ages and specific diseases. In the hilly region of Southern Rajasthan, the present study aims to discover some phytotherapy practices and indigenous confidence. Herbalists need to protect their shared wealth because this traditional knowledge is fast disappearing due to modernization.***
Keywords: Ayurveda, Herbal Healer, Phytotherapy, Indigenous Trust, Sustainable Development.

I. INTRODUCTION

Rigveda and Ayurveda (4500-1600 BC) indicate that ancient Indians had a vast understanding of indigenous uses. Since prehistoric times, India has undeniably held the top spot in herbal remedies, utilizing almost 600 plant species in various formulations. The day-long study of medicinal plants has become a central field of biodiversity conservation and pharmaceutical science. Every ethnic group has its herbal health care system everywhere across the world. For human and animal illnesses, these individuals use various plants and their items.

Several reports in different regions of India are reciting these studies [1]–[8]. The Traditional ayurvedic system that has been built over several thousands of years in India is a traditional knowledge system that could help solve enormous environmental issues. Typically used for human ailments, this information method may provide us with information for ecological restoration. There are many different types of medicinal plants that develop in arid lands and possess properties that can reduce the environmental impact indigenous to the Himalayas and all-mountain regions of the world [9].

Sacred groves are precious medicinal and other plants with high therapeutic and economic value for land [3]. For thousands of years, western Indian and Herbal medicine medical systems are now developing. They have left a very well heritage for posterity that helps us remember a theoretical foundation whose philosophical structure is instantly rational, even if we are more or less archaic [10]. The use of ethnomedicine dates back to the civilization of the Indus valley in 2600 B.C. Chinese medicine and Ayurvedic medicine have been developed but are still used by local people [11]. In current pharmaceutical research, this kind of conventional awareness is beneficial because it acts as an initial screen. It can help detach the phytochemical compounds that should be of medical significance.

Several modern drugs were developed from indigenous remedies based on traditional knowledge. The role of food, medicine, fiber, cloth, paper, building materials, etc., provides besides natural resources and habitats for biodiversity. These procedures offer a set of guidelines for societies to benefit from their environment [12]. Traditional medicine includes many theories and concepts that are not scientifically explicable and depend on experiences that are passed down to the next generation [13]. Religion and treatment have been explored by [14]-[16]. At stake, the economic and cultural issues compel respect for the role of local agronomic traits, farmers, and indigenous healers in an increasingly globalized.

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The implication here is that only those with the expertise can identify, prepare, and prescribe herbal remedies. Traditional knowledge is being exploited at an alarming rate by the modern food, perfume, and cosmetics industries. Pirates desire to increase native and local people. The concern is that patents are being granted for non-original inventions that don't meet patent protection standards based on traditional knowledge. The turmeric's wound healing properties and insecticides properties were patented in two of the most notorious patent cases (the Turmeric patent and Neem patent). The legal patent system failed to recognize or search for prior rights. These patents were based on traditional knowledge and practices from indigenous communities in the Indian subcontinent and the Amazon without regard for indigenous people's rights over their resources, intellectual efforts, and developments.

The holders of traditional knowledge have the right to protect their interests in cultural creations and services. They will receive compensation for their investment in protecting and developing biodiversity [11]. Unregulated medicinal plants are traded in Chhattisgarh. They exist to regulate the public interest and change certain forest products by creating state monopolies. The state government has endowed the rights of NTEP to village panchayats (Village level institutions). The environmental policy also attempts to teach sustainability, equity, and better resource management. [6]. There will always be an enormous need for traditional medicines on a global level. Many of the people living in less developed countries rely on traditional medicine for their health care needs. Many people who suffer from the side effects of prescription medicines are looking back to traditional herbal cures. The word "herbal" has come to symbolize protection against chronic diseases and cosmetics. This would unite the golden past and present to have a safe future.

II. METHODOLOGY

This study was based on fieldwork in six villages at Sundanpur, Bankoda, Gordi, Chidiyavasa, Kevaria, Barvi, Garhi, Siyapur, Saliya, and Survania of Banswara district. The previously mentioned upland areas are mainly inhabited by Bheel and Meena, Garasia, and Damor tribes. This research was done during different periods. The information was gathered from people in villages, villagers, forest range officers, and other government authorities at a particular site. During the study, forty field trips were carried out. The interview was able to find out about medicinal plants in the local area, which doctors would be ignorant of. The interviews were done mostly in the local language, Vagadi, and Hindi also. For this study, patients and herbal healers were interviewed. Medicinal plants have been collected, listed with the help of locals and natural healers.

Fig – 1 Location of Study Area.

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III. OBSERVATIONS

In the present study, we observed that bark, root, fruit, seeds, powder, paste, massage oil, ointment are prepared from wild medicinal plants. Herbal healers collect various parts of medicinal plants such as leaves, bark, branches, buds, flowers, fruits, seeds, and roots on specific days and times. Some medicinal plants and their products are preserved for the future. In the present study, we also observed that 24 herbal healers are found in the village and well-known. Some bones are bonesetters; some are experts for a dog bite, snakebite, and scorpion bite. Herbal healers of the study area have their methods for diagnosis. They also use combinations of different crude herbs. The preparation of that combination is their professional secret. Some healers claim to treat very chronic and incurable diseases also. Herbal healers of the study area use various medicines for Phytotherapy of 40 ailments. (Table- 1&2).

Table 1 - List of ailments

S. No.	Ailments		
1	Oral diseases	21	Body tumor
2	Cataract	22	Malaria
3	Toothache	23	Skin diseases
4	Ulcers	24	Paralysis
5	Earache	25	Sexual ailments
6	Throat infection	26	venereal l ailments
7	Respiratory ailments	27	Fertility in male &female
8	Rheumatic ailments	28	Urinary ailments
9	Gastrointestinal	29	Body pain
10	Stomach disorder	30	Muscular pain
11	Diarrhea	31	Headache
12	Jaundice	32	Swelling
13	Nausea	33	Piles
14	Loss of memory	34	Cold &cough
15	Fever	35	Bone fracture
16	Mental fatigueness	36	Dog bite
17	Dehydration	37	Scorpion bite
18	Diabetes	38	Centipede bite
19	Sunstroke	39	Snakebite
20	Blood pressure	40.	Cancer

Table 2 – Herbal Medicines

S.No.	Local Name	Botanical Name	S.No.	Local Name	Botanical Name
1.	Adusa	Adhatoda vasica	21	Jamun	Eugenia jambolana
2.	Akarkara	Anacyclus pyrethrum	22	Jangli pyaj	Asphodelus fistulosus
3.	Amaltas	Cassia fistula	23	Kateri	Argimon maxicana
4.	Amarbel	Cuscuta reflexa	24	Kalmegh	Andrographis paniculta
5.	Amrood	Psidium guajava	25	Kaner (peeli)	Thevetia peruviana
6.	Anar	Punica granatum	26	Kaner (Safed)	Nerium oleander
7.	Ankol	Alangium lamarckii	27	Karonda	Carissa carandas
8.	Amla	Emblica officinalis	28	Kathal	Artocarpus heterophyllus
9.	Aparajita	Clitoria ternatea	29	Kewda	Pandanus odoratissimus
10.	Arjuna	Terminalia arjuna	30	Mahua	Madhuca latifolia
11.	Ashwagandha	Withania somnifera	31	Jangali Karela	Momordica balsamina
12.	Bael	Aegle marmelos	32	Kamal Kakari	Nelumbo nucifera
13.	Brahmi	Bacopa monnieri	33	Nagfani beldi	Trichisanthes cucumerina
14.	Champa	Michelia champaca	34	KoliKanda	Urginea indica
15.	Chandan(red)	Pterocarpus santalinus	35	Amba haldi	Curcuma amada
16.	Chitrak	Plumbago zeylanica	36	Keli	Canna indica
17.	Gudhal	Hibiscus rosa sinensis	37	Khhata nimbi	Cayratia trifolia
18.	Harjora	Cissus quadrangularis	38	Jatashankari	Dioscorea bulbifera
19.	Harshingar	Nyctanthes arbortristis	39	Kalihari	Gloroisa superb
20.	Jamun	Syzigium cumini	40	Lalpatta	Leea macrophylla

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Bavsi is a religious priest. He does jhadfoonk also. In some bavsi's place at sacred groves, no money is accepted. Patients typically bring food grains (Chana, Makka, Rice), Agarbatti, and Paniwala Nariyal (coconut). Bavsi of that Gaddi does not make money out of their medicinal help and other therapy of treatment. (Table-3)

TABLE – 3 Bavsi of the study area

S.No	Name of bavsi	Sex (F/M)	Village
1.	Kupda mata ji	M	Kupda
2.	Devgarh kala ji	M	Deogarh
3.	Khodiyar bavsi	M	Banswara
4.	Kala ji	M	Khandu
5.	Bhootnathiji	M	Kupda
6.	Dasha mataji	F	Ghantaghar
7.	Kalika mataji	F	Banswara
8.	Bhairav ji	M	Padla
9.	Ojhariya mataji(bavsi)	M	Talwara
10.	Bodigama bavji	M	Kalbhairav
11.	Naugama bavji	M	Surya maharaj
12.	Gamdi	M	Gotmalai
13.	Dhira	M	Khodiyal mataji
14.	Dhira	M	Hastinapur lok devta
15.	Karji	M	Dashamata mandir
16.	Kohala dhaani	M	Balswarup maharaj
17.	Bavsi	M	Bedala
18.	Ishwar das vaishnav	M	Choppasagh
19.	Chunni lal ji	M	Kom ji ka padada
20.	Kala bavsi Bhogji	M	Nahali
21.	Rooja bavsi	M	Rooja
22.	Rakko bavsi	M	Rakko
23.	Bavsi of Devla dham	M	Ghardi
24.	Kala bavsi Adhaiswahar	M	Ghardi
25.	Bhairavji bahvanpura	M	Anandpuri

IV. RESULTS AND DISCUSSIONS

During this study, it was observed that the ethnic people of the study area preferred to use a variety of local medicinal plants from local herbalists of their location. In some study sites, people were willingly going to the government allopathic doctors or private doctors also. Still, people believe that no allopathic medical treatment will be sufficient if the disease has been due to any supernatural power. It is removed only by Bavsi. Indigenous trust for medicinal plants and biophilic philosophy is commonly found in the study area. People worship sacred trees for several supernatural ailments. In those cases, they believe that no allopathic and other medicine will be useful. Mitra [17] support the results of the present study. They were also support present study [18], [3], [7], [8], [12] and [19]. The present study is a topic of extensive and comprehensive research with new tools and technology. In the present study, I have touched only a few outlines.

A. Some Ground Realities

1) Weak coordination among some stakeholders.
2) More invalid links between demand and supply of medicinal plants.
3) Proper marketing wanting.
4) Appropriate schemes and programmers for medicinal plants in this area are very few.
5) Deforestation.
6) Awareness about patent rights in this area is inferior.
7) Herbal healing skills and knowledge of medicinal plants are disappearing in the younger generations of the local areas.
8) Trade-in medicinal plants are unregulated in the rural area.

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B. Pitfalls of Negative Impact

1) Linkages between policy and planning are weak.
2) Integration with other sectors is weak.
3) There is no financial support to the herbalist for the rising of medicinal plants
4) Science and technological research centers are not present in the study area.
5) There are no electrical connections in Medicinal Botanical Gardens (Kevdiya, Talwada), so electricity connections can be treated in a particular category.

C. Awareness through different programs

Some programs help develop an understanding of various aspects of herbal medicines in our area. A few of them are given below:

1) Arrangement of programs based on participation in National and International fairs based on herbal medicine and their products.
2) Interpretation of trades based on herbal medicines.
3) The plan is to be managed based on science and Technological research related to the quantity and quality of herbal drugs.
4) Programs to be executed that are helpful in the identification and conservation of medicinal plants and medicines.
5) Plans to be managed which are useful in the development of understanding about IPR of herbal healers.
6) Programs to be ordered which are helpful in the enhancement of popularity of medicinal plants and herbal drugs.

Such activities and initiatives help develop a bright future of the glorious herbal gift of our planet. Every state of the out country with such type of herbal treasures should follow similar practices for future generations' safe future.

D. Suggestions

1) Tax benefits to be given to pharmaceuticals processing of manufacturing units.
2) Enhanced opportunities to be available for local teams.
3) Bank financing policies should be available for farmers of medicinal plants.
4) Science and technology and research units to be developed for in situ and ex situ conservation and quality improvement of medicinal plants.
5) Forestry projects for medicinal plants should be developed.

V. CONCLUSION

Medicinal plants have tremendous healing capacity. There is a need to draw phytochemists, pharmacology for scientific research, and Legislation sector, and the trade sector for bright tomorrow. It can be hoped that many essential drugs can be unrevealed from the secret treasure of the ethnic world. Today the government is aware of its contribution to herbal healers. Some other NGOs have also taken some initiatives. However, there is still a need for proper research and protection of IPR of herbal medicines and healers.

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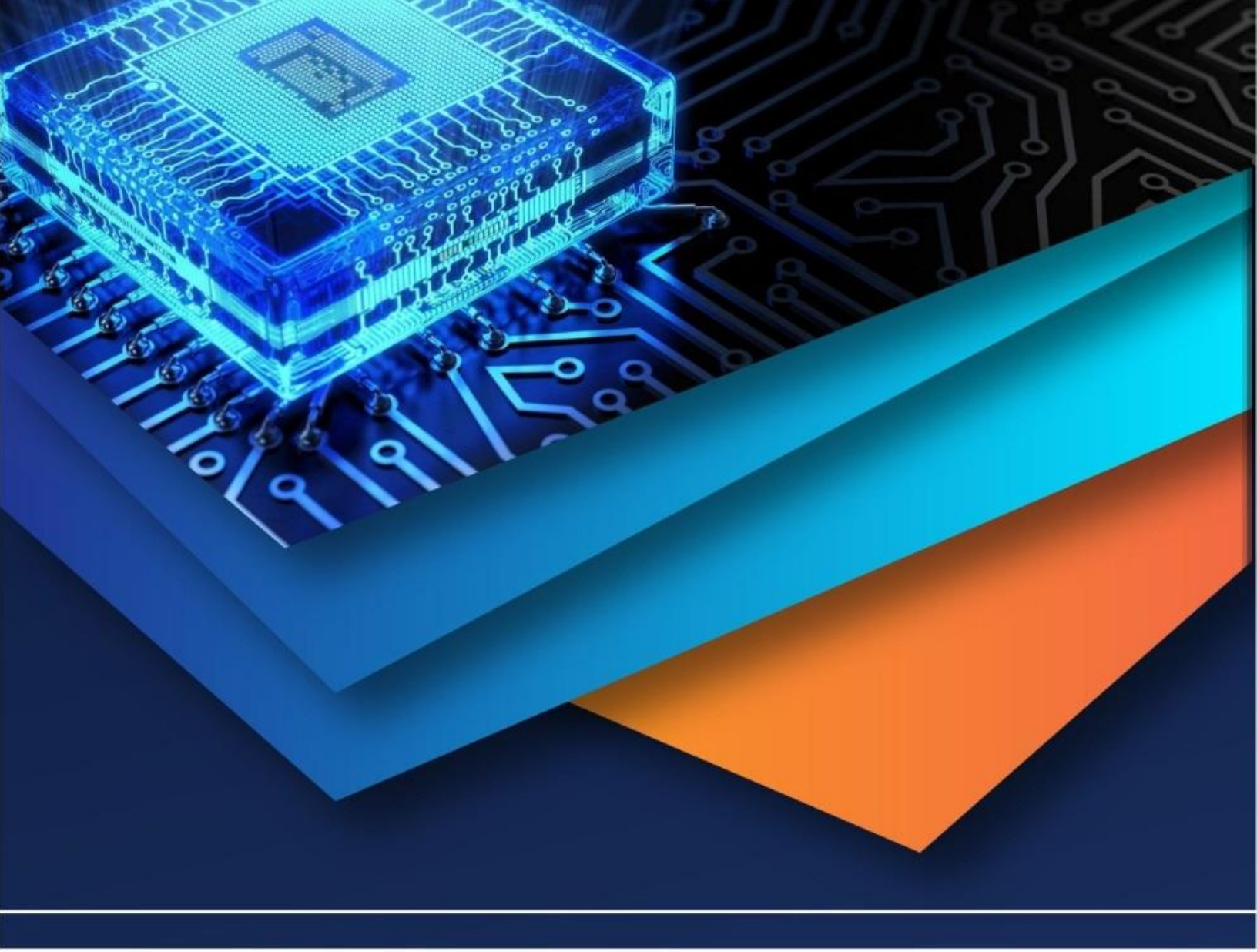

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