



## Ethnic society and biodiversity conservation in the Thar Desert, Rajasthan

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### Abstract

Indigenous people are over 300 million in the world. They are inhabitants of each biome of the earth, significantly the least disturbed ecosystem, which is terrestrial or aquatic. Based on comprehensive analysis of recently published data, this paper stresses the strategic significance of indigenous people in the maintenance, management, and conservation of Biodiversity of the entire world.

There is an indivisible relation between Indigenous ethnic cultures and biodiversity conservation. Indigenous people live in the most hostile environment and protect biodiversity. They have evolved to live in extreme conditions. In case of western Rajasthan indigenous schedule tribe is Bheel community. Their contribution to the conservation of biodiversity is significant. Traditions, cultures and their livelihood activities are an important factor for the desert ecosystem.

**Keywords:** biodiversity, culture, conservation, ethnic, indigenous, significant, tradition

### 1. Introduction

Biodiversity as a term and concept derived in the field of conservation biology. Though, as Alcorn (1994) <sup>[1]</sup> states "...while proof of conservation success is ultimately biological, conservation itself is a social and political process, not a biological process. An evaluation of conservation requires, therefore, an evaluation of political and social institutions that contribute to, or threaten, protection" one of the important social aspects allied to biodiversity is, unquestionably, the case of the world's indigenous or ethnic peoples. Indigenous people live in and have special claims to territories that, in many cases, harbor exceptionally high levels of biodiversity <sup>[2]</sup>.

Ethnic people live in the most antagonistic environment from the pole to equator, from the fragile desert to the tropical rainforest. The Decade beginning from January 1, 1995, is being observed as the "International Decade for the world's Indigenous and ethnic people" <sup>[3]</sup>.

There is an indivisible link between Indigenous ethnic culture and biodiversity conservation. All over the world, the ethnic people have conserved the flora and fauna with which they have an emotional and symbiotic relationship.

The Agenda 21 of the Rio Earth Summit (1992) affirmed that indigenous people and their communities and other local communities have a significant role in environmental management and sustainable improvement because of their knowledge and practices <sup>[3]</sup>.

Given the above, this chapter offers a review about the multiple importances of indigenous peoples and makes the point that is valuable, local-specific views, knowledge, and

practices are used by indigenous peoples who have relied for centuries upon the maintenance of biodiversity. Indigenous peoples are frequently classified as impecunious or treated as invisible. Nevertheless, in the concluding analysis, they embrace the key to successful biodiversity conservation in the majority of the biologically richest regions of the world.

### 1.1 Indigenous Peoples

Indigenous people number over 300 million. They live in about 75 of the world's 184 countries and are inhabitants of practically every main biome of the earth. Indigenous peoples also called as tribal and aboriginal peoples, national minorities or first peoples and are best defined as the descendants of the original residents of a territory which has been overcome by conquest and are "ecosystem peoples", such as shifting or eternal cultivators, herders, hunters and gatherers, fishers and handicraft makers.

Indigenous people called "ecosystem people" by some authors such as R.F. Dassman, and M. Gadgil, these producers subsist by appropriating a diversity of biological resources from their immediate vicinity. Their quality of life is therefore intimately linked to the maintenance of certain levels of local biodiversity <sup>[4]</sup>.

In Indian subcontinent Ethnic community is known as schedule tribe. For biodiversity utilization and its management ethnic people plays a significant role in Thar Desert of Rajasthan <sup>[5]</sup>.

In India Indigenous people are over 100 million in number which is classified into the following categories mentioned below:

**Table 1:** Ethnic People of India

S. No	Community Name	Region	Race
1	Garo, Mikir, Naga, Abor, Bodo, Angami, Khasi	North- East India Hills	Mongoloid
2	Gujar, Lodhs, Majhi, Nats, Gonds, Gaddis	North and North-West, India in the sub Himalayan Plains	Mongoloid and Proto-Australoid
3	Pargaiyas, Korwa, Oran, Rabha, Saor, Asurs, Birja, Santhals, Ho, Juangs, Munda, Khonds, Birhor, Toto, Lodha, Malpharia	East-India Plains	Proto-Australoid
4	Gonds, Marias, Koya, Kurku, Baigas, Hill, Korbas	Central India	Proto-Australoid
5	Bhils, Grassias, Dhankas, Gamits, Minas, Saharia, Siddis, Damore	Western India	Proto-Australoid
6	Todas, Badaga, Kotas, Chenchu, Kolam, Thoti, Irulas, Karumbas	South India- in the Nilgiri Hills	Proto-Australoid & Negrito
7	Onges, Jarwa, Shompen, Great Andamanese, Sentenalese	Indian Islands Andaman & Nicobar	Negrito (Vanishing tribe)

**Source:** Sinha, K. Rajiv, 1996

As per the 2001 census, the Scheduled Tribe (ST) population of Rajasthan State is 7,097,706 constituting 8.4 percent of the total ST population of India. The Scheduled Tribes of the State constitute 12.6 percent of the total population (56,507,188) of the State. It holds the 12th position among all States and UTs in respect of the percentage share of ST population to total population. The ST population has registered a growth rate of 29.6 percent during 1991-2001 which is 1.2 percent higher than the growth of the total population [6].

## 2. Material and Methods

Specific methods were applied randomly in the village to gather information regarding ethnic people and their role in biodiversity conservation. We gained valuable information during the random field survey using various methods like:

- 1. Field Survey:** Random field survey and visual observation at Orans (sacred land), Gaucher (pasture land), Magra ecosystem and agriculture land in Barmer, Rajasthan.
- 2. Interview:** The field survey conducted by making simple questionnaire format to obtain the information through people's traditional knowledge.
- 3. Literature Survey:** Offline and online literature has been used with the help of Books and Journals.
- 4. Animal Sampling:** By counting burrows, a collection of dropping dung, ocular trapping methods and observation. Avian fauna was also watched by ocular methods and their dropping feather and nests. Vehicle-based method and roadside counts also have been used.
- 5. Questionnaires Format:** With simple question randomly asked people how they utilized these resources to conserve biodiversity.
- 6. Photography:** Photographs of their activities in the study area has been also taken. Identification of Faunal, as well as floral diversity, was also observed.

## 3. Observations and Result

During random field surveys, we observe various valuable information and facts which proves the vital relationship

between ethnic peoples and biodiversity conservation in Thar Desert of Rajasthan.

### 3.1 Biological Conservation by Ethnic Society of the Thar Desert

The Documentation of local people's knowledge of ethno-botany began thousands of years ago as Chinese, Greek, Indian and Native American scholars recorded folkways of classifying and using animals and plants. Ethnic societies have generally preserved their tradition, art, culture, and agriculture.

Generally in western Rajasthan most population of schedule tribe is Bheel. This community comprises of sub caste-like Bochia, Parmar, Makvana, Dagla, Lirdia, Waghela, Chuddi, Malkhat, Gundhi, Devra, Sundia, Kalinda, Joling and many more. Every sub-cast has their own God or Goddess for which they are devoted to conserving the Biodiversity.

### 3.2 Case Study- Lunu Village

Bheel of Lunu village having sub-cast waghela has their local Goddess Malan Mata. For devotedness of Malan Mata, they never cut Rohida (Ticomela undulata) for firewood and for furniture purpose. According to them the statue of Malan Mata is made up of wood coming from tree Rohida (Ticomela undulata) so if they will cut it or use it for their regular purposes then Malan Mata will curse them.

Due to this devotee behavior, they conserve the state flower of Rajasthan i.e. Rohida flower.

They also protect the avian biodiversity which depends upon Rohida tree for their nesting and feeding. Bird Grey Shrike (Lanius excubitor) is locally called "Malali" or "Shakun chiddi" is the very hallowed bird for them. They consider and use its presence as a good sign or bad sign for work and travel. There is a common quote "Daavi Dere, Jeemni Gometre". This quote states 'Daavi'- the presence of Bird at the left side is good for going home and 'Jeemni'- Presence of bird at the right side is best for travel.

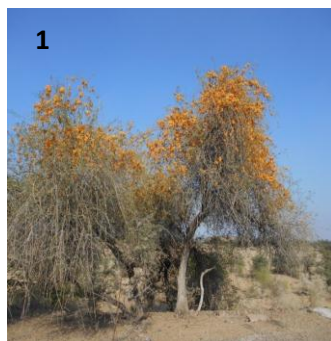
These types of ethnic behaviors of indigenous people boost the faunal as well as floral biodiversity in these areas.

**Table 2:** Mammalian faunal sightings of the study area

S. No	Zoological name	English name	Local name	Availability
1.	<i>Gazella gazelle</i>	Chinkara	Hirania	Common
2.	<i>Bandicoota bengalensis</i>	Mole	Undra	Common
3.	<i>Vulpus vulpus pusilla</i>	Desert fox	Dholi pooch loki	Rare
4.	<i>Vulpus bengalehsis</i>	Indian fox	Kali pooch loki	Common
5.	<i>Herpestes edwardsi</i>	Mongoose	Nevela	Rare
6.	<i>Pteropus giganteus</i>	Fruit bat	Chamcher	Old open well
7.	<i>Felis silvetri oranata</i>	Desert cat	Rohimana	Rare
8.	<i>Hemichinus auritus calloris</i>	Hedghog	Heli	Common
9.	<i>Hystix indica indica</i>	Porcupine	Seha	Rare
10.	<i>Funambulus pennati</i>	Five-striped	Tilori	Common
11.	<i>Meriones hurrianae</i>	Indian desert gerbil	Kol	Common
12.	<i>Tetera indica</i>	Indian gerbil	Chuchunder	Common
13.	<i>Boelaphus tragocamelus</i>	Nilgai	Rojara	Good
14.	<i>Lepus nigri collis</i>	Desert hare	Sashia	Common
15.	<i>Canis aureus auveus</i>	Jackal	Siyaliya	Rare

**Table 3:** Avian faunal sightings in the field area

Zoological name	English name	Local name
<i>Francolinus pondicerianus</i>	Grey-patridge	Teetar
<i>Pavo cristatus</i>	Peacock	More
<i>Tringa glareola</i>	Wood sandpiper	Sutradia
<i>Pterocles exustus</i>	Indian sand grouse	Patebari
<i>Streptopelia deaecto</i>	Indian ring dove	Dholi holi (Kamedi)
<i>Streptopelia franduebarica</i>	Red turtle dove	Rati Holi (Kamedi)
<i>Lanius excubitor</i>	Grey shrike	Shakun chidi
<i>Phyconotus leucogencys</i>	White checked bulbul	Pinsa
<i>Phyconotus cafer</i>	Red vented bulbul	Lal pinsa
<i>Turdoides caudatus</i>	Common babbler	Laly
<i>Athene brama</i>	Spotted owlet	Kochari



**Fig 1 and 2:** *Ticomella undulata*



**Fig 3 and 4:** *Lepus nigricollis*, Grey shrike (*Lanius excubitor*)



**Fig 5, 6, 7:** Faunal Diversity at Barmer

### 3.3 Ethan botanical contributions of the tribal of Desert-

- Useful domesticated plants.
- Useful wild plants as a source of food and herbal medicine for them.
- Collection of plant product in a sustainable manner for their economy.
- Sacred groves- The reservoir of ethnobotanical consolation and last refuge of endangered flora <sup>[7]</sup>.
- Common property resources and economy <sup>[8]</sup>.

### 4. Discussion and Conclusion

The study of Human Ecology and ethnobiology has now become a critical need of the time. Traditional knowledge and wisdom about the miraculous properties of diverse plant and animal species are now emerging as a holistic segment of ecology.

The world's remaining regions of high biodiversity are frequently found on the ethnic community's territory and in their water bodies. All over the world social and political divergence are arising over the scheme of the Government and the conservationist to deracinate ethnic people from their native territory and forest and the human ecologists and environmentalists efforts to rehabilitate them.

States regarding ethnic society should recognize and duly support their identity, interest and culture, and enable their effective contribution in their achievement of sustainable improvement of faunal as well as floral Biodiversity.

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