Biocultural Diversity and Culture Animals in Mobile Pastoralism: Cattle-Culture of Pastoralists of Telangana State, India

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Abstract

The concepts of culture animals and biocultural diversity do exist since the time immemorial; however, they made inroads into scientific research relatively recently. Indigenous livestock breeding communities have a tradition of assigning social and cultural meaning to the livestock they breed. In this regard, an attempt is made to review the term 'biocultural diversity' and to define tentatively the term 'culture animals' with reference to the Indigenous Poda Thurpu cattle breed reared by pastoralists inhabiting the Telangana state of India. Indigenous livestock breeds, such as the Poda Thurpu cattle, represent the collective heritage of communities they are associated with, and cannot be conserved in isolation. Such breeds will survive only when the Indigenous knowledge and production systems, which they are a part of, would also survive.

Keywords
Culture animals; Biocultural diversity; Pastoralism; Poda Thurpu; Deccan Plateau; Banjara; Golla

1. Introduction

Biocultural diversity and the concept of culture animals have been around since the time immemorial, however, it made inroads into scientific research and discourse relatively recently. The term biocultural diversity is gaining significance in science, practice and policy. Maffi (2007) defines biocultural diversity as "the diversity of life in all its manifestations - biological, cultural, and linguistic - which are interrelated (and possibly coevolved) within a complex socio-ecological adaptive system." Further, Maffi (2012) elucidates that biocultural diversity can be understood as "the diversity of life is made up not only of the diversity of plants and动物 species, habitats and ecosystems found on the planet, but also of the diversity of human cultures and languages."
With reference to the concept of ‘culture animals’, Kohler-Rollefson (2015) defines (animal cultures) as “Indigenous livestock breeding communities that have a tradition of livestock breeding and for whom their animals have social and cultural meaning. This is reflected in an identity based on the community’s association with animals, and a myth of origin linking community to a particular breed or species. Animals represent social currency, and they are given as dowry or bride wealth. Animals are shared within the community, while exchange with outsiders is restricted.”

With the above background, an attempt was made to refer to the term biocultural diversity, to propose and define tentatively the term ‘culture animals’. Present findings of the study conducted on biocultural diversity of mobile pastoral communities of the Deccan Plateau region of India discuss Poda Thurpu cattle breed as the ‘culture animal’ of mobile pastoralist communities of Nagarkurnool district of the Telangana state of India.

2. Methodology

2.1 About the Study

A study on mobile pastoralism of the Deccan Plateau region was initiated by Sahjeevan-Center for Pastoralism based in the Indian state of Gujarat, in collaboration with the Watershed Support Services and Activity Network (WASSAN) and Revitalizing Rainfed Agriculture Network (RRAN), based in Telangana, India, during July-December 2018. The objective of the study was to develop new insights on the biocultural diversity of mobile pastoralism and explore the concept of culture animals with regards to the indigenous Poda Thurpu cattle breed reared by the traditional pastoralist communities of Telangana state.

2.2 About the Study Area

Nagarkurnool district was the study area, which is geographically located at 16.4833° N and 78.3333° E, at an elevation of 576 m in Telangana state of India (Government of Telangana, 2020). The Amrabad plateau of Nagarkurnool district was selected to conduct this study. It is one of the mandals (sub-division) in Nagarkurnool district of the once undivided Mahabubnagar district in Telangana state of the Deccan Plateau region of India. The topography of the area is highly undulating and hilly, covered in savannah type grasslands with tall grasses. The mandal has an area of 727 sq. miles, comprising 14 villages and a total population of 45,589 (Census of India, 2011).

2.3 Sampling and Data Collection

Following the ethnographic approach (Cresswell, 2013), this study was conducted in 7 villages of 2 mandals of Nagarkurnool district. A total of 50 resource persons belonging to the Indigenous pastoralist communities were recruited for collection of data. Resource persons have been selected by following purposive sampling technique (Cresswell, 2013) and prior oral consent of the respondents was taken by the authors before collecting the data. Primary data, predominantly qualitative in nature, was collected through personal interviews and focus group discussions (FGDs) with the resource persons. Data collected through personal interviews and FGDs was transcribed. Transcripts were carefully coded and inductive coding method (Leech & Onwuemwezie, 2007) was adopted to initiate the coding process. Codes were generated by identifying ‘shared beliefs’ (i.e. words or terms mentioned by two or more participants/FGDs with reference to a particular context/thing), (Francis et al. 2010). Codes such as beliefs, traditional festivals involving cattle, importance of cattle in pastoralist weddings, and the relationship of pastoralists with wildlife have emerged naturally from the data itself. It helped in breaking the transcripts into
3. Results and Discussion

3.1. The Mobile Pastoralist Communities of the Study Area

There are three major traditional pastoralist communities found in the study area: the sheep rearing Kuruma community (known also as Dangar in Maharashtra and Kuruba in Karnataka states), the cattle rearing Lambadi community (known also as Banjara) and the cattle and buffalo rearing Golla community (known also as Yadava), besides few other non-traditional pastoralist communities actively engaged in mobile pastoralism at a very small scale.

The Lambadi community of the study belongs to the sub-sect called Gora/Goramaati Banjara, they are categorized as a nomadic tribal community in the official categorization of tribes and other Indigenous communities of India. They are known to have migrated from the North Indian state of Rajasthan to the study area more than four centuries ago. The Golla (belongs to OBC) are the dominant traditional mobile pastoralist communities of the study area. Both the communities practice mobile pastoralism, and Lambadi communities usually travel further and longer than the Golla communities during their annual seasonal migration. In addition, few families of Maala (SC) have been maintaining large herds of this cattle breed for generations (Siripurapu et al., 2020).

The local pastoralist communities rear a unique Indigenous cattle breed called as Poda Thurpu cattle breed (Siripurapu et al., 2019). From the oral narratives of the local communities, Poda Thurpu cattle breed is reared by the local communities for over 400 years now. Oral narratives suggest that both the Poda Thurpu cattle breed and the pastoralists have been around this area for over 400 years. And the documental evidence (cattle grazing permits issued by Nizams and forest department) suggests that cattle breed and the breeders have been here since 1836 (India Code, 2021).

About 101 households have been maintaining large herds (more than 100 cattle heads) and about 30 – 40 households have been maintaining less than 50 cattle heads of Poda cattle breed in the study area. The Poda Thurpu cattle breeders of the study area formed a group and registered into an association named “Amrabad Poda Lakshmi Govu Sangham” (APLGS) in 2018. There are about 101 members in the APLGS. Among the 101 members, the major communities are Lambadi (52%), Golla (23%), Maala (11%). Other communities include Chenchu (2%), Kuruva (4%), Maadiga (2%), Doodekula-Muslim (3%), Vaddera (2%) and Yerra-Golla (1%). The three major communities engaged in rearing of Poda Thurpu cattle breed in Nagarkurnool district are Lambadi/Banjara, Golla and Maala, (Siripurapu et al., 2020).

3.2. Biocultural Diversity of Poda Thurpu Cattle Breed

Poda Thurpu is a small-compact sized Indigenous cattle breed belonging to the draught power group of cattle breeds. Local communities identify the cattle breed as Poda edlu (locally the term Poda means spotted/speckles/blotches); the cattle usually has speckled/blotted coat (brown spots on white coat or white spots on brown). The cattle breed is commonly known as Thurpu edlu in the western parts of Mahbubnagar and Nagakurnool districts and western parts of Telangana. Farmers

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1 Other Backward Caste, as notified under Constitutional provisions and differently in different states.
2 Scheduled Caste, as notified under Constitutional provisions and differently in different states.
who use bullocks of the breed for draught purposes call them as Thurpu (means East, in local language Telugu), because they are believed to have come from the eastern side of the state. There are an estimated 15076 (approx.) cattle heads of this cattle breed present in the native breeding tract (Siripurapu et al., 2019).

The Indigenous Gora/Goramaati Banjara community (Lambadi) of the study area rear cattle because their spiritual guru, Santh Sevalal Maharaj (believed to be the incarnation of Lord Shiva) who was also a cattle herder (Naik, 2009). He took care of his father’s 7,000 cows and led the life of a cattle herder. Being his disciples, the Goramaati Banjara also rear cattle and continue his legacy. Cattle occupy a very significant place in their traditions, culture and economy (Siripurapu et al., 2020). Malaya Ramavath, an elderly Goramaati Banjara (Lambadi) pastoralist says that “those who serve the cow will attain nirvana and reach the heaven and those who serve the cattle would die a natural and peaceful death.”

Similarly, Golla (also known as Yadava/Yaduvanshi) the other dominant traditional mobile pastoralist community of the study area rear cattle due to the belief that they belong to the same lineage into which Lord Krishna was born. The name Golla is derived from the Sanskrit word, ‘Gopal’, which means caretaker/protector of cows (Joshua Project, 2019; Yaadav, 2010). Cattle are extremely important for the community as it is a huge part of their culture and traditions. The animal is a part of every ceremony, ritual and festival of the Golla community.

Every year both the pastoralist communities celebrate their own traditional festivals during Diwali, which are especially observed to celebrate their intimate relationship with their cattle. The element of conservation is deeply embedded within their culture; perhaps, it was a combination of the culture, traditions and economy, in other words biocultural diversity that may have played an important role in the evolution and conservation of the Poda Thurpu cattle breed in the study area.

3.2.1. Traditional Festivals of Lambada Community involving Cattle

The two major traditional festivals of Lambadi community are Aavula panduga (cow festival celebrated during Diwali festival) and Seetala panduga (celebrated during Holi festival). Aavula panduga and Seetala panduga are celebrated during the month of October and March, respectively. During Aavula panduga, the entire village congregates at temples of the forest goddesses Mantralamma and Peddamma. Both the forest goddesses are worshipped, and traditional rituals are performed to appease them. The entire community cooks and feasts together at the site. Aavula panduga involves the procession of cattle of each pastoralist household. Usually, 9 – 16 cows are tied in a sequence to the sacred rope, locally known as Avula tadulu / Damara tadulu (rope made of neem4 fiber) and brought to the temple of the goddess Mantralamma. Local people believe that blessings of the goddess will double the number of strings (which means the number of cows will be doubled the next season).

Rice porridge cooked in cows’ milk and curd are offered to satiate the goddess Mantralamma. The goddess is said to have born out of cows’ milk and curd and the symbol of bounty of milk and curd; therefore, cow milk and curd are very sacred for the Lambadis’. Lambadis’ of the study area abstain from eating non-vegetarian foods along with milk and curd because of the belief that the goddess Mantralamma lives in them.

The most powerful goddess of the Lambadi community of the study area is Peddamma (symbolically represented as the Tiger). She is offered lambs and chicken to protect the cattle herders as well as the cattle herders from predators and other

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4 Azadirachta indica
wildlife during their stay inside the forest. Although Lambadis’ of the study area seldom milch the cattle; however, cows with only female calves are milked during Diwali festival, and the milk is used for cooking rice porridge and make curd. Perhaps this is the only festival of Lambadi’s where rice porridge is cooked in cow’s milk and consumed along with non-vegetarian dishes.

Another major traditional festival of the Lambadis’ is Seetala panduga, which is celebrated during Holi festival. Like any other traditional festival, it also involves sacrifice of lambs and chicken and offering of rice porridge cooked of cow milk to the goddesses. During the festival, Jaju (red colour) is applied to horns of the cattle and the owner of the cattle herd brings seven bones, known as Kamani and women of his family bring punnets/pots of Molakalu (nine day old wheat seedlings) to the ritual site. Kamani ritual is performed by men (considered masculine) and Molakalu ritual is performed by women (considered feminine). A large pit is dug in the ground (at least ten feet away from the goddess) and filled with cooked Bobbarlu (horse gram), beans, feathers and innards of the chicken and lambs sacrificed during the festival. After filling the pit, cattle herds are made to pass by the pit. Either one or two people toss the rice porridge at the passing shepherds, which the shepherds catch and eat as they move on. Cooked Bobbarlu (horse gram), feathers and innards of chicken are scooped from the pit and toss at the passing by cattle herd, it is believed to protect the cattle from wild animals during their stay inside the forest. Cattle herds are often taken to the village in a procession during the festival. Local communities consider cattle entering into the village as a good omen and believe that they bring wealth and good fortune to the village.

3.2.2. Traditional Festivals of Golla Community involving Cattle

One of the major traditional festivals of Golla’s in the study area is Ligamayya jatara, which is celebrated during Dashehra, a major Hindu festival celebrated in the month of October. The festival is observed in the honour of the forest god Lingamayya (believed to be the incarnation of Lord Shiva) and his five sisters Pedamma, Elamma, Mahisamma, Pochamma, and Mantralamma. The temple of Lingamayya is usually located at a sacred spot inside the forest and the entire family of the cattle herders visit the temple and offers lambs or chicken to satiate Lingamayya.

The festival also includes a ritual called “poli challadam”, which involves tossing hot porridge cooked in milk at shepherds and herds taking procession through the sacred place. The shepherds catch the porridge thrown at them and move ahead eating it. It was believed that it brings good luck and protects the shepherds and the herd from dangers (bad spirits, predators, wildlife, etc.) lurking inside the forest. The ritual is observed once in every 3 – 5 years.

3.2.3. Cattle in the Wedding of the Lambadi Community

Traditionally, parents of the Lambadi and Golla communities give cattle as wedding gifts to their daughter at her wedding. Usually, pedigree of the cattle is also drawn from such traditional transferences and exchanges. The Lambadi community even performs ritual involving cattle (especially bull) during weddings. The new bride is made to sit on the bull and she sings to the bull, reminding him how she took care of him and requests the bull to move to her in-laws house along with her as her parents and siblings may not join her. The bull and few cattle accompany the new bride to her in-laws place.

3.2.4. Traditional Pastoralist Communities and their Relationship with Wildlife

The traditional pastoralist communities of the sub-continent share a unique relationship with wildlife. As mentioned earlier, the Lambadi community of the study area revere and worship the tiger. It is considered as the manifestation of
“Peddamma”, the most powerful goddess, and believed to be the creator of the universe. Similarly, the sheep rearing, Kuruma/Kuruba/Dangar, pastoralist communities of the Deccan plateau region of India, are known for their mythological and cultural connection with wolves. They revere wolves and refer to them as their maternal uncle/aunt, and do not resort to killing them even if wolves lift off their livestock (Vishwanadha, 2017; Bhardwaj, 2020; Kohler-Rollefson, 2015; Ghotge and Ramdas, 2010). According to them meat of the sheep is tastier when wolves are around, due to adrenaline rush; therefore, the presence of wolves is tolerated. Surprisingly, they often support conservation and protection of wolves in the Deccan plateau region (Bhardwaj, 2020). Similarly, the Changpa herders of Ladakh of the Himalayan region also share a special mythical and cultural relationship with wolves and often tolerate their presence (Bijoor, 2020). One of the most fascinating is the relationship shared by the Indigenous Bishnoi community of the Indian state of Rajasthan with the wildlife. The Bishnois are known for their dedication to protect blackbucks and the environment. Bishnoi women take wildlife conservation altogether to a different level, they are known to breastfeed the young and orphaned blackbuck fawns along with their own babies (Humairah, 2017; Menon, 2012).

3.3. The Terms ‘Cultural Animals’, ‘Animal Cultures’ and ‘Culture Animals’

The notion of human beings as the cultural animals refers to the idea that human beings differ from other animals in the extent to which they create, sustain, and participate in culture (Aronson, 2004; Baumeister, 2005; IResearch.net, 2020). Borrowing the term ‘animal cultures’ from Kohler-Rollefson (2015), it is preferred to use the term “culture animals” over “cultural animals” and “animal culture”, as the former has a different definition and the latter has a different connotation (Ramsey, 2017). ‘Animal culture’ as defined by Bekoff (2019) is, “animal culture as information or behaviours shared within a community, which is acquired from conspecifics through some form of social learning.” It is suggested that understanding the rich social lives and preserving animal cultures are quintessential for biodiversity conservation (Whitehead, 2010; Balter, 2013; Whitehead, and Rendell, 2015; Bekoff, 2019; also see Avital & Jablonka, 2001; Bennett, 2010).

In the context of pastoralism, the term “culture animal” refers to the livestock species that prefer living in groups, tolerate and prefer human companionship. They are organized and maintained not by an individual human being but by a community, where the knowledge and information pertaining to the breed, breeding, management and animal husbandry are usually generated, accumulated and shared not only among a particular community but also passed down to the next generation through traditions, customs, beliefs, rituals, songs, myths, stories, folktales, crafts, and other folklores by placing the animal at the centre of culture and traditions (Kohler-Rollefson, 2015; Tripathi & Rajput, 2006). Further, such animals/livestock usually rely on the community to get what they need to survive and procreate in return of the products and services derived from them by their human counterparts.

There are however, many other wild fauna revered and considered sacred among different cultures of the human society. And many wild fauna are a part of traditions, customs, beliefs, rituals, songs, myths, stories, folktales, crafts, and other folklores of human societies around the world. That leads to the question whether such wild fauna should also be considered as culture animals? Perhaps the answer is no, because, such fauna may not live in groups, may not tolerate and prefer human companionship. They are not organized and maintained by an individual human being or a community. And the knowledge and information pertaining to the breed, breeding, management and animal husbandry is usually neither generated nor shared among a particular community or passed down to the next generation. Most importantly, such fauna do not rely on humans for their survival and procreation in return of providing goods and services.
3.4. The Concept of Culture Animals in Mobile Pastoralism in India

Pastoralist communities are often closely associated with a particular livestock breed/species by the myth of origin, drawing their descent to an ancestor who was created by God to take care of these animals (Kohler-Rollefson, 2015; Sharma et al., 2003). Indigenous livestock breeds such as the Poda Thurpu cattle represent the collective heritage of communities. They are associated with, and cannot be conserved separately. Such breeds will survive only when the indigenous knowledge and production systems of which they are a part of are also conserved (LPPS & Köhler-Rollefson, 2005; Marsoner et al., 2018).

The Indigenous cow-herding and semi-nomadic Nanda Gawli pastoralist community is a sub-group of the Gawli community, which is predominantly found in the Indian state of Maharashtra. The three sub-groups of the Gawli community, the Yadav Gawli, Ahir Gawli, and Ligayat Gawli, are divided on the basis of the territory which they inhabit (Singh et al., 2004). Perhaps the name 'Nanda' was derived from Lord Krishna, the Hindu God, who was raised by a cow-herding family. The Nanda-Gawlis believe that they are the descendants of Lord Krishna (Kalokar & Siripurapu, 2020; Siripurapu et al., 2021).

Nanda-Gawli community rears a unique Indigenous cattle breed called as Gaolao cattle breed. Legend has it that Nanda-Gawli ancestors brought the Gaolao cattle along with them when they arrived from the ancient mythical city of Mathura. Since then, Nanda-Gawlis’ continue to nurture and conserve the Gaolao cattle breed. Perhaps, the name Gaolao may have been given after the Gawli community, which rears it. There is a traditional practice among the Nanda-Gawli community, locally known as ‘Jani’ (translates as origin/life). Jani as a practice is to maintain few selected animals as sacred (elite) animals and they are revered. Animal products and calves produced by ‘Jani’ are considered holy and sacred (Siripurapu et al., 2021).

Gaolao cattle are extremely important for the Nanda-Gawli community and it is a part of their culture, traditions, identity and economy. It is an integral part of every traditional ceremony, ritual and festival of the Gawli community. It is gifted as a wedding gift to the new bride by her parents at the wedding and pedigree of the cattle is traced accordingly. Both men and women of the community share the responsibility of taking care of the cattle and women usually keeps a record of the pedigree of the cattle.

Likewise, both sheep and wool are intricately woven into customs, traditions, culture and social fabric of the Indigenous Dangar/Kuruma/Kuruba pastoralist communities of the Deccan plateau region (Patil, 2009). The Dangar/Kuruma/Kuruba pastoralist communities share a special bond especially with the Deccani sheep breed, found in the Deccan Plateau region of India. There are many myths and stories celebrating the relationship between the Deccani sheep breed and the Dangar/Kuruma/Kuruba pastoralist communities. The Dangar pastoralist communities revere Sri. Santh Balumama, their spiritual guru, a shepherd himself, who had handed over his Deccani sheep flock to the Admapur Panchayat at the time of his “jeevasamadhi” (soulful meditation). Therefore, the progeny of his flock is considered sacred and taken care of by the Balumama Trust of Admapur, Maharashtra (Shri Balumama Trust, 2019). Similarly, the Kuruma community of Telangana keep idols of both sheep and dog at shrines of their deity Beerappa (believed to be the incarnation of Lord Shiva) (Patil, 2009).

Similarly, camels have an important place in the traditions, culture, identity and economy of the Rabari community of Gujarat and the Raika community of Rajasthan states of India. Camels are not only central to their culture, rituals, customs, traditions and ceremonies but also influence their lifestyle to a large extent. The relationship of
these communities with camels is believed to be more spiritual than economic (Patel, 2018; The Raika Samaj Panchayat, 2009; Tripathi & Rajput, 2006).

Cattle, especially the Burugur cattle breed is an important part of the life, culture and traditions of the indigenous Lingayat community of the Indian state of Tamil Nadu. They consider themselves as the proud custodians of the indigenous Burugur cattle and Malai Erumai buffalo (hill buffalo) breeds. Both the breeds are said to have co-evolved with the Burugur forest ecosystem. One can notice a picture of the Burugur cattle on the roof of every Lingayat temple in the state (Swamigal, 2009).

Van Gujjar of Himachal and Uttarakhand is a Muslim, vegetarian and nomadic pastoralist community sharing a unique bond with their buffalos (Benanav, 2015; Gooch, 2004). Equally, the indigenous Toda communities, the oldest inhabitants of the upper Nilgiri Plateau of Tamil Nadu state rear buffaloes and they are an integral part of their life, traditions, culture and economy. Traditionally, Todas divide their buffalo herds into six hierarchical grades and maintains special dairy temples for each grade (Chhabra, 2018). Similarly, Naggpur buffalo breed occupies a very special place in the life, culture and economy of the Nanda-Gawli community, a semi-nomadic pastoralist community of Maharashtra. Curd prepared from Chilika buffalos’ milk is offered to Lord Jagannath of Puri, Odisha. As per the mythology, Manika, a milkmaid offered some curd to Lord Jagannath and his elder brother Lord Balabhadra at the village named Dahiklia, and both the brothers relished the curd. As a tradition, offering of curd made from Chilika buffalo milk continues to this day at the famous Puri shrine (Mishra, 2022; Nanda et al., 2013).

4. Conclusion

The traditional pastoralist communities of the study area have a rich and vibrant biocultural diversity, which they share with their livestock, the Poda Thurpu cattle breed. Poda Thurpu cattle as a culture animal, is central to the biocultural diversity of the Lambadi and Golla communities. Cattle is the genesis of folklore and folksongs of the traditional pastoralist communities of the study area. It is evident that indigenous livestock is crucial for keeping the socio-cultural fabric of the traditional pastoralist societies intact, sustain their livelihoods, traditions, culture, art and crafts, folklore, music, ecology and economies, vis-à-vis the biocultural diversity and socio-cultural fabric of the traditional pastoralist communities. There are endless such examples of biocultural diversity depicting the intimate and intricate relationship between the livestock and the indigenous traditional pastoralist communities of India and around the world, which need further exploration.

6. References

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http://psychology.iresearchnet.com/social-psychology/cultural-psychology/cultural-animal/ [accessed on 17 January 2023]


Authors’ Declarations and Essential Ethical Compliances

Authors’ Contributions (in accordance with ICMJE criteria for authorship)

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<td>Funding Acquisition</td>
<td>No</td>
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<td>Overall Contribution Proportion (%)</td>
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Funding
No funding was available for the research conducted for and writing of this paper. Therefore, acknowledging any support agency is not applicable in case of this research or the written work. However, informal support of institutional supervisors, colleagues and respondents is duly acknowledged.

Research involving human bodies or organs or tissues (Helsinki Declaration)
The author(s) solemnly declare(s) that this research has not involved any human subject (body or organs) for experimentation. It was not a clinical research. The contexts of human population/participation were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of Helsinki Declaration does not apply in cases of this study or written work.

Research involving animals (ARRIVE Checklist)
The author(s) solemnly declare(s) that this research has not involved any animal subject (body or organs) for experimentation. The research was not based on laboratory experiment involving any kind animal. Some contexts of animals are also indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of ARRIVE does not apply in cases of this study or written work.

Research on Indigenous Peoples and/or Traditional Knowledge
The author(s) solemnly declare(s) that this research has involved Indigenous Peoples as participants or respondents, with the documentation of their Indigenous Knowledge. Some other contexts of Indigenous Peoples or Indigenous Knowledge are indirectly covered through literature review. Therefore, a Self-Declaration in this regard is filed by the researcher and first author to support this study or written work.

Research involving Plants
The author(s) solemnly declare(s) that this research has not involved the plants for experiment or field studies. The contexts of plants were only indirectly covered through literature review. Thus, during this research the author(s) obeyed the principles of the Convention on Biological Diversity and the Convention on the Trade in Endangered Species of Wild Fauna and Flora.

(Optional) Research Involving Local Community Participants (Non-Indigenous)
The author(s) solemnly declare(s) that this research has involved local community participants or respondents belonging to non-Indigenous peoples. Yet, this study did not involve any child in any form directly or indirectly. The contexts of different humans, people, populations, men/women/children and ethnic people are also indirectly covered through literature review. Therefore, prior informed consent (PIC)
of the respondents was taken under this study before the face-to-face interviews and interactions.

(Optional) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)
The author(s) has/have NOT complied with PRISMA standards. It is not relevant in case of this study or written work.

Competing Interests/Conflict of Interest
Author(s) has/have no competing financial, professional, or personal interests from other parties or in publishing this manuscript. There is no conflict of interest with the publisher or the editorial team or the reviewers.

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To see original copy of these declarations signed by Corresponding/First Author (on behalf of other co-authors too), please download associated zip folder [Ethical Declarations] from the published Abstract page accessible through and linked with the DOI: https://doi.org/10.33002/pp0103
SELF-DECLARATION FORM

Research on Indigenous Peoples and/or Traditional Knowledge

1. Conditions of the Research

1.1 Was or will the research (be) conducted on (an) Indigenous land, including reserve, settlement, and land governed under a self-government rule/agreement or?

   Yes

1.2 Did/does any of the criteria for participation include membership in an Indigenous community, group of communities, or organization, including urban Indigenous populations?

   Yes

1.3 Did/does the research seek inputs from participants (members of the Indigenous community) regarding a community’s cultural heritage, artifacts, traditional knowledge, biocultural or biological resources or unique characteristics/practices?

   Yes

1.4 Did/will Aboriginal identity or membership in an Indigenous community used or be used as a variable for the purposes of analysis?

   Yes

2. Community Engagement

2.1 If you answered “Yes” to questions 1.1, 1.2, 1.3 or 1.4, have you initiated or do you intend to initiate an engagement process with the Indigenous collective, community or communities for this study?

   Yes

2.2 If you answered “Yes” to question 2.1, describe the process that you have followed or will follow with to community engagement. Include any documentation of consultations (i.e., formal research agreement, letter of approval, PIC, email communications, etc.) and the role or position of those consulted, including their names if appropriate:

   Before initiating the field work and investigations, the consents were obtained from the village heads of Kuruma, Lambadi, Golla and Maala communities. The groups discussions and
informal interactions were conducted after these consents. While interviewing the individual respondents, a PIC document was shared and got signed bilaterally between each respondent and the researcher. No personal data was gathered with the approval and consent of the individual owner of the knowledge or information.

3. No Community Consultation or Engagement

If you answered “No” to question 2.1, briefly describe why community engagement will not be sought and how you can conduct a study that respects Aboriginal/Indigenous communities and participants in the absence of community engagement.

Not Applicable

⇒ Name of Principal Researcher: Kanna Kumar Siripurapu
⇒ Affiliation of Principal Researcher: South Asia Consortium for Interdisciplinary Water Resources Studies, Plot No. 164, Road No. 6, Vayupuri, Sainikpuri, Secunderabad - 500094, Telangana, India.

Signature:

Declaration: Submitting this note by email to any journal published by The Grassroots Institute is your confirmation that the information declared above is correct and devoid of any manipulation.
A) INFORMATION TO PARTICIPANTS

1. Objectives of the research
The objectives of this study were to investigate on biocultural diversity of mobile pastoral communities of the Deccan Plateau region of India in context of Poda Thurpu cattle breed as the ‘culture animal’ of mobile pastoralist communities of Nagarkurnool district of the Telangana state of India.

2. Participation in research
The researcher will ask you several pertinent questions. This interview will be recorded in written form and should last about 50-60 minutes. The location and timing of the interview will be determined by you, depending on your availability and convenience.

3. Risks and disadvantages
There is no particular risk involved in this project. You may, however, refuse to answer any question at any time or even terminate the interview.

4. Advantages and benefits
You will receive intangible benefits even if you refuse to answer some questions or decide to terminate the interview. You will also contribute to a better understanding of the causes for pastoralists’ livelihood transformation.

5. Confidentiality
Personal information you give us will be kept confidential. No information identifying you in any way will be published. In addition, each participant in the research will be assigned a code and only the researcher will know your identity.

6. Right of withdrawal
Your participation in this project is entirely voluntary and you can at any time withdraw from the research on simple verbal notice and without having to justify your decision, without consequence to you. If you decide to
opt out of the research, please contact the researcher at the telephone number or email listed below. At your request, all information concerning you can also be destroyed. However, after the outbreak of the publishing process, it is impossible to destroy the analyses and results on the data collected.

B) CONSENT

Declaration of the participant

⇒ I understand that I can take some time to think before agreeing or not to participate in the research.
⇒ I can ask the research team questions and ask for satisfactory answers.
⇒ I understand that by participating in this research project, I do not relinquish any of my rights, including my right to terminate the interview at any time.
⇒ I have read this information and consent form and agree to participate in the research project.
⇒ I agree that the interviews be recorded in written form by the researcher: Yes ( ) No ( )

Signature of the participant: ___________________  Date: ___________________

Surname: _________________________________  First name: __________________________

Researcher engagement

I explained to the participant the conditions for participation in the research project. I answered to the best of my knowledge the questions asked and I made sure of the participant's understanding. I, along with the research team, agree to abide by what was agreed to in this information and consent form.

Signature of the researcher: ___________________  Date: 12-09-2022

Surname: Siripurapu  First name: Kanna

⇒ Should you have any questions regarding this study, or to withdraw from the research, please contact Mr. Kanna Kumar Siripurapu by e-mail kanna.siripurapu@gmail.com

⇒ If you have any concerns about your rights or about the responsibilities of researchers concerning your participation in this project, you can contact the Sahjeevan, Hospital Rd., Jalaram Society, Vijay Nagar, Bhuj - 370001, Gujarat, India by email sushmasiyengar@gmail.com