



# Indigenous people and their wisdom for environmental protection

Noor Un Nisa<sup>1</sup>, Anand Prabha Rawat<sup>1</sup>, Laxman Singh Kandari<sup>2</sup> and Vinod K Bisht<sup>3\*</sup>

<sup>1</sup>Department of Environmental Science, Doon (PG) College of Agriculture Science and Technology, Dehradun - 248 011, Uttarakhand, India

<sup>2</sup>Department of Forestry and Natural Resources, School of Agriculture and Allied Science, H.N.B Garhwal University (A Central University), Srinagar Garhwal - 246 174, Uttarakhand, India

<sup>3\*</sup>Zandu Foundation for Health Care, Ambach, Pardi, District -Valsad - 396 145, Gujarat, India

\*[vksbisht@gmail.com](mailto:vksbisht@gmail.com)

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## Abstract

This paper highlights the traditional and indigenous practices among *Bakarwal's* and *Gujjar's* tribal communities of Kashmir and their wisdom for environmental protection. These communities are well adapted to survive the harsh conditions of far-flung area in Kashmir without impairing it. They possess the asset of Traditional Ecological Knowledge (TEK) which could be useful in changing the dynamics of environmental problems that the world is facing today. Their TEK if taken into consideration will be useful for environmentalists to address the environmental degradation. The main aim of this survey was to interact with the tribals and to understand how they lived in harmony with nature, without any conflict and degradation. Two different sites (Site A: “*Banjar pati*” area of Hyhama having *Gujjar* community and Site B “*Hak Pathri*” area of Manigah inhabited by the “*Bakarwal*” community) were chosen for community interaction. Sample Size (N = 50): 25 individuals from each site were interviewed. This paper focuses on the knowledge of indigenous people, their eco-friendly methods of survival in the most fragile environments along with their TEK.

**Keywords:** Agricultural practices, Eco-friendly, Medicinal plants, Modernization, Traditional ecological knowledge

## 1. Introduction

The continuum of habitat degradation, biodiversity loss, climate change and its implications and allied socio-economic swings have positioned us at a crucial crossroads in time. There is urgent need to find out new solutions to prevent this continuum of global scale ecosystem change and to withstand the significant changes occurring (Edwin *et al.*, 2020). However, the aboriginal and cultural communities in the world adopted to survive in harsh environmental conditions primarily due to aboriginal knowledge and traditional wisdom (Upriy, 2016). The cultural, religious, traditional and indigenous knowledge of these communities are often described as profound, complex methods of understanding and co-exist with environment and is developed and refined over time.

They actively participated as partners in natural habitat and biodiversity conservation drives (Mekonen, 2017). The rising evidence suggests that acknowledging terrestrial rights of aboriginal community, equitable benefit sharing and governance structure is crucial for achieving regional and global conservation goals (Garnett *et al.*, 2018). A notable characteristic associated with these communities is that they inhabit areas abundant in biodiversity (Parajuli and Das, 2013). Approximately 300 million aboriginal people inhabit the world, with nearly half, approximately 150 million are residing in Asia and about 30 million in Central and South American countries with significant population living in Australia, Europe, New Zealand, Africa and Soviet Union (Toledo, 2001). Indigenous people's

collective memory contains the traditional knowledge about medicinal herbs, but due to the spread of modernization, this knowledge is disappearing at a concerning rate (Rajadurai *et al.*, 2009). These communities have played a vital role in conservation of nature, environmental management and development process as they possess traditional knowledge of sustainable use of bioresources, which has been proven to be useful in eco-restoration. Because these societies have a long history of using bioresources sustainably a skill that has been shown to be helpful in eco-restoration they have played a crucial role in environmental management, development and conservation (Lone and Lone, 2018). It has been noticed that these communities participated in biodiversity conservation and natural resources management (Negi and Maikhuri, 2013; Langton *et al.*, 2014). Thus, it is clear that, in order to survive the present century, we need to embrace indigenous knowledge, be intimately guided and led by knowledgeable people and where appropriate, consider it alongside the best scientific understanding or the practices followed by these communities for protecting the ecosystem, thus also helping us in plotting a better course for the future (Garnett *et al.*, 2018).

Today in this age of modernization and development, indigenous people of India are facing crisis of survival due to the degradation of their habitat and environment. This despite the fact that the indigenous communities have better expertise in the management and conservation of environment and natural resources. Indigenous people have immense knowledge about their environment and held a strong affinity with nature, but the greed of modern man is creating a deep void between the environment and this environment friendly community. Need of the hour is to understand the importance of indigenous people, their traditional ecological knowledge (TEK), traditional practices and the indigenous community's contribution in biodiversity conservation. Over the past several decades, the importance of TEK has been acknowledged and extensively covered in both public and literary media. The downward trend in TEK has been widely documented throughout that same time span across numerous case studies in all major global regions. Thus, a plethora of international accords (such as the Declaration on the Rights of Indigenous Peoples and the Convention on Biological Diversity) and National Laws (the Forest Act, 1927; the Biodiversity Act, 2002) were founded in an effort to defend the rights of indigenous communities. Nevertheless, these agreements have frequently not resulted in actual TEK conservation efforts at the local level. Since the early 1980s, the importance of TEK has been discussed more and more in relation to the advancement of indigenous rights protection, sustainable resource management and biological variety conservation.

Different indigenous and targeted tribal communities of Jammu & Kashmir in India live in the most hostile environmental conditions. However, these hostile environmental conditions being bestowed with rich biodiversity, are much associated with tribal communities who have immense knowledge about their surrounding environment and bioresources. Indigenous people know how to live in unanimity with their surroundings. Historically nomadic, the communities have taken rather distinct paths, with their names denoting the livestock they raised (Gujjars raised cattle, Bakarwals raised sheep and goats; "*Gau*" means cow, while "*Bakara*" means goat). These two communities are socially much backward as compared to others community of the State (Dwivedi, 2018). The Bakarwals of Jammu & Kashmir are primarily Muslims and they have a remarkably distinct way of life, language, and customs from their counterparts who are primarily situated in the State's plains. The majority of the one million Gujjars reside in hilly regions where small-scale farming and cattle rearing are now their main sources of income. The Bakarwal people are still nomads, spending the summers on alpine meadows with their herds of livestock (Dwivedi, 2018). However, because of the growing difficulties associated with migration, a sizable portion of Bakarwals have now relocated to the plains and their way of life is changing even for them. Due to the military war in Kashmir, many pastures have remained off-limits to nomads in recent years. They are unable to enter the northwest Kashmiri mountains, including Kargil and Gurez. Some nomadic Bakarwal households have discovered new pastures in Dachigam's upper reaches (Parvaiz, 2018). Without indulging in any sort of clash or conflict with their environment since centuries, these tribals are enjoying a jubilant health status owing to their most eco-friendly lifestyle (Kumar and Kumar, 1998).

Thus, the current study aims to document the TEK, associated traditional knowledge, environment friendly sustainable practices of indigenous people (*Gujjar* and *Bakarwal*) of Haihama region of Kupwara (Kashmir) and to analyses how indigenous people and their surroundings interact, the traditional ecological knowledge and conservation of environment, traditional practices and their use to save environment from further harm.

## 2. Materials and methods

### 2.1. Study area

The current study was conducted in Kupwara district, lying in the northern part of Jammu & Kashmir Union Territory (Fig. 1). The district's geographical area is 2379 sq kms. The district is bordered by district Baramulla to the south, and the line of control (L.O.C.) to the north-west. The district is situated between 73°45 to 74°3 east longitude and 34°18 to 34°47 north latitude

and is roughly 1577 m a s ll. The Kupwara region experiences 1066.9 mm of annual rainfall on average, with typical high and low temperatures of 23.9°C and 2.9 °C, respectively. The difference between the wettest and driest month's rainfall is 119 mm. Winters are typically harsh. It encompasses the larger part of tribal regions such as Machal, Kalarous, Bangus and Hayhama, major areas where the prominent tribal *Gujjar* and *Bakarwal* community live.

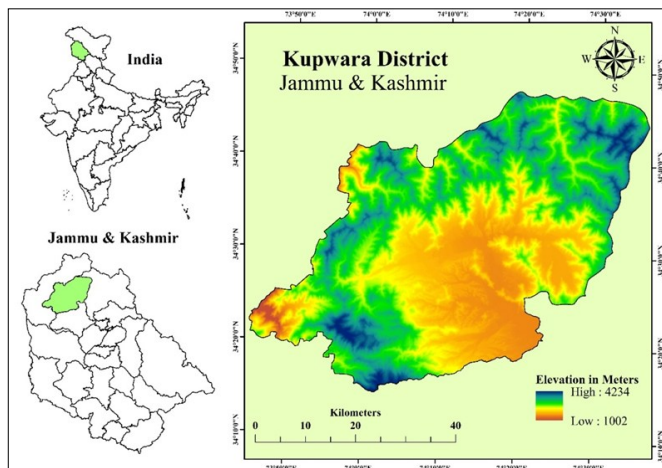


Fig. 1. Map of the study area

## 2. Methodology

Two different sites were chosen to interact with people of these two communities; Site A: “*Banjar pati*” area of Hyhama was people of “*Gujjar*” community live, Site B: “*Hak Pathri*” area of Manigah were people of “*Bakarwal*” community reside during summers (Table 1).

The methodology used to complete this work was survey method. The main aim of this survey was to interact with the tribal people and to understand how they have been living in harmony with their environment without any conflict and degradation. The survey was done during the month of July 2023 with information recorded on pre framed questionnaire. Many families were taken in consideration with their consent. The data was analysed according to the information obtained as answers. Here, both the primary data as well as secondary data were used (Fig. 2).

Table 1. Main data source used in study

Sl. No.	Method and data source	Key aims
1	Content analysis: peer reviewed paper/journals	To see how the specific literature worked on the indigenous people and traditional ecological knowledge.
2	Community discussion: Field notes from community discussion on site A ( <i>Gujjar</i> community) and B ( <i>Bakarwal</i> community).	To understand the life experience of indigenous remote communities and how their TEK helps them in conserving the environment.
3	Sample Size: (N=50; 25 individuals from site A; <i>Gujjar</i> community and 25 individuals from site B; <i>Bakarwal</i> community).	
4	Interviews with some government officials.	To understand how government works for indigenous people and how there TEK is taken into consideration



Fig. 2. Interaction with the tribal people of the study area

2.2.1. *Questionnaire*: This questionnaire was divided into two sections (Table 2), section A (consisted of respondent's profile and economic status e.g.: name, age, gender, etc.) and section B (consisted of questions aimed at getting knowledge about indigenous people, their ancient techniques and wisdom of saving environment).

## 3. Results and discussion

The study depicts information about TEK of *Gujjar* and *Bakarwal* community for environmental protection, sustainable use of bioresources, traditional knowledge, etc, collected by interacting with the people of these communities.

### 3.1 Traditional ecological knowledge for agricultural practices

3.1.1. *Gujjar community*: According to a respondent (68-year-old man) from *Gujjar* community instead of using fertilizers like urea they use the organic fertilizers like cow dung and manure. Such organic fertilizers enhance the fertility of soil and also save humans from bio accumulation and the water bodies from eutrophication.

3.1.2. *Bakarwal community*: *Bakarwal* community do not possess any agricultural land. Because they are more adaptable and sustainable, techniques based on TEK for managing agro-ecosystem are becoming more and more popular (Sharma, 2017). The ultimate goal of

**Table 2.** Questionnaire for the *Gujjar* and *Bakarwal* communities

SECTION A	SECTION B
A1: Name of the respondent A2: Age A3: Gender A4: Education/Occupation. A5: Source of income. A6: Community they belong from (Gujjar/Bakarwal.)	B1: Traditional conservation practices of <i>Gujjar &amp; Bakarwal</i> community. (a). Agricultural practices. (b). Water conservation practices. (c). Forest conservation techniques. B2: Their eco-friendly practices B3: Role of community heads in environmental protection. B4: Relation between new generation and traditional ecological knowledge (TEK). B5: Effect of modernization and industrialization on indigenous people. B6: Significant effect on them due to climate change. B7: Comparison between their knowledge and rest of the world B8: Should government take into consideration their TEK while framing environmental policies. B9: Basic practices to survive in harsh conditions like during winters. B10: Their survival methods when they travel from plains to mountains. B11: Satisfaction with their nomadic way of life B12: Any medicinal plants they have knowledge about and use in their daily life.

soil sustainability is attained with the aid of modifications in soil and agro-management driven by TEK. For example, the bio-mulching method, which uses organic materials to cover the soil, helps to save moisture in areas with low rainfall while simultaneously enhancing soil carbon and lowering crop illnesses (El-Baltagi *et al.*, 2022).

### 3.2. Traditional ecological knowledge for water conservation

**3.2.1. *Gujjar* community:** According to a female respondent (45-year-old), water bodies are protected by some spiritual forces, to pollute them will cause harm to them and their families. So, they consider these water bodies as sacred and this concept of “spiritual forces” or “sacred water bodies” had played an important role in conservation of water bodies in those remote areas from centuries.

**3.2.2. *Bakarwal* community:** According to a respondent (55-year-old man), water bodies play an important role in our journey from plains to hills. We look for water bodies and then stay there with our animals. According to them, conservation and management of such water bodies is their responsibility and to keep them pollution free makes their future journey easy. A young man (28-year-old) feels it will be a sin to pollute such water bodies as they are the primary and exclusive source of water for them and their animals. Through its TEK, many African nations have been protecting their water resources. It has been discovered that to preserve their forest and water resources for the present and the future, some Sangwe communal lands communities manage the water sources, forests, and wildlife in and around their territory using their Indigenous Knowledge (IK) or beliefs (Chibememe *et al.*, 2014).

### 3.3. Traditional ecological knowledge for forest conservation

**3.3.1. *Gujjar* community:** According to the villagers of “*Banjar-pati*” forests are their home. They have a close affinity with the trees around them. The people feel it is almighty’s blessing on them that they live in such a pollution free place. They have protected these forests for decades and with the evolution of new techniques they feel their home is at the verge of destruction, as the materialistic world is getting dominant over the traditional knowledge.

**3.3.2. *Bakarwal* community:** According to the Bakarwal community, their livelihood lies in the forests, as they have lived there from centuries. They feel they are the chosen protectors of these forests and forests are shield to them and to their coming generations. They have a firm belief that their coming generations will take care of forests in a more responsible way and they will not let this TEK to perish. They want to pass it to their coming generations. Numerous studies have revealed that tribal communities apply the key TEK to conserve the environment and they have favourable sentiments regarding the preservation of the indigenous forest (Sinthumule and Mashau, 2020).

### 3.4. Traditional knowledge (TK)

Indigenous people use the medicinal herbs to treat variety of illnesses. Tribal people employ a variety of plant components, including leaves, roots, bark, flowers, fruits, rhizomes, tubers and wood for medicinal purposes. Occasionally, the entire plant is used (Table 3).

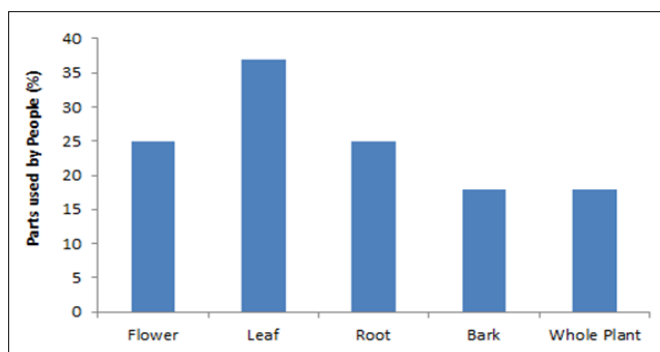
In the present study, the use of leaves (37%), flower (25%) and roots (25%) by communities is found to be

**Table 3.** The list of medicinal plants used by *Gujjar* and *Bakarwal* community of Jammu and Kashmir

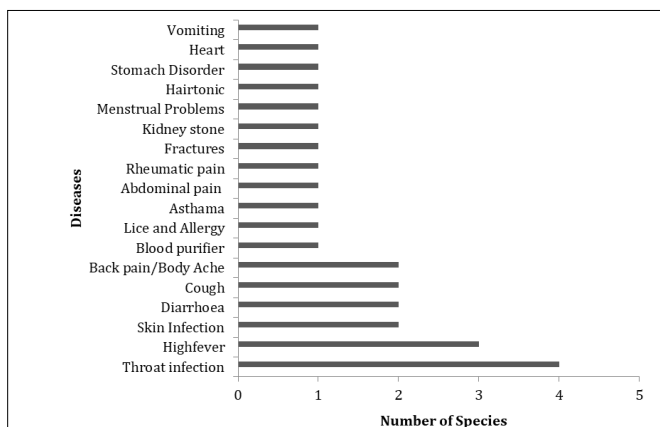
Sl. No.	Botanical name	Local name	Part used	Used for/as
1	<i>Aconitum heterophyllum</i> Wall. ex Royle	<i>Patris</i>	Root is used in powdered form	Dysentery, high fever and vomiting.
2	<i>Ajuaga bracteosa</i> Benth.	<i>Jaan-i-adam</i>	Paste of whole plant	Blood purifier, hair tonic and wounds
3	<i>Allium sativum</i> L.	<i>Rhoon</i>	Root	Root is chewed or added with vegetables to cure stomach problems, hypertension, asthma and respiratory disorders
4	<i>Althaea rosea</i> Cav.	<i>Saze Posh</i>	Khambir made of dried flower	Throat swelling and infection, asthma and cough
5	<i>Anagalis arvenis</i> L.	<i>Chaireseben</i>	Flower paste is mixed with ghee and applied	Lice and allergy
6	<i>Arnebia benthamii</i> (Wall. ex G. Don) I. M. Johnst.	<i>Kah-Zaban</i>	Leaves	Diseases of throat and heart
7	<i>Artemisia absinthium</i> St.-Lag.	<i>Teethwaan</i>	The extract is obtained by crushing the plant	Abdominal pain and chronic fever
8	<i>Artemisia absinthium</i> L.	<i>Tethwan</i>	Leaf	Obesity, diabetes and liver disease
9	<i>Brassica oleracea</i> L.	<i>Haakh</i>	Leaves and stem of plant is used	Constipation and corn
10	<i>Butea monosperma</i> (Lam.) Kuntze	<i>Kamar Kas</i>	Flower extract	Thirst sensation and diarrhoea
11	<i>Cannabis sativa</i> L.	<i>Bhang</i>	Leaf extract	Menstrual problem
12	<i>Cydonia oblonga</i> Mill	<i>Bom Chunth</i>	Seeds and fruits are used	Chewing the seeds helps soothe sore throats; fruits are cardiac stimulant, tonic and expectorant
13	<i>Datura stramonium</i> L.	<i>Datur Boul</i>	The plant's seeds are crushed, combined with mustard oil, to prepare a paste	Paste is used externally on an ailing joint and it is also used as anti dandruff
14	<i>Dipsacus inermis</i> Wall.	<i>Wupal Hawk</i>	The extract of the leaves after boiling in water is used	Used by women for taking bath after giving birth for body ache, cough, sore throat, swelling
15	<i>Iris kashmiriana</i> Baker	<i>Mazarmund</i>	Whole plant	Joint pain
16	<i>Iris nepalensis</i> G. Don	<i>Mazermund</i>	Root is dried crushed to make powder	Rheumatic pain and swelling in throat
17	<i>Lavatera kashmiriana</i> Mast.	<i>Sazposh</i>	Roots	Skin irritation in pregnant women
18	<i>Lysimachia monelli</i> (L.) U. Manns & Anderb.	<i>Leesa</i>	Leaf extract	High fever
19	<i>Malva sylvestris</i> L.	<i>Sotal</i>	Seeds	Fever, cough and eye sight
20	<i>Matricaria chamomilla</i> L.	<i>Fukk-gass</i>	Whole plant extract by crushing	Insecticide and fungicide
21	<i>Nymphaea stellata</i> Willd.	<i>Bumposh</i>	Extract of flowers is prepared and mixed with root extract of <i>Arnebia benthamii</i> in warm water	Kidney stone
22	<i>Papaver somniferum</i> L.	<i>Khaskhash</i>	Seeds	Relives pain, diarrhoea, fever, hypertension, snake bites, etc
23	<i>Portulaca oleracea</i> L.	<i>Lees hakh</i>	Root and leaf extract mixed with mustard oil	Treat acne and applied to the head to ease headaches. The bitter-tasting root relieves rheumatism, stomach discomfort, and chronic pain
24	<i>Sorghum halepense</i> (L.) Pers.	<i>Durham</i>	Roots are dried and then crushed into powder	Antidote and skin infection
25	<i>Taraxacum officinale</i> H. G. Wigg.	<i>Handd</i>	Roots and leaves used as vegetable	Back pain
26	<i>Urtica dioica</i> L.	<i>Soii</i>	Whole plant extract by crushing	Fever, fractures, stomach pain, wounds and skin infection



widespread followed by bark and whole plant (18% each) (Fig. 3). Leaves are most common part used by tribal communities for herbal drug (Cornara *et al.*, 2009). Leaves are used in the form of paste followed by extract, fresh part, powder and juice (Table 3). The tribal community has developed their own traditional knowledge to treat illnesses include infections, respiratory disorders, gastrointestinal issues, joint discomfort, skin issues, diarrhoea, dysentery, cuts and wounds heart issues, etc. (Fig. 4). These communities lack adequate instruction for passing down these TK from one generation to the next. Only folklore is used to transmit it from one generation to the next (Dwivedi, 2018). Prior to this information, which, having been transmitted to next generation orally through folktales from rural and tribal communities was lost in obscurity and was founded on the experience of generations (Trak and Giri, 2017). The most prevalent illnesses in the research area were found to be stomachaches, cold and cough and joint troubles. It was recorded in many studies that almost 50% of the medicinal plants used by ethnic communities were used for stomach ache and rheumatism (Kandari *et al.*, 2012). Stomach pain, throat infection and skin infection are most common ailments within the tribal community of this region. traditional herbalists treated 135 diseases with 400 different plant species in the neighboring regions of the central Himalaya (Phondani, 2010).



**Fig. 3.** Percentage of plant part used by tribal communities to cure different ailments



**Fig. 4.** Number of plants having different pharmacological actions used by tribal communities

These indigenous communities practicing sustainable use of bioresources and conservation of biodiversity, ecology and environment as they have protected the biodiversity in and around the areas of their natural habitat since time immemorial. While harvesting any bioresource from nature, they always do it in such manner that sufficient population must be left behind to help natural restoration of economically important species. Such practices play a pivotal role in natural restoration of bioresources and conservation of biodiversity.

### 3.5. Eco-friendly practices

Both the tribal communities have a strong bond with their environment. Their affinity with their surroundings makes them more ecofriendly than the rest of the world. They protect forests, they use organic fertilizers, conserve water bodies and consider it is their responsibility to save what is at the verge of destruction. Their ecofriendly practices make them the natural protectors of the environment.

### 3.6. Role of the Head

Head of the community play a vital role in the transfer of TEK. They supervise how the people of their community are protecting their environment and at what scale members are using the natural resources. They are the decision makers, who manage the harmony and peace within the community. Heads are the most experienced members and they are more aware about the consequences of environmental degradation than others.

### 3.7. Bridging the gap between new generation and TEK

According to the head of the *Gujjar* community of *Banjarpati*, transfer of TEK to the new generation is the most important and complex responsibility. To make new generations understand the importance of TEK, associated traditional knowledge and sustainable use of bioresources should be our priority as the modern world is getting dominant over the young minds within the communities. Bakarwal people feel that to make our new generation understand the importance of TEK, they keep them along from the very young age, so that they understand and experience how they must continue their survival with the surrounding environment in a sustainable way.

### 3.8. Effect of modernization

Modernization attracts young tribal people most as their knowledge and their way of living is different from the modern world. They are trying to save themselves from the harsh effect of modern world but they feel they can't stay away from modernization for a long period. The social structure of Gujjars and Bakarwal is improving due to modernizations, but it is very slow (Dwivedi, 2018). The main threat they feel from modern world is loss of their TEK. Modern techniques are human friendly however may pose

negative impact on environment. Indigenous tribes are fighting to preserve their ancient ways of life, while contemporary settler societies have suppressed them (Allen, 2006). The management of colic, lack of facilities, high cost of feed and fodder, lack of insurance, etc., were among the *Bakarwal's* in the Jammu and Kashmir region (Kirmani *et al.*, 2020). The indigenous people continue to practice their religion and art as part of their vibrant culture but their original livelihood and caste are fading slowly because of modern era. Globalization and modernization are challenge for the indigenous people in maintaining their culture (Sartika *et al.*, 2017). To survive in the present world and to protect their TEK, they need to adopt a moderate style of living having component from both traditional and modern style.

### 3.9. Climate change

As the whole world is facing wrath of climate change, indigenous communities are particularly affected most with it. Both the communities talked about the changed seasons, the late summers and early winters which is affecting their ecosystems. They observed that, the seasons are drastically changed in the last 20 years which severely affecting the agricultural yield for *Gujjar* community and affecting the movement of *Bakarwal* community. Climate change act as a barrier to uphold and encourage relevant practices. According to Ba *et al.*, (2018), similar problem is faced by communities of Village Wutai (Taiwan) in practicing traditional farming that shows the traits of adaptive aptitude and materialize as self-sufficient lifestyles, climatically and environmentally conscious activities and ties to the community's development and culture, are all manifestations of adaptive capability.

### 3.10. Policy makers and TEK

Tribal people feels that their TEK is not taken into consideration while framing any environmental, ecological or economic policy. If taken, policy would be more ecofriendly instead of economical. Due to enforcement of such policies, the local communities are facing the threat of losing their habitat under the forest areas where they are living from decades.

### 3.11. Practices to survive in harsh climate

Indigenous communities live in the far-flung region having very harsh conditions and adopted some precautionary measures to survive. They stored the food for long winters as heavy snowfall in the region cutoff them from the rest of the world. They have well developed traditional knowledge based on medicinal plants and well-dependent on it for their primary healthcare needs. These basic practices help them to survive in such harsh winters. On the other hand, *Bakarwal* community has developed the migration pattern and moved back from mountains towards plains to survive during winters. *Bakarwal* people who travel from different places of Jammu region towards

Kashmir face many difficulties while travelling but now with time they have learned to overcome these hardships with some basic steps which include;

- Taking rest while travelling at those places where they find a water body like a pond or spring.
- They keep dogs with them which protect them and their animals from the wild animals.
- They keep all the eatables with them laden over their horses.
- They lit fire during night around their tents to avoid any conflicts with wild animals.

Similar practices were recorded by Dwivedi (2018) in his study of the adaptive capacity of south Indian indigenous peoples towards climate change. The author offered a theory as - why the *Konda Reddis* moved from one location to another in response to climatic change.

### 3.12. Way forward

During the study, it has been noticed that these communities are well-known for the way they live with nature as they have been living in forests since ages and have grown to feel a connection of sorts with the natural resources. They believe everything in their environment is sacrosanct, that they are a part of nature and that it must be preserved for future generations. They consider themselves to be environmental stewards. *Gujjar* and *Bakarwal* communities are solely dependent on their livestock and livestock is dependent on their surroundings, so to keep their surrounding in a healthy state they use their TEK. Since traditional wisdom is inextricably linked to spiritual and sociocultural contexts, it contains significantly more information about ecological linkages than empirical scientific understanding (Supyan *et al.*, 2022). According the Azlan *et al.* (2022), recent trends in modernization are shifting from anthropocentrism towards technocentrism, but the changes occurs at a slow pace and has very low impact. They further suggested that modern society needs to look back the practices followed by these indigenous people and appreciate them for their wisdom to take care of environment long before the arrival of modern civilization.

This study demonstrates that there are still a number of restrictions and gaps in the knowledge of indigenous peoples and local wisdom in conservation of biodiversity and environment. The information regarding the indigenous people's traditional wisdom in conserving environment is lacking and the information regarding the cultural, religious and traditional practices followed by the indigenous people is meagerly documented. The results of this study could be applied to a scientific method, for example, using technology to improvise trial designs, which would help environmentalists safeguard the environment.

## 4. Conclusion

This study reveals that the *Bakarwal* community, which is a nomadic tribe conserve everything like water bodies, forests, fauna and flora, etc., as these are the main resources they rely upon for their survival. They use resources in natural form and conserve it in a sustainable way, being aware that their future generations must survive on the same resources. Gujjar people too keep their surroundings clean and protect the available natural resources for coming generations. They have kept their environment in a stable state over centuries and have protected it from the industrialization and other developmental activities. Both these communities provide excellent examples of unique traditional practices of conserving their natural resources. Degraded forests and polluted water bodies in Kashmir can be restored with the help of implementation of the TEK practices followed of these indigenous communities. Tribal people and their knowledge are the asset of any region and to protect them and environment with their TEK should be the priority of the government.

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