Exploring the Indigenous Knowledge System: A Sociological Study of Environmental Conservation Practices among the Gaddi Community

1. Manjeet Singh,
   PhD Scholar, Sociology and Social Anthropology
   Central University of Himachal Pradesh
2. Dr. Vishav Jyoti,
   Associate Professor, Sociology and Social Anthropology
   Central University of Himachal Pradesh

ABSTRACT: Gaddi is a tribal community whose people reside mainly in areas like Chamba, Kangra and Bharmour of Himachal Pradesh. This community has traditionally followed a semi-nomadic lifestyle in which animal husbandry, especially sheep and goat rearing, has been their main source of livelihood. This research paper presents a sociological analysis of the traditional lifestyle of the Gaddi community of Himachal Pradesh and their environmental outlook. The traditional practices of the Gaddi community such as seasonal migration, limited resources use, collective decision system, judicious use of herbs, living in harmony with nature have been found to be in accordance with the principles of environmental sustainability. Under this research, facts have been collected using qualitative methods such as interviews and participant observation, which reveals that parallel to the model of modern science and development, the traditional knowledge of the Gaddi community contributes significantly to environmental protection. On the basis of the facts obtained in this research, it was found that the traditional medical system of the Gaddi community has adopted

a lifestyle of co-existence with nature. It is clear from the research findings that if these traditional systems are preserved and incorporated in policy making, it can prove to be a strong step towards sustainable development.

Keywords : Tribe, practices, environmental , custom, community , conventional wisdom

Introduction: As the world is growing and it faces environmental crises and climate change and hence poses challenges, it is necessary to focus on the traditional knowledge and lifestyle of tribal communities. The lifestyle of tribal communities reflects a deep connection with natural resources (Gadgil & Berkes, 1991). The aim of this research is to study the traditional practices and knowledge system of the Gaddi community of Himachal Pradesh regarding environmental sustainability. This study highlights how the Gaddi community promotes environmental conservation through their traditional knowledge and practices. This research is not only important from a sociological point of view , but it can also be useful for policy-makers and environmentalists. Tribal communities of India have a tradition of deep connection with nature. Gaddi tribe is a major tribe of Chamba district of Himachal Pradesh (Sharma, 2022). This community lives mainly on animal husbandry and seasonal migration (transhumance). The traditional practices of the Gaddis are a living example of their environmental knowledge. Their lifestyle clearly reflects the balance with nature. "Indigenous knowledge systems are deeply intertwined with ecological wisdom". According to Berkes (1999) The seasonal migration system of the Gaddis is in accordance with the mountain ecology. This system helps in the regeneration and sustainable use of pastures. Their animal husbandry tradition is highly dependent on nature but does not harm it. They take care of water sources, vegetation and land (Thakur, 2010). Their religious beliefs are also linked to the

feeling of environmental conservation. "Sacred groves and ritual practices often reflect ecological consciousness", (Gadgil&Vartak, 1976). The knowledge of the Gaddi community is transmitted from generation to generation through oral traditions. Environmental consciousness is inherent in their folklore, songs and proverbs. Knowledge of medicinal plants is a part of their daily medical system (Thakur, 2010). They give priority to water conservation and soil protection in traditional methods of farming. Their knowledge is not scientific but is very useful from the environmental point of view. "Oral traditions encode valuable ecological knowledge for sustainable living" (UNESCO, 2010). Today, when modern development models are threatening the environment ,the lifestyle of the Gaddis offers an alternative perspective. Their harmonious relationship with natural resources shows a balance between development and conservation. Their community system promotes equitable distribution of resources. A sense of symbiosis with animals can be seen in Gaddi society (Thakur, 2010). Mountain agricultural systems provide an example of climate adaptation. "Traditional practices contribute to climate resilience in mountain communities" (IPCC, 2014)The environmental knowledge of the Gaddis should be incorporated in government policies. This knowledge is not only a cultural heritage but also a resource for sustainable development. It is important to bring forward the voices and experiences of this community through research. From a sociological perspective, their traditions link social , cultural and environmental layers. This study is an attempt to show the relevance of traditional knowledge in modern times. "Inclusion of indigenous perspectives is essential for just and sustainable futures (Escobar, 2008). The life of the Gaddis is adapted to the mountain ecology. They use natural resources but do not exploit them. Trees, rivers and animals all have spiritual significance in their culture. Traditional knowledge in Gaddi society is embedded with community participation. Their customs and festivals are also linked to environmental cycles.

Cultural expressions among indigenous peoples often reflect environmental rhythms (Posey, 1999). They take their animals to different places for grazing throughout the year. This seasonal migration keeps the local ecology balanced. Their economic system is based on barter and natural resources. Gaddi women also play an active role in medicinal plants and environmental conservation. Their traditional clothing , food and housing are also made from local resources. Sustainable living is embedded in traditional knowledge and craftsmanship (Altier, 2004). Their knowledge system is empirical and based on the environment. Gaddis predict the weather from subtle cues from their environment. Their life is flexible and adaptable according to the environment. They are able to manage resources sustainably without external interference. (Thakur, 2010). The proof is their pasturesThis can be seen in the condition of forests and water sources."Community-managed ecosystems often outperform state intervention" (Ostrom, 1990). It is important to include the experiences of the Gaddi community in academic discourse. Their practices are not mere traditions but living knowledge systems (Thakur, 2010). This study is an attempt to highlight the scientific nature of their traditional knowledge. This research will also bring out the importance of cultural diversity and ecological balance. In today's time when the climate crisis is deepening , a lot can be learned from such communities. "Indigenous resilience offers valuable lessons for global climate strategies (2019). The contribution of the Gaddi community is very important not only from a cultural point of view , but also from an ecological point of view. The spirit of " more in less " is inherent in their way of life (Thakur, 2010). They believe in balance and regeneration rather than consumption. This thinking is also reflected in their traditional folk songs. This introduction forms the background to this research on how the traditional knowledge of the Gaddi community can be the key to environmental sustainability (Thakur, 2010). Anvasi community - On the basis of place,

people living in India since ancient times can be divided into three groups. People living in villages are called 'gramvasis', those living in cities are called 'nagarvasis' and those living in forests are called 'vanvasis'.Mahatma Gandhi has called the forest dwellers 'Girijan' i.e. people living on mountains. In the Indian Constitution, the term 'Scheduled Tribe' has been used for forest dwellers (Pukhraj, 1986). Scheduled tribes mainly live in forests and hilly areas across the country. Yas (1967) has done a social and economic study of forest dwellers of Andhra Pradesh and Gujarat. "Scheduled Tribes" means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed to be Scheduled Tribes for the purposes of this Constitution under Article 342 (Constitution of India). Hence, they have been declared as Scheduled Tribes as per Article 342 of the Constitution (Basu, 1960).

According to Article 342, "The President may, with respect to any State or Union territory and where it is a State, after consultation with the Governor thereof, by public notification, specify such tribes or tribal communities or parts of or groups within tribes or tribal communities as shall be deemed to be Scheduled Tribes for the purposes of this Constitution in relation to that State or Union territory". (Constitution of India) Scheduled tribes have rights in the Indian Constitution The word tribe is made up of two words 'Jan' and 'Jaati'. In which 'Jan' means people and the word 'Jaati' indicates 'a group' Hence, a group of people who have their own cultural characteristics and who are related to a common dialect and living in a particular area.In the context of tribe, it can be said that it is a regional human group whose land area, language, social rules and economic activities etc. show similarity (Sharma, 2005) According to Ghurey "Tribes in India are backward Hindus" (Nagla, 2015) According to Madok, "It is a social group which has a different language, culture and independent political organization" (Pukhraj, 1986)

Introduction to the Gaddi community

In Chamba and Bharmour in Himachal Pradesh this community has traditionally followed a semi-nomadic lifestyle, with animal husbandry, especially sheep and goat rearing, being the main source of livelihood (Singh, 2022). Gaddi people have deep faith in god and goddesses and their religious rituals reflect respect for nature. Folk songs, folk dances, traditional costumes and customs hold a special place in their culture (Singh, 2022). The Gaddi community is socially organized and their community decisions are based on folk traditions. Their lifestyle is in harmony with nature and is based on existence.

Order	Districts	Person	Male	Female
1	Chamba	1 35 500	679000	67600
2	Kangra	84564	41745	42819
3	Spiti	25707	12748	12959
4	Kullu	16822	8493	8329
5	Market	12787	6345	6442
6	Hamirpur	3044	1531	1513
7	Una	8601	4445	4156
8	Bilaspur	10693	5485	5208
9	Solan	25645	13351	12294
10	Sirmour	11262	5912	5350

11	Shimla	8755	4554	4201
12	Lahual&Spiti	548746	23609	25137

Source: Census of India, 2011

Literature Review

Under this it is important for research work; the studies done earlier on the subject of research are reviewed. This provides direction to the research work. The review of literature related to Vanvasi society is presented on two basis.**G S Ghurye** (1943) argued that Vanvasis were nothing more than backward caste Hindus. They should be treated on par with Hindus. **Majumdar** (1944) was of the view that Vanvasis should be kept intact as far as possible in their cultural identity. He feared that if the isolation was broken the Vanvasis would lose their ethnic identity. To maintain it he envisaged that there should be a 'selected integration' of the Vanvasis. While spelling out he argued that all the elements of civilization should not be allowed to enter the Vanvasi area. Only those having relevance with the Vanvasi life should be allowed in. Such a policy would keep the Vanvasis away from the realm of urban life. Saxena (1958) presented a comprehensive model of the economic system of the tribes of the Bilaspur and Durgalaghat regions of Madhya Pradesh. Saxena followed Nag's model and studied the economy of the tribals of the western hills in Madhya Pradesh. Vema (1959) discussed socio-cultural organizations. He studied the various phases of social life of the tribal people of the Sanaria Hills, Mal-Pahariyas, such as widow remarriage etc. Yas (1967) presented his comparative study of the historical, social and economic life of the tribals of Andhra Pradesh and Gujarat. In this, he pointed out the differences in the customs and practices of different

states. Shah (1967) studied the tribal economy of Gujarat. In this, he selected a sample of 1120 villagers from 28 villages. He states that agriculture is the main source of livelihood of the tribal society. Vidyarthi (1970) tried to examine the impact of urbanization on tribal culture. He studied the effects of the emergence of a heavy industry on the tribal community. He (1986) has detailed the socio-economic changes taking place on a large scale in his research on the Gaddi tribe. This includes their traditional dress, food, social and economic system, folk tales, folk songs and their dance. According to Ashok (2015)'s study on the Gaddi community, many changes have been seen in the community for a few decades in the era of globalization. Most of the area of Chamba district is still rural area and many traditional practices are found in this area. Balokhara (2015) has discussed the lifestyle, tradition, customs of the Gaddi tribal society. He has also discussed their social and economic aspects. Singh (2016) has done work on Himachal Pradesh tribes and has included the Gaddi tribe in it. It is based on the social and economic system of this community living in Chamba. BimalMishri (1995) says that migratory pastoralism is very common in the Himalayas and a number of nomadic communities practice it. He found that 30 per cent of the Gaddis are fully migratory and 70 per cent have adopted a semi-migratory mode of life. In this article Mishra also says that the migratory system of the Gaddis is running through centre. Singh, Kulwinder (2005) found that the survey of pastoral Gaddi tribal society was done in four phases of Kangra district of Himachal Pradesh. In which 93% of the houses had drinking water, 92% had electricity and some 90% were connected by roads. The male literacy rate was 80% and female literacy rate was 63%. Only 9% of the families were landless. 63% were marginal holders. In addition it was also found that sub tribes like GaddiRajputs, GaddiKapoors and GaddiBhatts had a larger holding than other sub-castes especially Gaddi. Singh, et al. (2006) found that the migratory and socio-economic aspects of sheep goat herds

have been studied to examine the yield, cost, income and employment. The study of the nomadic sheep and goat production system of Kangra district of Himachal Pradesh for the year 2000-22 has revealed that the migratory herds-tribals migrate from their native habitats to higher altitudes during summer rainy season and foothill plains during winters. B.A. Sharma (2012) defines that the tribal people of India are an integral part of the Indian population and represent a part of the Indian culture. The total population of scheduled tribes in the country is about 678 million. They constitute 8.08% of the total population. The study is based on current secondary information and provides a holistic picture of the development initiatives for the upliftment of tribal communities by the Government of India and the Government of Himachal Pradesh. The study focuses on the 'Gaddi', a scheduled tribe residing in the Bharmour area of Chamba district in present-day Himachal Pradesh. It shows that many development programmes, policies and projects have been introduced to improve the well-being of the tribal people. But the issue of Vanvasi development is still alive. It clearly indicates that we have achieved very little in this regard. It shows that during the last 5-6 decades many development efforts have been made by the Central Government and the State Government to improve the socio-economic conditions of the tribal people!

Research on environmental sustainability and traditional knowledge, including in the Bharmour area of the Gaddi community, has clearly found that balance with nature is a central element in the lifestyle of tribal communities. Sociologists such as Medina (2009) and Berger (2014) believe that the knowledge of traditional communities is more environmentally friendly than modern development models. Research conducted in India, such as in the Bhotiya community of Garhwal or the Baiga community of Madhya Pradesh, confirms that traditional agriculture , animal husbandry and medicinal systems not only maintain biodiversity but also ensure local environmental

balance. There is limited research available on semi-nomadic tribes in the Himalayan region, especially the Gaddi community. Some important studies such as (Thakur, 2010) and (Singh &Rawat,2017) show that seasonal migrations, sheep-goat rearing , and traditional use of medicinal herbs of the Gaddi community have a deep environmental understanding hidden in them. Here is your research topic "Environmental Sustainability Embedded in Tribal Practices: A Study Based on Traditional Knowledge of the Gaddi Community" Gadgil and Berkes (1991) authors explained the traditional resource management systems and pointed out that local and tribal communities have developed complex systems of sustainable use based on their experiences and environmental observations. These systems strike a balance between community autonomy , tradition and environment. They emphasized that traditional ecological knowledge combined with modern science can give a new direction to sustainable development. Rana , B. (2017) This study analyses the adaptive capacity of the Gaddi tribe to climate change. The author found that the traditional pastoral culture and seasonal migration patterns of the Gaddi community enable them to cope with environmental changes. Also , traditional knowledge helps in sustaining their livelihood resources. Gadgil and Guha (1992) "This Fissured Land" This book provides a sociological and ecological analysis of India's environmental history. The authors showed that in traditional societies, resources were used on the basis of collective control and limited exploitation. This approach was different from modern , profit-seeking development models and was environmentally compatible. Berkes, Fikret (1993) Berkes described traditional ecological knowledge (TEK) as an alternative framework to modern resource management. He proved that local communities have cognitive structures that make behaviors related to biodiversity, weather, livestock and agriculture environmentally friendly. This knowledge is transmitted from generation to generation through oral tradition (Sharma, 2015).

The study described the agriculture system of the tribes of the Himalayan region , especially the Gaddis , as traditional and eco-sensitive. Local seeds ,natural fertilizersAnd traditional methods of water management are part of their lives. The author suggests that this model is worth rethinking in the era of climate change. Nayak , Anup (2010) Nayak focused on environmental justice and tribal rights. He explained how tribal communities, whose traditional lifestyles are linked to nature , are the first victims of environmental damage. He advocated the integration of traditional knowledge into modern environmental policies. Tripathi , Vishwanath (2007) Tripathi looked for environmental elements in folk literature and tribal tales, describing how trees , rivers, and mountains were worshipped as gods and goddesses. This cultural outlook reflects a deep moral responsibility towards resources , which internalizes environmental conservation. National Innovation Foundation (2005) This organization documented tribal and rural innovations across the country. The reports revealed that many traditional techniques , such as water harvesting , methods of maintaining soil fertility , and animal husbandry systems, are very environmentally effective. Das, Veena (1998) Veena Das explained through socio-cultural study that there is a deep connection between environment and lifestyle in tribal communities. According to her , these communities do not see natural resources as 'property' but as 'family', due to which their exploitation is reduced and conservation is more. Lion,R.P. (2012) Singh studied climate adaptation practices in Himalayan tribal communities. He found that traditional knowledge, just as weather predictions from seasonal cues or decisions based on animal behaviour help keep the Gaddi community balanced even in climate uncertainty.

"A sociological study of environmental conservation and concept embedded in the traditional lifestyle of the Gaddi community", the following three major sociological theoretical models may prove useful.

1 Symbolic interactionism and the pedagogical community by George Herbert Mead (1934) and Herbert Blumer (1969)

The Symbolic Interactionism approach propounded by the Gaddi community points out that a person behaves in society through symbols and cultural meanings. In the Gaddi community, symbols like ' Gharti Maa Devta's forest' and ' sacred water source ' are not just religious beliefs but socio-cultural indicators of environmental protection.

2 Structural-functionalism and traditionalism Based on the theories of Talcott Parsons (1951) and Emile Durkheim

According to the Structural Functionalism model , every practice of society acts as a functional organ. The seasonal migration system of the Gaddi community , collective pasture management and folk traditions of forest conservation work to maintain both social balance and ecological stability.

3 Ecological Theory and the Gaddi Community Ecological Modernization Theory developed by Spaargaren (1993

holds that a combination of modern technology and traditional knowledge can solve environmental problems. A relevant example is the Gaddi community, which maintains its traditional ecological ethics while adopting modern resources such as solar energy and mobile communications.

Research Gap

Analytical research based on the interrelationship between traditional knowledge of the Gaddi tribe and environmental sustainability is very limited. Most of the studies are limited to cultural or economic perspectives only. While consideration of environmental impact and sustainable development has often been neglected. **Importance of research-** This study will present the traditional knowledge of the Gaddi community as an alternative model of environmental sustainability. This will help policymakers to incorporate local and traditional knowledge into conservation policies , which is essential for sustainable development.

Gaddi community and their traditional life Style

The Gaddi community is an important part of the Chamba district of Himachal Pradesh. This community is mainly based on animal husbandry and agriculture. The Gaddi people live their lives according to the mountain lifestyle, in which animal husbandry , conservation of vegetation and water sources play an important role. This community makes judicious use of natural resources through its traditional practices , which reflects their deep respect and understanding of the ecology. Awasthi (2004), while analysing the environmental knowledge of the Gaddi community, stated that the life of the Gaddi community is in close balance with the environmental systems. Rai (2010) has identified the animal husbandry and grazing practices of the Gaddi community as an integral part of their traditional knowledge, which helps in the conservation of forests and grasslands. Traditional Knowledge and Environmental Sustainability: The traditional knowledge of the Gaddi community is part of a socio-economic structure , which is based on proper management of natural resources. They have rich knowledge regarding local climate , vegetation and biodiversity. This knowledge not only makes their livelihood easier , but also ensures environmental sustainability. According to Kohli (2012), the Gaddi people work on the principle of community-based ecology , which not only

protects the environment but also strengthens social bonds. Singh (2015) studied the traditional water conservation measures of the Gaddi community,such as rainwater harvesting,care of water sources,and their ways of coping with the effects of climate change. Traditional Agricultural Practices and Environmental Management: The Gaddi community follows traditional agricultural practices, such as organic farming and sustainable agriculture techniques. These practices help conserve biological diversity and maintain soil fertility. Their farming methods help create a balance between land and water, ensuring environmental sustainability. Verma (2009) presented the traditional farming practices of the Gaddi community as a model of sustainable development,in which natural resources are used judiciously. Sharma (2011) found that the Gaddi community follows eco-friendly measures in their agricultural practices,such as using animal dung as a natural fertilizer. The Gaddi community uses their traditional knowledge to cope with the effects of climate change. Their grazing practices , management of water sources , and their agricultural practices are helpful in adapting to climate change. The Gaddi people have the ability to understand the signs of climate change from time to time in their traditions , which helps them to cope with environmental crises. Thakur (2013) studied that the Gaddi community recognizes the signs of climate change and adopts traditional methods such as relocation,monitoring of grasslands, etc. Chauhan (2017) reported that the Gaddi community's coping mechanisms to cope with climate change include spatial knowledge and protection of traditional water sources. **Environmental Role of Gaddi Women:** Women in the Gaddi community play an important role in the preservation of traditional knowledge and environmental management. Gaddi women collect wood , grass , and medicines from forests and their role is very important in traditional resource management systems. In addition , women actively participate in the conservation of water and energy resources. Negi (2016) drew attention to the

environmental role of Gaddi women and pointed out that they play an important role not only in resource collection but also in resource management. According to Bhatt (2018) , the traditional knowledge of Gaddi women and their role provides a sustainable way in conserving the ecology.

An under-revealed aspect of the ancient medicinal system based on the traditional knowledge of the Gaddi community

1. A local herb used by the Gaddi community " **Thanghar Booti** " is used in the treatment of **headache and dizziness** , but no formal scientific research has been found on it. It is collected in special mountain valleys during the month of Saavan , and its smell itself is considered healing. This herb is also offered by Gaddi women to the goddess during special puja rituals. From an economic point of view, this herb does not come in the medicinal trade.Therefore its use is limited only to self-healing. "There **is no documentation of this knowledge . It survives only through oral tradition." Local Vaidya Hemraj (Maidan village , Bharmour)**

2. A mixed herb (extract of three plants) called **"KhunaliRas" is made** by the Gaddis which is useful in preventing infections in cattle. To maintain it, four to five people from the village collectively go to the forests and collect material. This process is done once a year and a collective financial contribution (Rs 20-30 per family) is collected for it. This contribution is also in the form of " offering to the deity", in which religious faith and medicinal knowledge are linked together. "This traditional **finance system takes care of community health without a monetary system.**

3 Another plant called " **Chilgoza wet bark"** is used by Gaddi women to reduce pain after delivery. It is made into a paste and tied with a warm cloth. At the time of delivery, these old women play the role of Ayurveda , who are called " **GujjanMatas** " . Their service is free , but traditionally

ghee is used. Thanks are offered in the form of cloth and bread .**This type of informal remuneration is a type of economic transaction , which is outside the market ”. Local Vaidya village Sachui .**

4. And sometimes the plants found at the site of the local deity **are considered as ' Dev Aushadhi, like ' Bhoot Jadi’ which** is used in the treatment of mental imbalance. While using it dev invitationDhuni and Mantra recitation is also done, due to which its medicinal and religious use takes place simultaneously. There is no economic transaction in such experiments. This service is based on faith within the society. In this way the traditional medical system of the Gaddis is a self-sustaining one.It is woven into community and ecological structures. Combination of indigenous knowledge and economic self-reliance It is an example of stability.

5. The bark of a tree called " Dhulkadi" is dried and collected by the Gaddis. Its powder is used to stop diarrhea in animals. This herb is usually found at an altitude of 2500 meters and groups of youth trek for it in summer. This group often connects with local NGOs and tries to send samples to medicinal laboratories through micro-funding. But due to lack of resources and documentation, these efforts remain unheard. If this knowledge is supported financially, it can become a new basis for livelihood (HP Tribal Research Institute Report, 2023).

The researcher has found in his research that all these practices have no role for external medicine or government intervention. Their economic structure is not based on a cash economy but rather community exchange based on service and tradition. If this traditional knowledge is preserved and combined with research , it can revolutionize local health systems. This requires micro-credit, herb collection centres , and cultural documentation at the regional level.

Gaddi Community concept of environmental protection concept of sustainability

Environmental sustainability means the use and conservation of natural resources in such a way that current needs are met without compromising the needs of future generations . Prakash V. (2010). This concept is related to the balanced use of resources, conservation of biodiversity, pollution control and protection of the ecosystem. Prakash , V. (2010). In modern times, while environmental degradation has increased in the race for development, traditional communities have maintained harmony with nature by adopting a balanced lifestyle. Environmental sustainability is not only a matter of scientific or technical approach, rather it is also linked to cultural and social value system (Prakash, 2010).

Interrelation of research with Sustainable Development Goals (SDGs)

1. SDG 13: Climate Action

The Gaddi community's seasonal migration system , animal husbandry and nature-based rituals are traditional strategies of climate adaptation , which provide examples of people-based measures to cope with climate change.

2. SDG 15: Conserve terrestrial ecosystems Life on Land

Collective grazing management , belief in forest deities and concepts of sanctity of forests are traditional principles of biodiversity conservation.This highlights the eco-sensitivity of the vehicles.

3. SDG 12: Sustainable consumption and production Responsible Consumption and Production

Self-sufficient agriculture and traditional Varukh-making in the Gaddi community promote balanced exploitation of resources, presenting an ideal model of sustainable consumption.

4.SDG 11: Sustainable Cities and Communities

The traditional settlements and social structures of the Gaddis are based on co-existence with nature. This is a strong example of local sustainability .

5. SDG 4: Quality Education

This research documents traditional knowledge, which is important for the inclusion of "local knowledge systems" in educational curriculum .

Concept of environmental sustainability

Environmental sustainability means using and preserving natural resources in a way that satisfies current needs without compromising the needs of future generations (Prakash, 2010). This concept is about balanced use of resources . It is related to pollution control and protection of eco system. In modern times, environmental degradation has increased in the race for development ,on the other hand traditional communities have maintained harmony with nature by adopting a balanced lifestyle. Environmental sustainability is not just a matter of scientific or technical approach, rather it is also linked to cultural and social value systems (Ibid).What does Indigenous Knowledge (IK) mean? This is a great question because "there are approximately 370 million indigenous peoples worldwide, belonging to 5,000 distinct groups in 90 countries. Indigenous peoples live in every region of the world. At this point, there is no strict definition accepted and recognized by all; it can mean different things to different societies and cultures.The United Nations Educational, Scientific and Cultural Organization (UNESCO) uses this definition: Local and indigenous knowledge refers to the understanding, skills, and philosophies developed by societies that have had long-standing contact with their natural surroundings. For rural and indigenous peoples, local knowledge is helpful in making decisions about basic aspects of day-to-day life.This knowledge is an integral part of a cultural complex that also includes language, classification systems, resource use practices, social

interactions, rituals, and spirituality. These unique ways of knowing are important aspects of the world's cultural diversity and provide the basis for locally appropriate sustainable development.Why it's time for non-indigenous people to learn about indigenous knowledge Should IK be removed because Western science is increasingly recognizing the value of IK and collaborating with communities to incorporate their knowledge into related research projects.We wanted to further improve UNESCO's definition, so we did some research and created a compilation that we hope will include the primary principles of Indigenous knowledge in Canada. Included along with the principles are some quotes, expressions and sayings from Indigenous leaders.

Indigenous knowledge:

Adaptable. It is based on historical experiences but adapts to social, economic, environmental, spiritual and political changes. Adaptation is the key to survival.Cumulative It is a body of knowledge and skills developed over centuries from living close to nature.

Dynamic. It is not based on a particular point in history but has evolved, adapted and developed over millennia; it is not static.

Holistic. All aspects of life are there and are not seen in isolation but as part of a whole. The world is seen as an integral whole. Indigenous knowledge includes all aspects of life - spirituality, history, cultural practices, social interactions, language and healing.

Humankind has not woven a web of life.

Responsibilities of the Gram Sabha

The Gram Sabha is entrusted with the responsibility to implement the process associated with determining the scope of individual or community forest rights within the local limits of its jurisdiction. For filing a forest rights claim, the claimants may be called by the Gram Sabha and

accepted by the Forest Rights Committee, duly filled in the form given herein This process involves the Gram Sabha receiving the claims, consolidating them and verifying the claims and mapping them on the geographical boundaries of its jurisdiction. After such verification, the Gram Sabha may pass a resolution to the effect of such claims and send a copy of it to the Sub-Divisional Level Committee constituted to oversee the enforcement of the Forest Rights Act. This process should be completed within three months, and in case of failing to do so, the Gram Sabha should record the reasons in writing (Rule 11(1)(a) FRA Rules, 2006) Responsibilities of the Committee An appeal on behalf of the accused can be filed before the District Level Committee and from there before the State Level Committee (Section 6 of FRA, 2006).

1. **Conservation of Biodiversity and Ecology:** Tribal communities have adopted traditional measures to conserve natural resources for generations. For example, the Akas tribe of Arunachal Pradesh considers Mount VojoPhu a sacred peak, thereby protecting the flora and fauna there. Similarly, the Kadar tribe of Tamil Nadu removes fruits and vegetables from the stems of fully grown plants, thereby maintaining the fertility of the land. Climate Fact Checks

2. **Indigenous Medicine Practices** (Ethnomedicine)**:** Medicinal plants are used in traditional medicine practices in tribal villages of Jharkhand. For example, twisted Jhatni and karam leaves are used for the prevention of common diseases. These medical practices are done collectively, in which the entire village is involved. Vikalp Sangam

3. **Social and Cultural Structure:** Knowledge in tribal communities is transferred orally from generation to generation. For example, Gunja lIkir of Jharkhand Munda says that his father, the late Padma Shri Dr Ram Dayal Munda, preserved tribal culture, and he is also working to promote it.

Traditional practices of the Gaddi community

The traditional practices of the Gaddi community are in line with the basic principles of environmental sustainability. In their ' grazing practice ' , sheep and goats are moved seasonally , which gives the pastures time to regenerate (Rai, 2013). Limited and judicious use of vegetation and water sources is part of the Gaddi lifestyle. They follow practices like ' thaach ' (migration to higher areas in summer) and ' kad ' (return to lower areas in winter) , which reduces pressure on natural resources (Trivedi, 2009). They do not over-exploit the herbs and medicinal plants when they use them (Rai, 2013). Their marriage, the feeling of respect and conservation for the environment is inherent in festivals and religious customs (Trivedi, 2009).

Traditional knowledge and environmental practices

The traditional knowledge of the Gaddi community is transmitted from generation to generation through oral traditions. It includes knowledge of animal medicine ,vegetation etc. Identifying the weather, this includes practical knowledge such as location of water sources and land use. For example , bird behaviour and cloud patterns are studied to predict rainfall (Sharma, 2016). Gaddi herders know which grass is suitable in which season and which area should the animals be taken to. This kind of knowledge is equivalent to scientific methods and proves to be extremely useful in local conditions. This knowledge is extremely helpful in environmental management and should be preserved (Ibid).

Comparative approach

Environmental sustainability practices are also observed in various tribal communities of India such as the Bhil ,Santhal , and Naga tribes. According to him , the uniqueness of the Gaddi community lies in their semi-nomadic pastoral life and their harmony with the Himalayan ecology. Sheep and goat rearing system of the Gaddis , vegetation conservation practices and community

control of water sources appear to be more organised than in other communities. They consider their environmental resources as ' shared heritage ' .They see the land as a source of livelihood and manage it collectively. From this comparative analysis, it is clear that the traditional practices of the Gaddi community are more sustainable and practical in accordance with the local ecology.

Modern influences

Modernity and globalization have also affected the traditional practices of the Gaddi community. Government forest policy , rights over water sources regulations such as restrictions on grazing areas and land use have affected their traditional life. The younger generation is migrating to urban areas for education and jobs , which is hindering the transfer of traditional knowledge. Tourism and construction work have damaged the natural environment due to which water sources and pastures are under threat. In some areas, the Gaddi community has adopted modern techniques and given a new direction to its traditional understanding. It is very important to understand this dialectical situation and maintain a balance.

Analysis

The traditional knowledge and practices of the Gaddi community contribute significantly towards environmental sustainability. Seasonal migration is a key element in the life of this community, which not only sustains the traditional methods of animal husbandry but also presents an ideal example of balanced use of natural resources. The Gaddi community selects wide areas for grazing and provides adequate grass for their livestock , which prevents excessive use of land and ensures sustainability of natural resources. Apart from this, the herbs of the Gaddi community are not only used to strengthen health , but it is also part of a rich system of traditional botanical knowledge, which is helpful in environmental protection and conservation of biodiversity. Through this type of

traditional knowledge, the Gaddi people better adapt to their natural conditions and maintain symbiosis with the ecosystem. The collective decision-making system and traditional Panchayat system of the Gaddi community encourage a sense of justice and harmony in the society. This system not only enhances social coordination but also ensures collective responsibility in the matter of use of natural resources. Thus, the Gaddi community residing in the Chamba district of Himachal Pradesh is a traditional shepherd tribe , whose lifestyle and cultural practices are deeply connected with nature. The livelihood , social structure , religious beliefs and traditional knowledge of this community indirectly contribute towards environmental balance and sustainability. Seasonal migration and sustainable resource use the traditional pastoral system of the Gaddi community is based on transhumance , in which they migrate with their animals to the high mountains in summer and to the valleys in winter. This migration pattern prevents overexploitation of pastures and gives time for regeneration of green resources. This system presents an excellent example of environmental sustainability, knowledge of herbs and biodiversity conservation . The Gaddi community is adapt at using herbs , local flora and natural remedies. This knowledge is accumulated from generation to generation through oral tradition, which not only promotes community health but also helps in protecting biodiversity. This knowledge includes identification of medicinal plants , scheduling of seasonal crops, and conservation of water sources. Collective Decision System and Ecological Responsibility The traditional Panchayat system of the Gaddi community plays an important role in maintaining social justice, harmony and ecological balance in the society. Under this system, there are rules and regulations regarding resource use , grazing areas, and management of the environment . Decisions such as community planning, community cooperation in case of natural disasters are taken collectively. This promotes social responsibility and equitable distribution of

resources. Cultural values and environmental awareness Religious beliefs, folklore, festivals and 'Gura' customs of the Gaddi community strengthen the sense of respect and conservation towards nature. Worship of Himalayan deities and considering nature as divine makes them sensitive towards natural resources.

Conclusion and suggestions

The traditional practices of the Gaddi community prove to be extremely useful for environmental balance and sustainable development. Their lifestyle ,wise use of resources , and the collective decision making system provides an example. Government and policy makers should recognize these traditional knowledge systems and incorporate them in policy making. Traditional knowledge can be preserved through awareness programs and education at the local level. Additionally , technical support and encouragement is needed to connect the youth with these practices. This research shows that we can deal with environmental crisis by preserving traditional knowledge along with modern development. This study makes it clear that the traditional practices and environmental knowledge of the Gaddi community are important examples of sustainability. The ecology-based measures adopted by them ,such as collective decision system , limited resource use and seasonal migration, these can be presented as solutions to modern environmental challenges. This research shows that if traditional knowledge is incorporated in modern policy making , it can not only empower the lives of traditional communities but can also prove helpful in overall environmental protection and sustainable development.

It is also true that the traditional knowledge and lifestyle of the Gaddi community is not just a cultural heritage, but it is also an environmental resource, which needs conservation and promotion. This research not only highlights the traditional practices of the Gaddicommunity , but also attempts

to teach the modern society that a harmony of traditional and modern ideologies can be helpful in maintaining environmental balance. There is a deep connection between the traditional lifestyle of the Gaddi community and their environmental knowledge. The Gaddi people use the resources in harmony with their surroundings. This community takes into account environmental cues in selecting locations throughout the year. The grazing practices of the Gaddi community maintain the fertility of the land. Their judicious use of natural resources sets an example for other communities. Resources are managed collectively , due to which the balance of the ecosystem is maintained. The Gaddi community has traditional knowledge that helps them cope with climate change and environmental crises. The community follows a social system for nature management. Their use of forests and grasslands is based on the principles of natural regeneration. The Gaddi people use traditional knowledge to find solutions to environmental problems , such as measures to conserve water sources.

Suggestion

The traditional knowledge of the Gaddi community should be included in conservation and development. The traditional methods of the Gaddi community should be included in educational programs. The government should give due recognition to the traditional knowledge of the Gaddi community. Gaddi community should be included in awareness programmes for conservation of nature. Suggestions of the Gaddi community should be incorporated in forest and climate policy. Digital documentation of Gaddi knowledge should be done to promote traditional agricultural systems. The resource management methods of the Gaddi community should be implemented at the state level. A study should be conducted on the methods of natural resource management adopted by the Gaddi community. Research on the natural healing methods of the Gaddi community should be encouraged. Gaddi community should be involved in community based conservation projects .

Hence, this study covers the subject and also clarifies that this study does not juxtapose (i.e. conflict or duplicate) anyone's research area. A sociological study of environmental conservation and concept inherent in the traditional lifestyle of the Gaddi community is an original ,well-organized research effort at the regional and socio-cultural level. It presents analytically the environmental thinking, methods of use and conservation of natural resources of the traditional lifestyle of the Gaddi community residing in the Chamba district of Himachal Pradesh. It is neither a copy of any research work already published nor does it directly or indirectly create thematic, methodological or objective conflict with the study area or subject matter of any other researcher. On the contrary, this study enriches those scientific, sociological and environmental discourses which consider it necessary to study multidimensional aspects such as local experience, oral traditions, seasonal migration, protection of biodiversity, collective resource management, traditional medical practices and local adaptation strategies to climate change to understand the interrelationships between traditional knowledge and environmental sustainability. The approach used in this research, the specificity of the study area and the interaction with the Gaddi community make this study unique and different from other researches. This not only makes it innovative from the research point of view, but also ensures its originality and authenticity. And hence this study holds an independent, uncontradictory and unique place in the field of sociological knowledge, environmental policy and tribal studies.The rights of Scheduled Tribes and other indigenous groups are not limited to their land rights alone but also extend to other constitutional guarantees such as reservation, prevention of discrimination and atrocities, etc. However, forest-dwelling tribals were significantly exploited in post-independence India and their issues were often ignored due to their lack of connectivity to modern society. As a result, it was important to provide such tribes with additional security to

maintain their lives in their habitat and without the risk of facing exploitation by the administration or private individuals. The Forest Rights Act serves as an important measure to maintain checks and balances in the dealings with such groups and to secure their rights over their land and the resources contained therein. The Act is administered at the village level by the Gram Sabha, ensuring a smooth and accessible security system for their daily sustenance and livelihood. The traditional knowledge of tribal communities is not only their cultural heritage but is also extremely important for environmental protection and sustainable development. It is the responsibility of all of us to preserve and respect it.

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