



## ISSUES OF CONSERVING BIODIVERSITY AND PROTECTING INTELLECTUAL PROPERTY RIGHT OF TRIBAL IN KANKER DISTRICT OF CHHATTISGARH

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**Abstract:** *Biodiversity degradation has been recorded on international policy agenda for several decades. There are numerous ethical issues for biodiversity conservation. There are numerous strategies to reverse the biodiversity decline, ranging from economic, through ecological, to ethical. Both the rationale for biodiversity conservation action and its success differ greatly on the basis of paradigms represented by various professionals associated with conservation, as well as social-cultural and political context. The successful understanding of conservation goals to great extent depends on conservation stakeholders, i.e. people at different governance levels who work with implementing biodiversity policies in practice. There is an urgent need to know how forest dwelling communities understand biodiversity and the reasons behind their action for conservation. This article critically examines various ethical dimensions of conservation strategies adopted by communities.*

**Keywords:** *conservation strategies, biodiversity decline, ecological, ethical dimensions.*

### INTRODUCTION

Chhattisgarh, a nascent tribal state of India has been carved out of Madhya Pradesh on November 01, 2000. This State lies in eastern part of India between 17°46' N and 24°06' N latitude and 80°15' E and 84°51' E longitude. Forest covers 44 percent of total geographic area of the State. Kurandi Forest, Kurchel valley, Kanger Reserve, Bailadilla Hills and Abhujmar constitute medicinal plant hotspots of the State. The issues of environmental governance as correlated with sustainable livelihood in forest villages in and around Abhujmar, Bailadilla medicinal plant hotspots in Bastar are numerous and complex. These issues are deep rooted in cultural, social and natural life support systems of communities living in this region.

The biological resources in these indigenous territories of Chhattisgarh consists of natural sources of agricultural, medicinal, ecological, veterinary and cosmological utility which ensure equilibrium between local environment and social health of the tribal communities inhabiting in these forest villages. These biological resources influence the cultural practices,



resources and local knowledge systems not only among Gond and Halba communities but also among other indigenous communities. The cultural practices both customary and non-customary, prevalent among Gond and Halba tribes of Chhattisgarh are not only inherited territorially but also continue to evolve under influence of individual innovations and local environment. The deficiencies in careful customization of these cultural practices restrict opportunities for innovation and reproduction of these practices. The circulation and reproduction of natural and social environment and local system of production are followed by these cultural practices which are potential substrates of local cultural resources. The process of globalization has threatened not only protection of intellectual property rights of these tribal innovators but also protection of cultural and biological resources of these indigenous territories. The reproduction of these cultural knowledge and practices for commercial application has not been appropriately explored. Because they need to be synthesized, reduced, standardized and miniaturized for mass reproduction and distribution based on scientific research and integration of local knowledge in mainstream of scientific exploration. These limitations have provided vast opportunities to big players for hijacking the intellectual property rights of community over cultural and biological resources of this nascent State. The web of unique relationship between animal genetic resources and cultural practices. (i.e. magic, rituals, medicine divisions, symptoms) prevalent among tribal communities of Chhattisgarh need to be explored through appropriate research initiative towards protection of the intellectual property rights of local communities and expanding access to rich biological resources in these indigenous territories.

A little attempt has been made to protect the intellectual property rights and medicine components of animal species administered by these herbalists, Shamans and folk healers through awareness generation and action research interventions. The government and Civil societies in these indigenous territories have not been adequately sensitized on these issues. Appropriate interventions on dissemination of knowledge on traditional medicine, expansion of scope of utilization of this system, identification and elimination of harmful traditional health care practices, enhancement of information sharing on traditional medicine, increasing collaboration between traditional healers and other health practitioners are required to be planned and coordinated.



The autonomy of any tribal community is not only manifested through the existence and operation of subsistence economy but also through Ethno-medicinal practices adapted appropriately to their cultural framework. This healing system preserves the web of network of interrelationships of man with nature, flora and fauna. The administration of natural components and exploration of human interrelationships with invisible supernatural forces through magico-religious practices revolving around the stratum of folk medicine and traditional healing practices are prevalent among tribal communities in India. The community's confidence on rationality and effectiveness of traditional healing practices and the healers has been compounded by the traditional values and taboos regulating ethno-healing practices among tribal communities. The tribals foster their own traditional knowledge and belief prioritizing the origin and causes of and indigenously recommended treatment for diseases which may be rejected as irrational, superstitious and non-scientific by modern medical practitioners. The modern medical practitioners very often fail to touch the raw cord in the heart of tribal patients. Any intervention without responding to sentiment, belief and health seeking behaviour of tribal appropriately will certainly fail to bring them to center of health planning in any part of our country. No doubt the 'Baiga', 'Gayata', the traditional healers among tribal of Chhatisgarh have adequate knowledge and answers to cure permanently many respiratory, reproductive and digestive ailments which modern medical practitioners have failed. The traditional healers with traditional wisdom and expertise on herbal as well as medicinal extracts from various organic components of animals are referred to as "Baiga" or "Sirha" or "Vadde" or "Baidya". The traditional healers among tribal communities of Bastar have been graded as "Gayata" or "Pujari", "Sirha" and "Gunia" on the strength of their expertise, therapeutic skill and job responsibilities. "Gayata" or "Pujari" and "Sirha" among Muria tribe of Bastar have acquired the art of inviting holy spirits from supernatural world as occultists upon themselves and get possessed through performing specific magico-religious rituals. They infuse healing forces awarded by the possessed super natural spirits into patient's body for eliminating ailments through healing touch. Gunia always works as assistant to "Sirha" in performing magico religious rituals and worship of holy spirits in the forests. Spiritual component emphasizing on faith healing contributes significantly towards ensuring balances between mental health and physical health. "Perma" the elderly peer of the village takes lead in organizing



ceremonies and rituals at community level. "Panjiya" is the astrologer who has expertise of forecasting the fate, crop yield, climate and well being of persons and communities. These different types of folk healers have expertise and potentialities to serve as appropriate community level health care providers, health counselors, peer educators through their capacity building interventions. This unexplored human resource base need to be fruitfully utilized for transforming health scenario of State. The bio technology policy formulated by Government of Chhattisgarh has provisions for upgrading the capacity of people to exploit natural, cultural and knowledge heritage of the State. These traditional healers upholding the existence of the thousands years old culture of ethno-medicinal practices perpetuated through traditional wisdom provide vast opportunity to Government and corporate bodies towards promotion of medical tourism in Chhattisgarh. These persons can be motivated to form Peer Group at village level to identify, plan and prioritise the cultivation of medicinal plants and appropriately involved in the task of promoting Bio-Villages in the nascent state of Chhattisgarh.

The traditional healing practices of tribes are more or less based on stimulation of self healing efforts of body guided by observance of Laws of the nature. The therapies under traditional healing practices among tribe have been influenced by the sets of interrelationship among human world, supernatural forces and nature. Nature is treated as the microcosm and Universe as macrocosm crowned with spiritual and supernatural forces. Nature is consisted of minerals, vegetation and animal kingdom the ingredients of which have been derived from the Universe. Human Body contains all the ingredients, which both Universe and nature possess. The basic rationale of traditional healing therapies among tribal is deep rooted in the understanding of human relationship with nature and Universe. The ingredients from human world, animal kingdom, mineral resources and green vegetation along with unseen forces drawn from supernatural world influence significantly these traditional healing therapies. The principles of these therapies are directed to generate forces for stimulating human happiness, community consciousness and harmony apart from igniting the process of self healing within the human biological system. These days thousands of patients all over the world have developed a fascinating choice for a trial with treatment by folk healers for their chronic ailments and test the efficacy of alternative herbal or ethno-medical health care system practiced by Indian traditional healers.



## **RESEARCH DESIGN**

The present paper is based on anthropological study of indigenous knowledge system of ethno-medicinal practices prevalent among Halba and Raj Gond, Muria tribal communities living in twelve forests based mountain villages of Antagarh Block in Kanker district, Bastar region of Chhattisgarh. A team of two social anthropologists and one ethno-botanist camped in these villages for nine weeks during November-December 2002. The study focused on in-depth interview with 21 tribal herbalists (Baiga) and 18 Shamans (Gayata) and 35 community elites spread over these twelve forest villages adopted as samples under the study. The author administered Focus Group Discussion with Lineage elders, herbalists, herbal plant merchants, expecting mothers, traditional birth attendants (TBAs) and Shamans separately. More emphasis was given on analysis of data elicited from oral tradition, oral histories, and participant observation on rituals governing collection and use of biological resources. The village based resource maps covering habitat of herbal species were developed involving these informants with administration of appropriate tools of Participatory Rural Appraisal (PRA). The field investigation was carried with administration of both qualitative and quantitative tools such as interview guide, focus group discussion (FGD), in-depth personal interview and anthropological case studies. Some tribal herbalists were engaged as field guide to accompany the team for identifying the habitat of herbs in the forest.

## **INDIGENOUS MODEL OF HEALTH CARE AND CONSERVATION OF BIODIVERSITY**

The indigenous model of cultivation of medicinal plants like Safed Moosali (*Chlorophytum-arundinaceum*) for expanding commercialization opportunities on experimental basis in some parts of the state has provided unexpected encouraging response to the farmers. The cultivation of medicinal plants like *Terminalia-arjuna* (Arjuna), *Melia-composita* (Garood), *Samilex perfolia* (Phosar), *Withania-Somnifera* (Ashwagandha), *Piper nigrum* (Kalimirch), *Madhuca-indica* (Sarpogandha), *Terminalia-belirica* (Behada), *Terminalia-Chebula* (Harra), *Plumbago-zeylanica* (Chitawar), *Curculigo archiolis* (Kali Moosali), *Azadiracle-indica* (Neem) hold a bright future for upholding economic prosperity of the State. The globalization process has facilitated the linkage with vast marketing network for commercialization of these rare herbs, which must be appropriately tapped. As many as 625 plant species



including medicinal herbs have been traded from forests of Chhattisgarh. The results of such experimentation are urged to be disseminated through duplication in a larger scale operation, which will not only respond to community efforts in eradication of poverty but also compound Government efforts in transforming the State of Chhattisgarh into a herbal State of India at bigger stride. In absence of enactment of a sui generis law for protection of traditional knowledge from being bio-pirated by multinational companies inspired by the growing trends of globalization and privatization, the rich cultural heritage shall be faded away. Different multinational companies have been acquiring the traditional knowledge on ethno-medicine and commercializing these herbal medicines with their own patent. Lack of research and documentation of ethno-medicine, lack of awarding rewards to efforts to integrate these folk healers in country's main stream of development have provided enough scope to bio-piracy of traditional knowledge, art-craft, commercial use of valuable rare herbs supporting the rich cultural heritage of Chhattisgarh. The issues of protection Intellectual Property rights of folk healers have not been appropriately addressed at DOHA and incorporated in the TRIPS (Trade Related Intellectual Property Rights) agreement. The marketing of pure medicinal and aromatic plants along with provision of consultation by traditional healers capsuled in a package deal and handled by a federation of grass-root CBOs like Vana Suraskhya Samity or State level apex body of Stakeholders cooperative societies dealings with minor forest produce would pave a prosperous pathways for fruitful exploration of ethno-medicine system in Chhattisgarh. Chhattisgarh State Minor Forest Produce (Trade and Development) Cooperative Federation Ltd has been entrusted by State Government to ensure IPR of local health tradition practitioners. Unfortunately these initiatives have not been streamlined due to resource crunch, poor awareness of local bodies on their rights and responsibilities and inadequate institutional arrangements made for keeping track on smuggling of medicinal plants out of the state.

The success stories of the experimentation initiated by the Tanga AID Working Group (TAWG) of Tanzania in addressing the problems of HIV / AIDS patients through appropriate collaboration with traditional healers provide examples of eye opening interventions. Under this project, the traditional healers have been trained to work as HIV/AIDS counselors, peer educators, better health-care providers and condom distributors. The treatment of at least 2000 AIDS patients by traditional remedies have proved effective in elimination of skin



problems, increase in appetite, improvement of quality of life and enhancement of longevity of life in these patients.

## **ISSUES OF INTELLECTUAL PROPERTY RIGHTS; NEED FOR SUI GENERIS LEGISLATION**

The Government of India has enacted Biological Diversity Act in 2002, which seeks protection and regulation of country's natural resources and traditional knowledge. This initiative has been stimulated by resolutions of International Convention on Biological Diversity to which India was one of the signatories. This Act has prescribed three tiered systems of regulation ranging from national level to grass root level. National Biodiversity Authority (NBA) has been created at apex level to coordinate the activities of State level Biodiversity Board (SBB) and local level Biodiversity Management Committee (BMC). The Government of India have drafted the rules of Biodiversity Act (BA) in 2004, which entrusted NBA to take appropriate steps for creating database and documentation system for biological resources through biological registers and electronic data bank. The Ministry of Environment and Forest, Government of India convened a series of workshops for preparing detail manuals for People's Biodiversity Registry (PBR). It has been visualized that each Gram Panchayat of the country would be encouraged to promote Biodiversity Information System (BIS) and Peoples Biodiversity Registry (PBR). This would serve as a storehouse of all biodiversity related information and be used as tool towards gaining access to forest produce. People will be sensitized to know biodiversity around them and curtail its use and plan ecological conservation accordingly. At the initial stage, Centre for Ecological Sciences (CES), Bangalore has been entrusted by Government of India to prepare manuals for PBR to be launched at least in three hundred Gram Panchayats of the country, which would promote Intellectual Property Right (IPR) region and ensure conservation of bio-wealth.

Government of India have taken praiseworthy stand at international circle and denied IPRs on life forms at World Trade Organization (WTO) level. But, the flaws in domestic legislative provisions have not been prioritized and rectified so far. Government of India have allowed IPRs on plant varieties. No policy has been enacted to empower the stakeholders in prevention of biopiracy in terms of obtaining prior informed consent (PIC) directly from the communities. Biodiversity Rules, 2004 enacted by Government of India have entrusted power to National Biodiversity Authority (NBA) to grant permission to foreigners seeking



access to biological resources and traditional knowledge without taking prior informed consent (PIC) from local Biodiversity Management Committee. The representation of community at State and National Level Biodiversity Boards has been ignored. The role of local Biodiversity Management Committee has been confined to documentation of traditional knowledge and developing peoples biodiversity registry only. Besides, the provisions for equitable benefits sharing by stakeholders from commercial use of bio wealth and indigenous knowledge have not been well defined in the Biodiversity Rules. The district administration has been authorized to receive the benefit on behalf of the community. The principles of consent and benefit sharing need to be revised and restructured incorporating rooms for empowerment of stakeholders as well as local Biodiversity Management Committee in terms granting prior informed consent (PIC) to users and availing benefits sharing directly without involvement of any bureaucratic hurdles.

## **CONCLUSIONS**

The challenges before us today are not to challenge the efficacy and rationality of traditional ethno-healing practices but the challenges to bridge the gap between traditional and modern bio-medicine, reclamation and exploring core essence of ethno-healing practices in terms of their contribution to humanity and science. The knowledge base of ethno-healing system may be significantly explored towards supplementing the existing modern bio-medical practices. The challenging tasks ahead of State Government today are exploration of indigenous knowledge system and promotion of an appropriate database, incorporation of field tested concepts on indigenous knowledge into academic as well as development policies of the Government, promotion of national linkage between researchers and organizations involved in ethno-medicine initiatives, promotion of IK Resource Centre at State level for documentation, acquisition and dissemination of IK related information in the nascent State of Chhattisgarh. Without appropriate research initiatives towards documentation of traditional knowledge relating to medicinal plants preserved by elderly peers, the indigenous knowledge base is on the verge of erosion and elimination in absence of promotional efforts by younger generations to acquire, promote and sustain this stream of knowledge gainfully. Some magico-religious practices prevalent among abujhmaria and Baiga have tremendous impact on delaying child birth as experienced by some educated couples of the cities of Chhattisgarh. The Ministry of Culture, Government of India has set





up National Manuscript Mission (NMM) and another appropriate Missions to conserve country's intangible heritage, formulate appropriate policy and overarch legislative framework. This will not only prevent erosion and unauthorized exploitation of traditions but also stimulate innovation and creativity as well as protection of transmission of traditional knowledge honouring the dignity and moral rights of innovators in this globalizing era.

The globalization has opened spectrum of accessibility by overpowering multinational companies to procure, market and own intellectual property right over herbal medicinal resources technology and processing of the natural ingredients of herbal medical system preserved by indigenous communities. In absence of enactment of appropriate policy and legislation to protect the intellectual and cultural property rights of traditional folk healers and adequate exploration and documentation of intangible culture and oral tradition covering folklore, mythology, ritual, proverbs etc, the tangible and intangible assets of age old folk healing system have been taken over, owned and put for greater commercial use through process of privatization. These are highly sensitive issues which are to be dealt with by appropriate legislation and policy formulation with back up support through appropriate research interventions in growing state of Chhattisgarh.

The tribal sustain the preservation of rare medicinal plants in common productive resources (CPR) in indigenous territories of this State. The contradictions between Government's perceptions and rules of revenue and forest department over ownership and property right on these common productive resources on one hand and tribal beliefs and practices concerning resource management on the other have posed serious threat not only to preservation of biodiversity resources but also to sustenance of ethno-medicinal practices. These issues have taken for debate on various national and international forums. The 'Principle of Self –determination' upholding home – rule and autonomy of tribal communities as recommended in the International Conference on Conflict resolution, Peace Building, Sustainable Development and Indigenous People, 6-8 December 2000, Manila (Philippines) may be explored as guiding principle incorporated in the strategy for resolution of insurgencies and conflicts over tribal people's land and resources in this State. The deficiencies and vacuum in promoting capacities of tribal people to uphold and defend their rights are deep rooted in their inability to undertake research and documentation and



dissemination of information worldwide. They fail to promote appropriate global, regional and local networks and collaboration in campaign, policy understanding on these issues of tribal people of this State is very poor.

There is an urgent need for promotion of appropriate public understanding in this regard through media advocacy with involvement of academicians, NGOs and Civil society organizations of the State. There is an urgent need for promotion of Tribal and Indigenous People Global network with a mission to promote and defend their rights and capacities to expose the abuses of their tradition. The agenda of public awareness must focus on issues of peace keeping in indigenous territories, social protection, partnerships, mobilization of resources, national and international cooperation for social protection, preservation and protection of bio-diversity resources with appropriate participation of tribals of the State.

India is treated as treasure house of indigenous knowledge and numerous rare medicinal herbs. India preserves 7% of world's biodiversity. National Biotech Policy (NBP) of India is still at a rudimentary stage, which has not provided any consultation, sharing of success stories with stakeholders and civil society. No precautionary principle has been define to initiate any precaution when the environment is expose to threats. The rice exporters of India have bitter experience of economic threat posed to them by Taxas based Firm, Rice Tech, who could manage to hijack patent on Basamati Rice of India in 1997. Ultimately Rice Tech was forced to withdraw the claim for patent when challenged by Government of India. Similarly, two US based Indians have acquired patent for use of turmeric in wound healing. Government of India have challenged this patent and forced to revoke it. There are numerous cases where intellectual property right of tribal innovators have been hijacked without their knowledge. There is an urgent need to promote national consensus regarding protection of Intellectual Property Right on indigenous knowledge relating to medicinal and aromatic herbs. The issues of intellectual property right need to be published and discussed by a broad audience of stake holders. The policy on protection of intellectual property right needs to be based on informed public opinion and process of public engagement eliciting broad range of public opinions on these issues. The herbalists and folk healers upholding local health tradition need to be engaged with monetary and non-monetary incentives so that they would be encouraged to safeguard and share their knowledge for greater public cause. More focus is urged on research, documentation and publication of local health



tradition (LHT). Conservation Assessment and Management Plan (CAMP) workshops need to be organized for assessing commercially harvested medicinal plants in different forest regions of the state. The establishment of medicinal plants germ plasm Banks would create safety net for protection of intellectual property right on use of the medicinal herbs. The civil society organizations have a major role in promoting a platform for debate and information sharing between policy makers and stakeholders. The Government of India have promoted a network of four GeneBank to conserve the rare endangered commercially important medicinal and aromatic plants on experimentally basis. The success stories of this experimentation need to be disseminated among stakeholders of different regions of the country.

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