

# Indigenous Practices and Sustainability

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## Abstract

Sustainable Development to 'preserve the current resources for the progeny' emerged as an agenda to overcome global inequality faced by developing countries. Developing countries have several indigenous practices which tend to be in harmony with nature but unsustainable use of modern technology has destroyed such harmony and mutualism. This paper seeks to understand some of these indigenous ways and practices of forest communities which are sustainable in nature. As an illustration, 'ethno-medicine and the process of healing' practiced by the forest communities (Bhotias & Baigas) to attain the SDG of 'Health for All' has been discussed. The role of traditional medicine in promoting quality health care in isolated habitations and the acceptance it has in the tribal culture has been discussed at length. The paper also explores the SDG of 'sustainable consumption and production pattern' by illustrating the symbiotic relationship which forest communities share with nature and the affect of its breakdown has on the ecosystem. The importance of indigenous medicines to be substantiated by modern medicine has also been highlighted in the paper.

**Keywords:** Indigenous, Ecosystem, Forest Communities, Ethno-medicine, Sustainable Development Goals

## Introduction

The world is a place of deep seated inequality. Difference in access of resources and opportunities to live a healthy and fulfilling life is challenged by various factors such as social, economic, political and ecological. This era is one of global inequality where dispute over global north and the south is deepening. Traditionally the developing countries have been representing the global south. Problems of sanitation, health, connectivity and infrastructure are clubbed with ethnic, racial or caste. Development has not been an inclusive process. The

Millennium Development Goals were introduced with the realization that inequalities exist and that marginalization has to be overcome. There were vociferous attempts in the era starting from the early 1990's to mainstream the marginalized in order to make development accessible for all. The rural and forest economy were open for neo-liberal expansion of multinational companies with a vision that trickle down of development would happen. But little did the Global South know that they were opening the flood gates of plunder in their backyard. The people were almost dragged into the process of development<sup>1</sup> without seeking their consent. Therefore resistance emerged as a necessary corollary. People started protesting the plunder and claiming for their own rights to develop. The global community which was previously cynical gave up to the logic of the marginalized to develop at their own pace and in context of their environment.

Some sought solace in democracy to undo the wrath of open markets but little did such reliance bear fruit. Often democracy is called a successful example in India but travelling through the forest villages and rural areas one will immediately identify that the quality of democracy is questionable. Centralization of power in the hands of power elites or divide between the mainstream and marginalized has not have been resolved till date. In this great country of diversity and divides, neo-liberal policies have continued to plunder its natural resources and in the same way colonialism did. Free market has led to proliferation of greed among the traditionally rich and the poor has continued to become poorer. Those representing the vulnerable groups such as the Schedule Caste, Schedule Tribe and Women have been push out of the margins which they were erstwhile representatives. Thus mainstreaming of the marginalized within the democratic process, in India has not only been unsmooth but also unsustainable.

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The newly awakened global militia post Stockholm Conference, 1972, came up with the concept of sustainable development. Our Common Future Report, 1987, defined sustainable development as 'Development that meets the needs of the present without compromising the ability of the future generation to meet their own needs'. So a new logic of preserving the current resources for the progeny emerged. Going by the same logic, the ethics of the marginalized communities appeared in order to the correct approach to attain such preservation. The most elaborate example is provided by forest communities of Himalayan region and that of Central India. These communities practice and propagate wisdom acquired over hundreds of years and cherish an umbilical relationship with nature. They rely on the ecology around them and try to replenish her. These communities co-exist in harmony in the sense that they transmit their knowledge to the progeny. It is thus tried to be argued that the forest communities not only share a symbiotic relationship with nature but try at maintaining its balance and continuity for future. Mutualism is practiced and peace is maintained in such a manner that equilibrium is not disturbed, 'need not greed is the basis of dependence of the communities' relationship with the forest. Thus there are indigenous methods and practices which are carried by the forest communities in their day today living. Indigenous knowledge is understood as a unique local knowledge which has come into existence around specific conditions special geographical conditions and indigenous people who deeply engage with the ecology, carving a niche for themselves, thereby making the habitat sustainable (Samal, Dhyani, & Dollo: 2010). Hereby we reach the primary argument of the paper that indigenous practices<sup>2</sup> are in harmony with the concept of sustainable development.

## The Discourse

Before the advent of colonialism, the forest communities were able to practice given and take with nature, unhindered and remain self-sufficient. Ethnologists like Verrier Elwin mentions about such harmony and non-dependence. Colonial greed followed by neo-liberal plunder broke down the harmonious chain which the forest communities shared with nature. The symbiotic relationship started to falter when modern logic came in the way of harmonious primitive practices. Introduction of technology for extraction of forest produce and medicines for curing local ailments started derailing the mutualism.

Technological interventions from the modernist logic represent development. But in context of the ethnic groups from the post-modernist logic, technology and allopath has led to a disastrous effect. Technology was merely imported without keeping in mind the culture of the forest communities. This force-feeding of technology led to breakdown of the symbiotic relationship between nature and the indigenous people. The people thus started getting exposed to vulnerabilities of the neo-liberal world. The second effect which un-mindful technological import led to was depletion of traditional knowledge of ethnic groups. The capacity of these communities to transmit from one generation to next began to get derailed. So, un-mindful technological import was completely disastrous for self sufficient forest communities, who now became ecological refugees or easy paupers. The men and women of such communities began migrating into urban centre and occupying their place in unorganized sectors where they had no expertise and living in slums where there were no basic resources. From being independent in the state of nature, these men and women became totally dependent either on the market or the state.

However with the coming of Sustainable Development Goals (SDG) there was an acceptance by the developed part of the world that 'the exploitation of resources belonging to communities living in harmony with nature has reached its limits and that there is a need to restore balance'. Sustainability is the study how natural system functions, remains diverse and produces everything it needs for the ecology to remain in equilibrium. Sustainability defies the logic of consumerism. Increased realization of the fact that societies collapse due to inability to adapt to conditions brought by on by unsustainable practices. By the late 20<sup>th</sup> century the science of climate change confirmed that earth will soon exceed its limit if proliferation happens at the same rate. So expansion at the pace of local needs and equitable opportunities for all to grow and develop at their own pace was accepted as universal principle. And it is here that ancient traditions of the forest communities and their indigenous practices started becoming acceptable.

An Agenda for sustainable development by the year 2030 was adopted to transform the world. The agenda which was adopted by UN General Assembly in 2015 to envisaged a plan of action for people, the planet and prosperity for all. It included all countries and people as stakeholders to achieve freedom from poverty and heal and secure the planet. Seventeen sustainable development

goals (SDG) were adopted with one hundred and sixty nine targets in the year 2015. The goals are comprehensive and holistic in the view that each encompasses all areas of human intervention in society vis-à-vis the ecosystem and economy. Each of the goals envisions at peace and prosperity of people belonging to different nations, race, religion and ethnicity. All the goals also have both long term and short term aim at seeking partnership of people belonging to different regions to make the planet a sustainable one.

## Self Sustaining Indigenous Health Practices

One of the sustainable developmental goals is ‘To ensure healthy lives and promote well-beings for all ages’. Promotion of research, development activities to develop vaccines and medicines for the communicable and non-communicable diseases and affordable essential medicine for developing countries is one of its targets. Another target is to achieve health for all by substantially increasing health financing and the recruitment, development, training and retention of the health workforce in developing countries. The aim is also to strengthen the capacity of all countries, particularly the developing countries, for early warning, risk reduction and management of national and global health risks.

When these three targets are seen in light of indigenous practices it is clearly visible that tribal communities have been practicing age old medicines<sup>3</sup> obtained from their habitat. However, need for vaccines for quick amelioration remains greatly felt. But owing to habitat isolation and poor connectivity there is hardly any health infrastructure. So till now affordable and essential medicines have remained out of question. Second problem is that ethnic medicine is deeply embedded in tribal culture. To change the behavior of all unconnected communities to make them habituated to modern medicine will take decade. To address this within 2030, there is no ready-made solution but it requires calibrated decision. Decision has to be made to blend ethno-medicinal practice with modern medicine in such a manner that it becomes acceptable culturally. Thirdly there is the issue of recruitment and training of health facilitators. Tribal areas are often known to be havens of medicine-men and women, who play an important role on tribal culture as healers. To the modern world these men and women may be quacks or witch

doctors but the position of power and acceptability which they enjoy is beyond comprehension of an outsider. The usual approach has been to train a handful of youth from the community in modern medicine to perform safe health practices. If the group of ethnic healer may be roped in and their capacities built in light of modern medicine, they can become an integrating force between tribal masses and the modern health practices (Mishra, 157: 2012). Since the healers enjoy community trust and already possess knowledge of diseases and remedies, they can become sustainable assets. Another point to be mentioned about the healers is that they follow a tradition to pass on their knowledge to future generation. Indigenous medicine is an important component of indigenous knowledge system, which is widely practiced by tribal communities across India. From the point of sustainable development it would be a jubilant situation because knowledge pool gets created and transmitted without external interventions. And lastly, Tribal communities represent a vast diversity in the socio-economic life, cultural heritage and resource use pattern (Samal, Dhyani, & Dollo: 2010). They thus have a fair idea about the risks involved in use of specific ethno- medicines. Also they are able to perceive risks which are impending by virtue of rich folklores from past. Empirical evidence of indigenous medicine used by the Bhotias of Central Himalaya allows us to introspect how they have lived for generation in harmony with nature. Also the illustration will highlight the specialization in medicines which the isolated community has. Evidence also emerges how the balance nature and culture which is used for healing is broken down by outside interference.

The Bhotias are a primitive tribal group but the expertise which they have over indigenous medicine and health care practices is incomparable if physical well being of the tribal people is considered and the degree of distance which they maintain with the outside world. The qualitative relation of the Bhotias with their immediate environment and natural resources has evolved through strenuous experiences of difficult survival. Documentation of more than forty (40) indigenous medicinal practices reveal that the indigenous knowledge system of medicine effectively serves the tribal people. However what is disturbing is the disappearance of the medicinal plants from the habitat under intense anthropogenic pressure and also because of high level of commercial use, posing continuous serious threat to indigenous medicinal practices which may have adverse impact on physical, social and economic well being of the tribal people. The people possess a

sound knowledge base of behaviors of the complex ecological system (Siporin, 508: 1980). The replication of modern technology developed elsewhere has not been successful in the terrain where the tribe lives because of inaccessibility, fragility, marginality, diversity, niche and adaptability (Jodha, 2: 1992). Empirical evidence shows how the indigenous medical system is being able to serve the local people, contributes to their scarce economy and helps conserve bio-resources in the community. The eco-cultural eco-system specific tools, technologies and practices in the form of indigenous knowledge constitute integral part of innovative appropriate innovative strategies that effectively conserve resources and allow options for developmental goals to pitch in.

Based on an interview of the Bhotias belonging to Village Darkot and Seepu in the Pithogharh in the Indian Central Himalaya, Uttarakhand it was found that their diagnostic knowledge of curing diseases, medicinal plants and other raw materials is exact and suitable for local conditions and diseases. Some of the locally available strategies and components have been listed below:

The leaves of Guava which is locally known as Amrood are chewed to get relief from blisters in the mouth. The resin obtained from *Pinus Wallichiana* or pine tree is heated and applied in the fractured portion of the bone. *Pichorhiza kurrooa* which is locally called Kutki is an herb locally available in the Himalayan region. The root of this herb is used not only during fever but also to relieve of abdominal pain. Again the paste of *Arisaema Tortuosm* which is locally known as Bankh, is mixed with water is applied in the body part stung by snake or scorpion. The remedy for Urine infection is provided by Dhak which is scientifically called *Butea Frondosa* Roxb. It is mixed with half glass water and consumed to remove urine infection. To relieve of indigestion, kala jeera is consumed (*Carum Carvi* L.) and *Capsicum Annum* L. or Mirch is used in the form of paste in case of dog bite. *Hardeu Vulgare* L. which is locally called Jaun seed is made paste and applied on head to get relief from headache. The leaves of Jark which is scientifically called *Portulaca Oleracea* L, is cooked without spice and oil and taken with food during jaundice. It can be seen from the examples above that diseases which are locally prevalent have local cures and there is no importation involved. The strategy as to how each component has to be consumed by a patient reveals that significant amount of research may have gone down in the past and today is a part of indigenous history. The knowledge, how to use a

product and how to heal form a part of precious community knowledge. There are a lot of pros and cons attached to the use of herbs and plants though they are extremely suited to local conditions. The process is unlike modern medicine which can be immediately administered. Given the cost, difficulty procurement of modern medicine and the culture, the health practice of Bhotias is safe and reliable. The level of acceptance of these practices is really high but a demerit is that more intense forms of diseases are hard to be cured by such practices. Bhotias have also proposed cure for epilepsy. Leaves of Anar, scientifically called *Punica granatum* L. is boiled in half liter water with the rose leaves till the extract is reduced to half its volume. The filtered extract is mixed with butter and given to cure epilepsy or hysteria. What is locally called Brahmakamal or *Saussurea Obvallata* Wall in applied in seed form and applied on head twice as remedy for earache and mental problems. Here it becomes evident that traditional medicine not only focuses on physical well being but mental well being. Epilepsy even in the modern times is looked down upon with stigma. If ethno-medicine subsumes under its domain epilepsy, it gives an implicit answer that the system of ethno-medicine has considerable acceptance in society and deeply embedded in its culture.

Seasons are divisions that are marked by changes in weather, ecology and hours of day light but the relevance of seasons is far greater when it comes to indigenous medicinal practices. The Bhotias also consider maturity of plants, its height, patterns of branching and morphological character while collecting plant produce. Indigenous medicinal practices are holistic in nature since all dimensions are kept in mind while collecting the same. Seasonal abstinence is practiced in the process of collection by the community healers. For instance, *Guduchi Satva*, the starchy material extracted from the *Guduchi* stem is well-known for a wide range of therapeutic utility. Maximum yield of *Satvais* obtained in *Shishira Ritu* (January-February) while the minimum in *Grishma* (May-June). Variation in taste and color was found in *Satva* prepared in *Varsha Ritu*. Though functional groups were found to be same in each season yet total alkaloidal content was found a bit higher in *Varsha* and *Vasanta* (Sharma, Amin, Galib, & P.K., 2013). Traditional set of practices must be followed for maximizing the gains of treatment. Other forms of abstinence are also practiced such as, damaged leaves are not collected whether infected by insects, pests, diseases, toxicity, sunstroke, hailstorm, flood, fire and so on.

But the challenges faced by the Bhotias are immense. The ecosystem is affected because in the greed for these indigenous medical plants. Huge pharmaceutical companies do not resort to the indigenous codes of collection, these collections are both regulated and unregulated in nature, which ultimately leads to depletion of not only the resource but also the entire ecosystem. For example the branches are collected when they grow in the spring season and leaves collected during flowering and ripening season. However the pharmaceutical companies do not abide by traditional codes which are often laid off as non-scientific. From the point of view of sustainable development, such collection being unregulated becomes ineffective which leads to wastage. This is one of the reasons why different varieties of endemic plants are getting threatened. Seventeen species of the Himalayan medicinal plants which are used by the tribal communities are listed in the Red Data Book of Indian plants. Some academics are of the idea that these declining resources should be documented for the posterity. But sustainable development being a positive concept says that these resources need to be majorly preserved and unwanted exploitation must be prevented.

The benefit which indigenous medicines have over allopathic medicine is another debate. Worldwide increase in drug resistant diseases is an indication enough to realize that the medicinal plants must be preserved and researched upon so that healing becomes a natural process. These bio-resources need to be preserved for future generations to come. The Bhotia expertise must be preserved rather than branding them as witch doctors. If the isolated tracts of Himalayan forest has remained insulated from modern medicine in harsh topography and yet thrived for centuries, it means that the Bhotias' indigenous knowledge is asset for the whole world. Laws must be enforced to protect them and promote their ways of preservation. Empowerment of the Bhotias will lead to emergence of a self sustaining model which will ensure that health for all becomes achievable sustainable goal.

### **Breakdown of Self Sustaining Indigenous Practice**

One of the other sustainable development goals is to 'promote sustainable consumption and production pattern' with the aim of 'doing more and better with less'. It is about promoting resource and energy efficiency,

sustainable infrastructure, and providing access to basic services, ecology, livelihood for all and a better quality of life. Its implementation helps to achieve overall development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty. Sustainable development helps to increasing net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole lifecycle, while increasing quality of life. The Sustainable Development Goals aim at involving different stakeholders, including business, consumers, policy makers, researchers, scientists, retailers, media, and development cooperation agencies, among others. For sustainable development principles to be applied in the market, it requires a systemic approach and cooperation among actors operating in the supply chain, from producer to final consumer. It involves engaging consumers through awareness-raising and education on sustainable consumption and lifestyles, providing consumers with adequate information.

It is expected that more people will join the global middle class by the next two decades. It will increase demand for natural resources which are already constrained. If the consumption and production patterns are not changed, it will cause irreversible damage in the environment, throwing balance off guard. In light of threatened resources enabling sustainable consumption and production becomes the responsibility of the present generation. A better understanding of environmental and social impacts of products and services is needed, both of product life cycles and how these are affected by use within lifestyles. Identifying 'hot spots' within the value chain where interventions have the greatest potential to improve the environmental and social impact of the system as a whole is a crucial first step. Other measures to reduce of wastage are being thoughtful while buying and choosing sustainable options whenever possible.

Present instance of functioning of the neo-liberal market show that utilization of resources is neither thoughtful nor sustainable. It has been found that highly developed countries like in US more than 100 chemical constituents of definite structure are derived from 41 species of plants, used in modern medicines. With the realization of health hazards and toxicity associated with indiscriminate use of synthetic drugs and antibiotics, there has been a general realization in the West as well as the East that anything in nature is safer than synthetic. The American public paid

more than 8 billion dollar during the year 1980. During the last 10 years the whole world especially the developed one has been swept by green wave. According to Tyler 1986, American health food shops sold herbs worth more than 360 million dollars during 1981 alone (Hussain, 2009:125).

For example, steroidal drugs are one of the most important therapeutic agents used in the modern medicine throughout the world today. They constitute one of the most important drugs sold in the world today because they include corticosteroids, sex hormones and oral contraceptives. Steroidal Sapogenins (SS) are obtained from plant species constitute one of the major raw materials for steroidal drugs. One of the most important SS, which serves as a starting material for production of various steroidal drugs is Diogenin, obtained from tuber of various species of Dioscorea. Dioscorea is used to provide 80% of raw material for synthesis of these drugs. Though soyabean oil and sitosterol from other plant sources are being used at present but for developing countries Dioscorea has continued to be in use<sup>4</sup>. The plant is threatened in natural habitat due to illegal use, urbanization over exploitation by local people for trading and domestic use ((Dangwal & Chauhan, 2015). It has been noted that indiscriminate exploitation in wild has led to steady decline of in production of Dioscorea (Tomlinson & Olayiwola, 1998). It has been also pointed out that a lot of genetic erosion has taken place. Many pharmaceutical companies have developed cultivation methods for Dioscorea Floribunda in India but most surprisingly commercial recovery has declined. Mulliken thus contends "Some species are difficult to grow in artificial conditions and cultivation may be unprofitable for farmers owing to the long growing time between planting and commercial harvest." Growing times for some species can be several years. Much less emphasis is being put on development and promotion of sustainable wild collection practices, which may be the only viable option to ensure sustainable supplies of some of these species.

Another issue which surrounds depletion of resources is simultaneous decline in livelihood. A study of WWF, 2008 which was commission by German Federal Agency for Nature Conservation focuses on seven plant species of conservation concern protected under Convention on International trade in Endangered Species of wild Fauna and Flora; found that in India collection and processing of medicinal plants contribute at least 35 million workdays

per year to the poor and under employed, but rising demand is threatening this vital source of livelihood income both in India and elsewhere. Contested livelihood has been an issue of immense debate. Those who live on the margins of society and depend on non-perennial source of income like collection of natural resources on demand from MNCs, life is a gamble. There are uncertainties attached to demands made. Uncertainties like how much produce is to be acquired, the issue of middle man, the vagaries of natures which may affect annual production etc. As pointed out by the study above, several herbs and plants of medicinal importance are getting threatened. In the scenario in which several millions are dependent upon collecting such produce, it becomes obvious that livelihoods are getting endangered. Endangered livelihoods will lead to migration of the tribal communities to cities, alternatively those people who remain in the resource depleted area will face several crisis like poverty, hunger, mal-nourishment and ill health. Thus the basic quality of life will be affected by further erosion of endemic resources and worst affected will be the mothers, children and the elderly of these forest communities.

## Indigenous Culture and Future Generation

When the sustainable development goal of 'health for all' is understood through indigenous culture, it would mean absence of disease. Indigenous concept of health deals with culture of healthy and health and harmony are equivalent. Since harmony has a broader meaning 'being at peace with self, community, God and cosmos' would mean, being at peace and in good health. In context of the Gonds of Kesli Tehsil of M.P health is not a biological phenomenon. It is a social phenomena that involves integrated development of society, culture, economic, educational, social and political aspects.

"Natural and cultural environment in which in which tribal live and their traditional medicinal practice are the main determinants of their health."

(Rijal, 2011)

The traditional health care practice is as old as man itself. Today in unconnected and isolated hamlets it provided the role of first aid. For instance, Gonds reside in inaccessible areas and remain out of mainstream developmental

process. They are yet to see the light of modern medicine and are using traditional medicines. They are deterred from the use of modern medicine because they are unavailable. Traditional medicines have been playing its role in the era of MDGs. However what lies in the future and will the vision of SDG bring the Gonds within its framework, remains an issue of acceptability of modern medicine and implementation of health care practices by the bureaucracy. Similar is dilemma involving other tribal groups like Baigas. Pregnancy among the Baigas is considered a natural phenomena and survival of child is considered the will of God. Is it here that modern medicine and health care practice has to carve its niche in collaboration with existing indigenous practices. The use of indigenous medicine and methods for birth care practice, prenatal care and child care are common among the Baigas who represent one of the forest communities of Central India. Verrier Elwin gives an account of the Baigas as primitive tribe who practice hunting and food gathering. Only recently the members of this community have started settling in villages and practicing settled cultivation. Their indigenous birth practices are closely related to their value system and cultural tradition (Rai, 2011: 213). Empirical Evidence from Dindori District of M.P reveals that they have their own indigenous system of maternal health care and it is based upon birth care, curative therapy, based on trial and error, experience and common sense. This leads to passing and building up of inter generational knowledge.

Post natal care for the new mother consists of giving Ajwain, dry Ginger, Coconut, Pepper and Carain with Sugar which is supposed to increase the production of breast milk. For lactation the bark of dried Bela is boiled and given. Urine tract infection is a common problem which occur in the post pregnancy period, for which Van Maithi is provided. The mother in many instances may be affected by cough and cold and for that purpose the leaf paste of Katanga Bans a form of Bamboo is provided. Massage by Mustar Oil is usually practiced and more specifically locally available Baiichandi roots are provided to relive of weakness. There are certain avoidances which a mother has to make. She is forbidden from indulging in Daru extracted from Mahua flower. The lactating mother is also prevented from entering kitchen and fetching water so that she can regain her strength. However there are many ill practices such as the mother is not allowed to consume egg, fish or pork, which provides for protein intake. Not much of care is taken for the mother prior to

the birth of the child. She is required to complete all the household chores before the birth. The nutritional content is poor because her staple food consists of Kudu, Kutki and Maize. Maternal malnutrition is a chronic problem in the Baiga society. Empirical evidences make it possible for us to introspect that Baigas have rich wisdom vis-à-vis their eco-system, to keep them in good health. Evidences shows that the existing socio-political context have made negative impact on the self sustaining health care practices of the traditional healing communities like Baiga (Azeez, & Sebastian, 2016; Sebastian & Azeez, 2014). There are areas where the modern practices will need to pitch into the indigenous culture, as per context. Remaining insulated from the rest of the world is not possible as the Baigas have already been exposed to the ills of development. The solution is thus for the sustainable development managers to design strategies where the forest eco-system is regenerated to its original glory and only those area becomes domains of modern technology which nature cannot make up for. So, sustainable development in context of the Baiga community would mean restoring balance between nature and culture.

## Conclusion

The dilemma of development is such that it is enhancing bipolarity rather than creating an egalitarian world. Incessant attempts at mainstreaming the marginalized groups are being made by designing modernist policies and neo-liberal economic reforms. Majority of these attempts have not only failed but broken down the self sustaining system of coexistence which the marginalized people shared with nature. The indigenous system of medicine with which the forest communities survived was ruptured by market interventions and greed of major pharmaceutical companies. After about half a century of plunder and making a few endemic species extinct, there was a realization at the global level. The coming of the Sustainable Development Goals ensured that lived experiences of the indigenous communities are not antithetical to development.

The indigenous medicinal process which evolved over a long period of history attempts not at curing but healing of mind and body of the recipient. Every man of the community plays a role in maintaining the systems and the community as a whole plays a unique role in perpetuating the system. Preservation of the resource, as practiced by the forest tribes is at two levels. For the purpose of healing,

the process is codified. The traditional healer is a revered man who possesses unique knowledge. He passes it on to his apprentice who is a member of the community. S/He exercises command over the health of the community. So the first level of sustainability is at the level of society, where members of the community share an inseparable relationship with the healer and the healer is a person of eminence in community decision making. The customs and traditions which perpetuates through the social system are in modes of promoting sustainable living.

The next level of sustainability prevalent among the forest tribes of Central India and Himalayas is that they keep pace with the abilities of the ecosystem to generate and regenerate itself. Indigenous medicine is a system in itself which is deeply intertwined with nature. Plucking is done in the season of harvest and not otherwise. There are traditional code and penalties of violation. Efficiency of the medicines are directly proportional to process of preparation. From extraction to mixing in correct proportion, the amount that has to be taken and at what time of the day and year, how much each person of a particular age or gender must consume has to be strictly adhered to. The age, height and color of the plant are also important factors. The process of medicinal preparation has to maintain harmony with the growth abilities of the forest and not haphazard. By doing this the forest community cannot merely be called dependents upon the forest but as preservers and conscience keepers of the forest. The mutualism which is evident in such a relationship is unfound and unheard of in the developed part of the world.

The ethics of sustainable development is in harmony with the customs and practices of the hitherto 'undeveloped'. There is no denial of the fact that modern health care practices and other techniques can make inroads into the isolated heartland but the attempts should be limited to covering the loopholes alone and not overthrowing the indigenous system. The developed part of the world must enhance its ability to perceive the world from the lens of the so called 'marginalized' forest communities. The coexistence and harmonious living of these isolated communities are the keys by which resources of the world will become sustainable and future will become a peaceful one. The solution for greed and voracious consumerism rests in understanding the ethics of these forest communities, the ethics of co-existence with the ecosystem.

## End Notes

1. Amartya Sen in *Development as Freedom* (1999) argues that human development is expanding capabilities of human beings. The process of development talked about here is compromising the human capabilities and making the environment defunct.
2. Indigenous knowledge is the local knowledge that is unique to a culture or society. Other names for it include: 'local knowledge', 'folk knowledge', 'people's knowledge', 'traditional wisdom' or 'traditional science'. This knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation, health care, education, conservation and the wide range of other activities that sustain societies in many parts of the world (UNESCO Education, 2010).
3. The World Health Organization (WHO: 2014) defines traditional medicine as "the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.
4. Its Indian variety is called *Dioscorea Deltoidea* Wall. It is a perennial climber and commonly called Singli Mingli in Hindi and Varahikand in Sanskrit.

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