

Role of Indigenous and Tribal Peoples in Eco System Services: Time to Look into the Pages of the Past for an Answer

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Abstract

Indigenous and tribal communities all across the world have taken care of the natural resources they have been living in for centuries. The various traditional knowledge's have transferred through generations and has been following them as ancestral knowledge. A lot many efforts have been made by these communities and serious contributions have been made in eco-system services by them. Their life has been sustainable and have respected natural resources more than their greed. Research has unraveled various method of similar eco system services which have been documented and practices till date. This practice requires to be imitated specially in jurisdictions with many indigenous, aboriginal and tribal communities specially in the area of conservation of indigenous medicines and water resources.

Keywords: *Indigenous Movement; Traditional Knowledge; Biodiversity; Ecosystem Services; Conservation.*

I. Introduction

Indigenous movements have got momentum in the last few decades like never before and 2019 initiates a new decade for the protection of indigenous and tribal languages across the planet. This would necessarily help in identifying the lost languages and would also help to carry on the messages and folklore that these languages generally carry with them. It also envisaged a decade that acknowledges what has been practiced in the past and how that may be conserved for the generations to come.

Indigenous rights after ILO 169 has turned out to be on the fore front and has been worth an era of celebrating their language, culture, their way of life, and most importantly their knowledge *inter alia* to conserve water. Various

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communities conserved and protected natural resources and their unique methods of conservation and protection of natural resources have never been discontinued. These know-hows and knowledge have survived many generations only through family practices. The most relevant area of research in the 'conservation world' today should be to identify and record the way these peoples managed to conserve natural resources for generations. It is surprising that the people who never had the opportunity to go to school are capable of producing genetically developed organisms, special techniques of surgery etc.

Modern scientific development has made millions of people literate with formal education, but the force of this educational system has a lot of adverse effects. It is very unfortunate that the scientific methods of catching large fishes, for example, in the world have destroyed over ninety percent of large fishes permanently. The advent of science and technology has been a boon on one hand and bane on the other. The improper and rampant use of technology have irretrievably damaged the environment. The ignorance to adhere to ecological ethos have a lot of adverse repercussions that we are now encountering. With the unfolding of various adverse-effects, of modern scientific discoveries and inventions, questions are now being raised even more after the corona virus outbreak, questioning such inventions.

II. Indigenous and Tribal Peoples

Indigenous population have existed in almost all parts of the world, passing significant test of time from time immemorial. Modern dictionaries have tried to analyze them from certain basic aspects and their journey with mother nature.

The term tribe has been identified by the Romans as political divisions where as the Greeks equated the term with fraternities. The term indigenous peoples and tribal peoples are in many a cases been used interchangeably. Even when there is no uniform definition of tribal peoples but a set of shared and distinct characteristics may lead to one. Tribal's are living descendants of 'preinvasion' inhabitants of lands and forests now dominated by others. The attachment to their territory is a significant feature of tribal existence. Various United Nations agencies have in their working definition of indigenous peoples incorporated these basic features. Commitment to cultural distinctiveness and a resolve to preserve both territory and culture as a means of reproducing a singular ethnic

community are major factors contributing tribal traits.² After studying the definition of the term tribe given by many sociologists, political thinkers and anthropologists, at various time, the researcher summed up the meaning of the term tribe with the aid of few of such definitions. However, it should be understood that the concept of 'tribal peoples' is nowadays mostly used to refer to a type of socio political organisation and that such a situation no longer exists. The reason behind this is the advent of various nation states rather than homogenous societies. The use of the word is prima facie problematic as it may invoke racial and negative connotations. It must also be noted that the international movement has further altered the relevant concept of tribal peoples and in the process of providing a meaning bereft of discrimination and racism. Even when the term has undergone a sea change historically and anthropologically, the word tribe needs to be understood from various dimensions. The word "Tribe" is derived from the Latin word "Tribus" meaning "one third". The word originally referred to one of the three territorial groups that united together to form Rome. The Romans applied the word "tribus" to the third five people who became a part of Rome before 241 B.C. A tribe was considered simply a territorially defined social group. They also called the conquered Gallic or Germanic populations 'tribus'. Thus, Romans primarily identified the term tribe as a 'political unit' with 'distinct name', and occupying a 'common territory' under a 'common leadership'. Apart from a tribe being a social group, which occupies a definite area, it has certain distinctive characteristics like cultural homogeneity and unifying social organisation. The identity and culture of every tribe are closely linked to the land and natural resources emanating out of such land and also the environment in which they live in with their family or clan. A tribe is viewed by some, historically or developmentally, as a social group existing before the development of, or outside of, states. A tribe is a distinct people, dependent on their land for their livelihood, who are largely self-sufficient, and not integrated into the national society. It is perhaps the term most readily understood and used by the general public. Stephen Corry, director of Survival International, the world's only organisation dedicated to indigenous rights, has defined tribal peoples as,

²Richard Falk (ed.), Maivan Clech Lam: At the Edge of the State: Indigenous peoples and Self Determination, 9 (Traditional Publishers. Inc. 2000).

*“...those which have followed ways of life for many generations that is largely self-sufficient and is clearly different from the mainstream and dominant society”.*³

The term ‘*tribe*’ has arguably also been used to refer to any non-Western or indigenous society.⁴ In some countries such as the United States of America and India, tribes are called indigenous peoples, and have been granted legal recognition and limited autonomy by the state. This attachment to a specific territory and insistence on the preservation of community on that territory distinguishes indigenous peoples from other ethnic minorities.⁵

One of the telling examples of the attachment of indigenous peoples are the refusal of accepting an amount as huge as \$400 million as compensation in lieu of the famous Black Hills of South Dakota, USA.⁶

III. Colonial Influence

With the advent of western dominance on the planet through the process of colonisation, slowly and steadily the indigenous culture and society started the process of evolution towards westernization with the initiation of the process of traditional and cultural erosion.⁷

Large scale displacement of tribals started in lieu of the process of developmental projects and industrialisation. With this started the process of resettlement in urban and semi urban areas by these uprooted population which became easy victims of discrimination and exploitation in the hand of non tribals. Lack of state initiative to protect this vulnerable class, instances of

³Elizabeth Palmer (trs.) Emilie Benveniste, Indo-European Language and Society, (Faber and Faber, London, 1973)

⁴A lot of racism is involved in such connotation

⁵ Virginius Xaxa, “Tribes as Indigenous peoples of India”, 34, EPW 3593 (December 1999)

⁶The land dispute between the Government of US with the native Americans, Sioux Nation on the oldest mountain range of USA.

⁷Shambhu Prasad Chakrabarty, ‘Tribal Peoples and Conservation: Who are they! What have they done?’, in Rule of Law: The Myths and Reality, Cape Comorin Publisher, Kanyakumari, 2020.

atrocities increased leading them to be marginalized amongst all the people of the world.⁸

Those who decided to fight the odds in or around their displaced habitat found their slow and inevitable death due to the absence of their economic system as that was directly related with the land and resources inherent insuchland.⁹ The one-sided battle left the indigenouscommunities' strangers in their own land and marked as criminals and offenders against the state. Their struggle ended with the loss of lives of their leaders and forced assimilation of the rest in the lower strata of the urban and semi urban societies. There has been evidence of large-scale increase in the unskilled labour market due to the continuous and never-ending influx of indigenous and tribal peoples from their displaces habitat.¹⁰

IV. Understanding the Role of India in Protecting Biodiversity

Tribes and indigenous communities across the world have lived a sustainable life for centuries. They have always respected their cultural and social practices coupled with their TK and TCE over individual wants and desires. Indigenous movements have always been on the backfoot with tribal rights being violated in almost all jurisdictions. There has however, been a sea change in this approach as international indigenous movement have gained momentum. Activists advocating tribal rights in the international stage has achieved significant achievements with international indigenous decades have started to be celebrated. The year 2019 initiates a new decade for the protection of indigenous and tribal peoples across the World. This decade also envisaged and acknowledge the traditional practices of the past and identify avenues to conserve them for the generations to come. ILO Convention No. 169 has certainly been a reason to celebrate the victory of tribal and indigenous cultures, their way of life and most importantly acknowledging their knowledge. The techniques used by these communities in remote places difficult for human habitat have managed the conservation and protection of natural resources in

⁸ id at 7.

⁹ How Many Indigenous peoples Are There, And Where Do They Live? (August 16,2020 ,9:29 PM),
[http:// www.NativeNet%gnosys.svle.ma.us@tamvm1.tamu.edu](http://www.NativeNet%gnosys.svle.ma.us@tamvm1.tamu.edu))

¹⁰ SHAMBHU PRASAD CHAKRABARTY, *Supra* note 7.

their unique ways. The know hows and knowledge have survived generations through community practices and at times through specific families.

One of the relevant areas of research in the 'conservation world' today is to identify and record the way these peoples managed to conserve natural resources for centuries.

Studies done and research undertaken have unravelled various functioning standards in these communities to be behind their successful sustainable life. The advent of science and technology has been a boon on one hand and bane on the other. Rampant use of technology have irretrievably damaged the environment. The ignorance and negligence of repercussions from nature and acts done to promote development has reposed with devastating environmental disaster. With the unfolding of various adverse effect of these new inventions, voices from diverse corners questioning such developmental inventions. The relationship which existed between the good and the bad towards the environment has met with ignorance on one hand and greed on the other to reap economic benefits sans its inherent limitations. The Monsanto debate and banning genetically modified seeds by many states in various parts of the world are glittering examples of this conflict.¹¹

V. The Convention of Biological Diversity

Species both dealing with its varieties and variability's that functions within, between themselves and also between ecosystems are subject matter of biological diversity. Biological diversity simple sitter may be stratified as genetic diversity, species diversity and ecosystem diversity. This combination of living things in the physical environment of an ecosystem is linked with that of the other. Hence, no ecosystem is more relevant than that of the other, making every ecosystem subject matter of equal protection.

Humans since the last few centuries have used the resources of the world without following the ethos and bioethics that was followed successfully for centuries to protect the ecosystem. Industrial revolution and the new world order decided to use the sources as means of production and the outcome brought

¹¹Lessley Anderson, Why does everyone hate Monsanto?(Jul. 21, 2020, 10:30 AM), <https://modernfarmer.com/2014/03/monsantos-good-bad-pr-problem/>.

devastation to the ecosystem. Millions of species have extinct from the earth irrespective of the habitat.

The World Conservation Union included more than 16000 entries in the red lists of threatened species. The IUCN also reported that the extinction rate of species has jumped many folds to 50% than the one calculated from the fossil record. (Baillie et-al, 2004)

The UNEP also took up this issue in 1988 and convened a work group known as the Working Group of Experts on Biological Diversity to explore and identify the major steps required to be taken through an international convention of biological diversity. After three years, in 1991 the ad hoc Working Group on Intergovernmental Negotiating Committee. Later the next year in May 1992, the work culminated in Kenya at the Nairobi Conference for the Adoption of the Agreed Text of the CBD. In the next month, the Convention was open for signature of the states at Rio during the Earth Summit. The very next year in the month of December, the Convention entered into force receiving 168 signatures. As of date 196 countries have signed the convention.

The Scheme of the CBD reflects 42 articles, 3 annexure and 1 main body, the COP and periodic meetings. The two subsidiary bodies established to aid the process are SBSTTA and WG on Protected Areas. The former advises to COP relating to the implementation of the CBD.

Two protocols were established to achieve the objectives of CBD. The Cartagena Protocol came up in 2003 and the Nagoya Protocol on Access & Benefit Sharing in 2011.

VI. Understanding the objectives of CBD

The threefold objectives of CBD are generally conservation of biodiversity, the sustainable use of the various components of biodiversity and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. More specifically, the conservation on biodiversity may be classified under in situ and ex situ. In situ includes wildlife sanctuary, national parks and biodiversity reserves. On the other hand, ex situ includes seed bank/ gene bank, zoological garden, aquarium etc. Thus, conservation may be done in both these ways of the biodiversity to protect our ecosystem. The sustainable use of the

components of biodiversity includes efforts to integrate the considerations of conservation. It also encourages cooperation between governmental authorities and the private sector to achieve sustainability. Fair and equitable sharing of benefits include appropriate access to genetic resources, transfer of relevant technologies and appropriate funding which would consequently contribute to the conservation of biological diversity. The CBD needs to be implemented by the member states by developing national strategies and integrate in the international movement to protect the eco systems. The Convention of General Measures came up inter alia with these objectives.

VII. The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity

At the 10th meeting of the CoP to the CBD held in Nagoya, on October 2010 The Nagoya Protocol was adopted. The Nagoya Protocol aims to implement primarily the third objective and other related articles of the CBD. These provisions called for negotiation, within the framework of the Convention. It further promotes and safeguard the fair and equitable sharing of benefits arising from the utilisation of genetic resources. It also aims to deliver greater legal certainty and transparency for both providers and users of genetic resources. It providing responsibility to the domestic legislation and regulatory requirements of the party to provide genetic resources and contractual obligations. Such development is to promote and ensure benefit sharing as and when the genetic resources goes out of party nation. In the 10th meeting of CoP, it mandated its Ad Hoc Open-ended Working Group on Access and Benefit sharing to elaborate and negotiate an international regime on access to genetic resources and benefit-sharing.

The Protocol also looks into the access to traditional knowledge held by indigenous and local communities when it is associated with genetic resources and the strengthening of the ability of these communities to benefit from the use of their knowledge. India ratified the Protocol in 2012 and there are currently 101 Parties to the Agreement.

It is quite imperative to state that the number of biopiracy cases have been on the rise and this Protocol may stand as an impediment to the process. A few instances would make the relevance of this protocol clear.

VIII. Agriculture and TK

There has been a debate in recent times as to whether seeds may be the subject matter of market and the said debate was put into rest with the WTO and TRIPS coming closer to all the member states to accept the dominance of market in seeds. This amongst other things have destroyed the culture of seed protection, Traditional knowledge of cultivation of thousands of plant varieties. In a personal discussion with Dr Debal Deb, the founder member of Vrihi, an NGO is pioneer in the field of protection of rice varieties in Eastern India. In his book 'Seeds of Tradition, Seeds of Future, Folk rice Varieties of Eastern India' has specifically acknowledged the traditional knowledge of the indigenous communities to be more scientific and sustainable than that of the present era of science. The seeds which are genetically modified may be capable of producing larger amount but are inherent with major weaknesses like susceptible to adverse climatic conditions, pests etc. Hence a complete kit is to be in practice to make the most out of them. This inclination towards the GMO seeds have destroyed the entire balance of nature as these varieties requires more water than indigenous varieties. Subsequently, The salinity of the soil is reduced and in the absence of proper rainfall, the land eventually would be barren. It has been identified by various scientific research that agriculture which is not indigenous specifically rice varieties, utilizes more water and reduces the salinity of the soil. However, to address the huge demand there has been large scale acceptability of genetically induced seeds and that has led to the extinction of various indigenous varieties.

In order to acquire land and forest the British passed The Land Acquisition Act, 1897 and The Forest Act, 1978 respectively. The concept of 'patta' was first initiated to create a reservation over the land or inhabiting the forest. The Forest Act, 1878 clearly gave the State authority over the forests for the purpose of protection and reservation of forests and to prohibit or permit shifting cultivation. Moreover, "in the case of a claim to a right in or over any land, other than a right of way or right of pasture, or a right to forest produce or a

water-course, the Forest Settlement-officer shall pass an order admitting or rejecting the same in whole or in part".¹²

IX. Water Conservation

Prior to the formation of commonwealth countries, the role that British administration played in the colonial era skeptically raises questions the policy formulated devoid of protecting natural resources. Inter alia, in India it has been debated that there has been systematic destruction of natural resources by introducing cash crops and hoarding of food crops without distribution at the time of famine.¹³ It has also been argued that it is during this period, India lost almost ninety percent of her natural resources irretrievably.¹⁴ Many animals have got extinct as did hundreds of species of flora and fauna. The climatic conditions consequently have changed perpetually.¹⁵ The cost of such change is beyond evaluation and has become evident with the rise of global temperature and green house effects.

Tribals have with the intrusion of British got refuge in remote places along with their ancient know how. On the other hand, in other areas, technology became a part of life. Modern challenges have encouraged scientists to do the impossible. Efforts are made to develop new ways to recreate water. Technology today has also developed to such an extent that sea water is now transferred to drinking water. Technology today can recreate and reconstruct ozone layers. What stand in the way however is money. Today world has shifted from market economy to market society and hence the benefits are out of reach as the process is hugely expensive and the cost is beyond the reach of most countries including India. Would reconsidering the old techniques used by indigenous communities in India or those in the Amazon be explored to address the problem or are we too far from that due to practical and procedural reasons.

The time has come to adapt the older techniques in a new avatar to address the gravest challenge the world is facing today, the scarcity of water. The time has

¹²Census of India,1931

¹³SHAMBHU PRASAD CHAKRABARTY , supra note 7.

¹⁴In an informal discussion with Dr Debal Deb, the seed man of India

¹⁵In an informal discussion with Dr Rajendra Singh, the water man of India. The coastal region provides the optimum condition for rainfall.

come to make a change and it is worth a consideration to look back into the pages of the past for some answer if any and also study some living examples to combat the irretrievable destruction of natural resources making it a major man-made catastrophe. We need to understand that the world would last but humans would not if this rate of destruction of natural resources continue.

There is an urgent need for both substantive and procedural measures to delay the catastrophe. More awareness coupled with urgent action is the need of the day. The question is can we do enough to prevent it and can we buy some more time. Can the tribal way be the way forward?

X. Eco-system Services

Sustainable economy of these groups makes them unique in various ways. This distinctive feature has many contrasting approaches to those of the non tribal's. As a matter of fact, the term sustainable with its various dimensions became an institution by itself. However, very little has been thought about those who originated the concept and practiced it in the true sense of the term. The indigenous communities across the globe had a sustainable way of life. Whether it is their economy or attitude towards life, it is the term sustainable that perhaps suits them the best. The most unique feature of the tribals across most of the communities in the world is their sustainable economic system. Tribals have a long history of using the resources from the land and forest for various use of their house and even transforming them for commercial use by their unique know how and skillful artistry. Business in small scale is common amongst tribal societies. Involvement of women in collection and gathering of raw materials from the forest is common and their role in the economy un-debatable. The raw materials involved in the business and the skill needed are no longer easily available and the chance to work on them to explore the skill and practice is reducing at an alarming rate. The greener pastures of the urban and semi urban developments are attracting and alluring the younger generations to a more modern life. Whether or not they are better is another question to be answered.

XI. Conclusion

The spread of corona virus across the planet has raised many questions. One of the significant aspects debated upon is the danger modern scientific inventions have posed upon us. Whether, the human endeavor to embrace comfort and convenience be prioritized at the cost of the entire human race to the verge of oblivion. Innumerable efforts made in the last few decades of scientific and modern development has left the entire world almost inhabitable for humans. Almost ninety percent of the large fish community has been lost¹⁶ in the last few decades due to scientific and systematic but unethical catching of big fish from oceans, seas and rivers. Another interesting development that ratification of ILO 169¹⁷ can bring is a sea change in the enforcement mechanism to protect the tribals and indigenous communities which in turn would assist the entire society to understand the importance of protecting the environment as well as sustainable use of water. In lieu of the TK we may borrow from the indigenous and tribal population, we should also not forget to provide them due respect and honor that they deserve for their ecosystem services. Indigenous peoples may be considered to be the true friend of the planet whereas the modern so-called civilized community would ultimately make us inhabitable for this planet. Time has come for the UNSDGs to be adhered to and follow the best of ethical practices by learning from the culturally enriched communities and pay respect to them for all that they have done for the planet and our survival. It is also advisable to the countries having indigenous and tribal populace to provide true reports than mere fabrication and suppression of facts and mere eye wash in the name of development and protection of human rights of these peoples to the world community. *Inter alia*, community right to property must be conferred to these peoples and help them to live a sustainable life based on ethological ethos.

¹⁶An article published in 'The Nature' reveals the same study: Marsha Walton, 'Only 10 percent of big ocean fish remain' available at CNN Thursday, May 15, 2003 Posted: 0229 GMT (10:29 AM HKT)

¹⁷Only 23 countries have ratified this convention till date.