

## CONTEMPORARY CHALLENGES TO TRADITIONAL KNOWLEDGE IN INDIA- A LEGAL INSIGHT

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*Traditional Knowledge is the wealth which we have gained from our ancestors. It is the actual wealth which gives many people the way to earn for their livings. Our ancestors have basically granted this knowledge in oral form and most of the knowledge and practice associated to it are not in records or documented form. The knowledge can belong to any single family or society or community. Due to which there is no single owner of this knowledge. So, it becomes very easy for the other developed nations to take out the information about this knowledge from anybody from this community or indigenous people, which ultimately hampers the whole community. This article is an attempt to highlight the contemporary challenges to traditional knowledge and also it is the high time for Indian Government, to develop a legislation that specially takes care about the security of traditional knowledge and to stop bio piracy and misappropriation of the traditional knowledge. The proposed legislation must contain certain provisions related to benefit sharing, so that original knowledge holders can also get in return of sharing the knowledge.*

**Key Words:** *Traditional Knowledge, Bio- Piracy, Bio-Prospecting, benefit sharing,*

### **I. Prelude**

Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Sometimes it is referred to as an oral traditional for it is practiced, sung, danced, painted, carved, chanted and performed down through millennia. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general.<sup>1</sup> With the development of science and technology the traditional knowledge is drawing global attention. The upcoming manufacturing industries (textile, handicrafts, pharmaceutical, seed etc.) commercially exploit the traditional knowledge using new technology without the permission and sharing of profits with the communities. Knowledge which wasn't required by the modern developed societies was left in the hands of the local and indigenous society.

Traditional Knowledge is all together owned property and is fundamental to the cultural or spiritual identity of the social group in which it is managed and is preserved. The main reason of protecting traditional knowledge is to stop misuse of the knowledge. Many attempts have been made till now but everything has been in vain. Therefore it is highly necessary to bring into thoughts to secure traditional knowledge. The knowledge is usually found in unscripted form. It is not in written and usually known by its practice. With the modern technology this knowledge have become into reach of many people throughout the world. This valuable asset of group of people or a particular community become easily accessible to number of people. The nature of this practice is similar to as someone is stealing the identity of one person by some other person. Traditional Knowledge is now at the centre of the discussions on intellectual property rights and has gained huge significance. India does not have any specific legislation for protecting Traditional Knowledge. It is very sad to say that even being rich in the traditional knowledge, India has taken minimum initiatives to protect it. There are few laws such as Protection of Plant Varieties and Farmers' Rights Act, 2001; Biological Diversity Act, 2002; Patents Amendments Acts, 2002 and 2005, which have tried to protect traditional knowledge from misappropriation, but there is still a need of a law to recognise traditional knowledge and the properties associated.

### **Statement of Problem**

Traditional Knowledge is an essential source of information which have been developed from various generations of the local communities and indigenous people in many parts of the world. These people has secured and protected traditional knowledge from thousands of years. India is such country from ever that is blessed with biodiversity and traditional knowledge in the field of health, agriculture, biotechnology and medicines. But today this knowledge is under threat of being misused with making listed under intellectual property. Bio-piracy and bioprospecting are the ways of misappropriation of the property which turns up into a new invention which can be protected under Intellectual Property Laws. Many developed nations are involved in performing such activities and providing no benefits to the original to the original holders of the traditional knowledge. Many cases have been registered under the heading of misappropriation of traditional knowledge against developed nations by the developing nations

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<sup>1</sup> Convention on Biological Diversity, 1992- Article 8(j)

along with India. India has faced a lot of bio-piracy cases. Bio-piracy is the biggest threat for India in the many last years. For Instance in: *Haldi* patent<sup>2</sup>- Around Dec'1993, University of Mississippi Medical Centre, Mississippi filed patents upon *Haldi* i.e. Turmeric. US patent 5,401,504 was granted for the use of *haldi* powder as antiseptic product which helps in healing wounds. Later it was opposed by the Indian Government and objection was raised against the patent grant. It is because the *haldi* usage was unable to fulfil the requirement of novelty which is required for granting patent, as *haldi* qualities has already been showcased in the ancient medical books. Likewise, Indian *neem*, Amazonian ayahuasca, Indian *Basmati* Rice, South African Hoodia Gordonii, Bolivian Quinoa are some of the examples. Misappropriation of the traditional knowledge is only because of the fact that there is an absence of a proper legislation for its security. Whichever laws we have today do not prevent misappropriation and do not protect traditional knowledge properly.

### Bio-Piracy and Bio-Prospecting of Traditional Knowledge

It is difficult to give a number that how many communities are there which have acquired knowledge from generation to generation. However, with the high demand of intellectual property rights along with modern biotechnological revolution have made it more important to focus upon security of traditional knowledge. The multinational companies are more tilted towards bio-genetic resources these days. They focus on various bio-patents which is a major reason for bio-piracy and bio-prospecting. The literal meaning of these terms *Bio-Piracy* & *Bio-Prospecting* refers to all the activities which involves the use of traditional knowledge without the prior consent of the community to whom it belongs.

#### a) Concept of Bio-piracy

The concept of bio-piracy is not new. It is into practice from the very long years in the history. Even at the time of Egyptian rulers they started bringing plants home after their military tours. None of the trip was ever challenged. Similarly, the Royal Botanical Gardens planted in South East Asia were brought from the rubber plants from Brazil.<sup>3</sup>Bio Piracy means the gaining of exclusive monopoly rights, over the biological material of one country by individuals, institutions or companies of other countries that ultimately leads to the denial of the rights, of the country of origin. Few purposes of the bio piracy are-Introduction of new plant varieties, Introduction of new living organisms, Production of pharmaceuticals and Privatization of traditional knowledge.<sup>4</sup>

Further, bio piracy can be defined as the stealing of knowledge from traditional and indigenous communities or individuals. The term also can also be used to suggest a breach of a contractual agreement on the access and use of traditional knowledge to the detriment of the provider and bio prospecting without the consent of the local communities.<sup>5</sup>Accordingly, it can be argued that the bio piracy is a twofold phenomenon which includes traditional knowledge bio piracy and genetic resources bio piracy. As such 'bio piracy' has emerged as a term to describe the ways that corporations from the developed world claim ownership of, free ride on, or otherwise take unfair advantage of, the genetic resources and traditional knowledge and technologies of developing countries.<sup>6</sup> The word Bio-piracy comes from a group which is recognised as Rural Advancement Foundation International and comes from Advocacy Group of North America, namely Erosion, Technology and Concentration Group.<sup>7</sup>

Before Biological Diversity Act, 2002, all the living resources were considered as the common wealth of humankind. Researchers were free to take samples without any legal formalities. There was no specific legislation to tell them that what one is allowed and what is not to take from the nature. Sharing no benefits led to great loss of the people who own those natural resources. It has been a continuous activity of abuse.

One of the causes of bio-piracy is the absence of the knowledge about the rights that an owner of the knowledge should have. Many of times it is seen that traditional knowledge has been misappropriated without paying any compensation to the knowledge owner. Later the knowledge is treated and processed with various technologies so as to convert into a new product. Therefore to exercise the rights, the holders of right should have the knowledge about the entitled rights. Usually the curators of biological wealth and traditional knowledge don't have the proper realization about the share in the protection of biodiversity they have. They need to be educated about the rights because due to lack of the education it is more prevalent to misuse of their wealth through bio-pirates. Other than lack of knowledge absence of adequate legal system for the protection is also a reason which promotes bio-piracy. The developed countries usually take advantage of this reason. They try to gain that knowledge from the under developed nations with minimal or no costs. Through proper legislation this process can be stopped as the legislations will provide a proper norm to gain or use any kind of knowledge. The third major cause of bio-piracy is that the bio pirates assume that the natural resources are free and common for public use. They portrait that it is there right to use such public goods for free and use them for their own benefit. Especially pharmaceutical companies initiate such free gaining practices to manufacture drugs etc. they state that this will aid to solve many health issues. Patenting is also one of the reasons which cause bio-piracy. Most of the traditional knowledge is not eligible to be patented due to the lack of novelty. As the patent laws only identify the rights over organisms which are modified genetically, it is considered that the owners lose ownership in the matter of any kind of changes in genes.

<sup>2</sup>Traditional Knowledge and Intellectual Property: Case of Turmeric, available at: <http://lifeintellect.com/blog/2013/10/24/traditional-knowledge-and-intellectual-property-case-of-turmeric/>, (Visited on: 15 Feb, 2019)

<sup>3</sup>Bio-piracy: The Legal Perspective, available at: <http://www.actionbioscience.org/biodiversity/gollin.html> (visited on March 19,2019)

<sup>4</sup>C.L. Akurugoda, "Bio Piracy and Its Impact on Bio Diversity: A Critical Analysis with Special Reference to Sri Lanka," *International Journal of Business, Economics and Law*, Vol. 2, Issue 3, p. 49, (June) 2013

<sup>5</sup> [www.grain.org](http://www.grain.org) > Archive > Publications > Reports

<sup>6</sup> [http://moderncms.ecosystemmarketplace.com/repository/moderncms\\_documents/L3.pdf](http://moderncms.ecosystemmarketplace.com/repository/moderncms_documents/L3.pdf)

<sup>7</sup> ETC Group, available at: <http://www.etcgroup.org/content/biopiracy10>, (Visited on March 19'2019)

In short, bio-piracy means the use of intellectual property right systems to have a legal right over the biological process and biological products without being the actual owner of it.

Thus the term bio-piracy refers to

1. Unauthorised use of traditional knowledge of the community
2. Unauthorised use of biological resources such as: animals, plants, micro-organisms etc.
3. Getting patent of the biological resources without inventiveness and novelty.
4. No sharing or unequal sharing of earning gained by the knowledge of the community<sup>8</sup>.

#### b) Concept of Bio-prospecting

Bio-prospecting means collecting the plants and biological material and doing research on them to convert them into products related to food, medicines and cosmetics. Bio-prospecting is a new term which has emerged with the development of technology. It is an essential task in the various biotechnological industries. Bioprospecting literally means to find out those biological materials which bring out the benefit for the humankind. It incorporates testing and developing biological materials, securing and manufacture and commercialise the useful outcome.<sup>9</sup>

In Earlier times bioprospecting was initiated to find out new chemical compounds with special properties such as medicinal and anti-microbial properties. But today bioprospecting is done for the purpose of commercial development. Bioprospecting had been become a major element in the success story of many companies and countries. It is the prospecting of wild animals and plants with a sight of commercial resource to earn profits. Bioprospecting hampers the right of indigenous people because through bioprospecting one gets entrance to the native land and they gets the sample of biological material. The indigenous people have the knowledge and information regarding the plants for the medicinal use. These plants are the free raw material which can help them to cure diseases. Usually the researchers take the information from them and in return they provide nothing to them. This way of research and development of drug or medicine is subsequently titled as kind of piracy. Bioprospecting moves towards the loss of the native people as they loss the authority over their own resource and knowledge. Most of such people are illiterate and depends upon the traditional knowledge to earn their livings. On the other hand, the companies upheld bioprospecting stating that it is necessary to take such information to bring out innovation and new products. According to them bioprospecting is not wrong and it is necessary in order to bring human health benefits.

It can eventually be said that without the information given by the native people to the bio prospectors about any medicinal plant/product, the researchers can't make a new product easily. In positive sense the concept of bioprospecting have the capability to find out the hidden secrets of the nature. But without acknowledging the native people it becomes a serious threat to them. The researchers many times fail to compensate enough to the community that provide them the whole information about the traditional knowledge.

#### Legal Protection of Traditional Knowledge

##### a) Protection of Plant Varieties and Farmer's Rights Act, 2001

The TRIPS agreement has made it mandatory for the security of various types of plants by the method of patents or through sui generis system or with combination of both.<sup>10</sup> So as to go according to the instructions of the TRIPS agreement, India came up with Protection of Plant Varieties and Farmer's Rights Act, 2001. To safeguards various plant varieties and farmer's Rights the Act have established the Protection of Plant Varieties and Farmer's Rights Authority<sup>11</sup> and Plant Varieties Registry.<sup>12</sup> The function of the authority is to support the development of the diversities of plants and protect the rights of farmers and knowledge holders.<sup>13</sup>

The Act have introduced the concept of farmer's rights, which directly provides protection to the native farmers having the knowledge which help in the further development of the new variety. Considering that this Act states about the registration of the varieties, which have been evolved over the period of time by the farmers. Registration helps in documenting the traditional knowledge and the varieties and secures it form misappropriation. It have the clauses under which benefit sharing among the communities as they grant registration certificate to the new varieties along with it they notifies the information in detail of the variety been protected. After this they ask for the invitations for benefit sharing. The interested parties get notified due to these

<sup>8</sup>Ikechi Mgbeoji, *Global Biopiracy: Patents, Plants, and Indigenous Knowledge* (UBC Press, 2006)

<sup>9</sup>Pushpangadan P, George V, Ijini TP, Chithra MA, "Biodiversity, Bioprospecting, Traditional Knowledge, Sustainable Development and Value Added Products: A Review," *Journal of Traditional Medicine & Clinical Naturopathy* 5 (2018).

<sup>10</sup> TRIPS Article 27.3 (b), available at: [https://www.wto.org/english/docs\\_e/legal\\_e/27-trips.pdf](https://www.wto.org/english/docs_e/legal_e/27-trips.pdf) (visited on March 20,2019)

<sup>11</sup> Protection of Plant Varieties And Farmers' Rights Act, 2001-Section 3

<sup>12</sup> *Id.*, Section 12.

<sup>13</sup> *Id.*, Section 9 of the Act specifically mention about the functions of the Authority :a)To register of existing varieties b) To develop documents related to the registered varieties under this Act c)Index making and classifying the farmer's varieties d) Mandatorily recording the facilities for all the plants e) Making sure that the seeds of the registered variety is available to the farmers f) Granting mandatory licences to such varieties whose breeder or any other person having the right to produce the variety does not organise for the production and sale of the seed in the manner as may be prescribed g)Collecting the data with the consideration of plant varieties, including the efforts of the person for the development of the plant variety in India or any other country for recording and dissemination.

invitations and then they submit their claims of benefit sharing. The Act have separate provision for providing reimbursement to the local or native communities for providing their contribution in development of variety.<sup>14</sup>

This Act for sure lays down an effective system for the protection of plant varieties, right of the farmers and plant breeders but this Act does not aims specifically at rights of native community in the matter of Traditional Knowledge and its other variations. The Act have a narrow scope which is limited to the communities related to agricultural biodiversity and knowledge associated with it. The Act does not cover other types of biodiversity such as knowledge related to traditional medicines. It incorporates only matters related to traditional knowledge of crop varieties.

**b) The Biological Diversity Act, 2002<sup>15</sup>**

The main motive behind the legislation is to conserve the biological diversity, equal and fair division of benefits along with viable application of the biological resources. The Biological Diversity Act had constructed National Biodiversity Authority and State Biodiversity Boards<sup>16</sup> to manage all the analysis activities related to biological resources in India. National Biodiversity Authority makes it mandatory to take permission while accessing to any biological diversity. This approval is mandatory for the non-citizens of the country. The non-citizens include foreign residents, foreign associations with foreign participation and foreign corporations. Section 3 and 19 of the Act restricts access to biodiversity and the knowledge associated to it without any prior approval from national biodiversity authority. There prior permission is highly essential to share the results of any research which is related to any biological resources or any kind of monetary compensation obtained from India. This law have a provision which states that any application for granting patent or any kind of IPR protection is not allowed in India or any other country if the application is based on any invention which has been constructed on any knowledge obtained from India.<sup>17</sup> The National Biodiversity Authority has the right to make sure that the benefits arising out of the biological resource should be equally shared before approving it. It has to be make sure by the authority that the right to use the knowledge is on the mutual agreed terms and conditions between the native people and person applying for the approval. Here the benefit means either in the way of pecuniary compensation or non-pecuniary compensation or mutually.<sup>18</sup>

At State level, there is State Biodiversity Boards set up by the Act, to give advice to the State Government about the subjects related to preservation of Biodiversity, long term use and fair sharing of the benefits emerging from the usage of biological resources. Another function of State Biodiversity Boards is to manage by granting approvals or apply for the commercial usage of any biological resource by citizens of India.<sup>19</sup> Any citizen or corporate body or any alliance or organisation can move forward in any kind of analysis linked to biodiversity and traditional knowledge along with the permission of State Biodiversity Board. While granting the approval the state board can ask the view of the native people having the knowledge and the board is authorised to restrict such research if it is to be carried against the objectives of the conservation and sustainable use of biodiversity or if it is against fair sharing of benefits.<sup>20</sup> Below the State level there is another active body called as Biodiversity Management Committee<sup>21</sup> which works under every local body for the empowerment of conservation, sustainable usage maintenance and for the proper attestation of the documents of biological diversity.<sup>22</sup> The function of this committee is to conserve the land races, secure the habitats, protecting folk varieties and various kinds of breeds of the animals and microorganisms. Before taking any decision the State Board and the National Authority consult with the biodiversity management committee. Through this consultancy the authorities gets the view of the committee about the biological resource and its use into their jurisdiction.

The legislation recognises the issues of bio-piracy and imposes strict liability for the offence. The offence is Non bailable and penal liability can also be imposed as per the guidelines provided by central and state government, national authority or State board.<sup>23</sup> The drawback of this legislation is that it does not provide the ownership right over the knowledge to these communities. To recognise the true owner is essential to safeguard traditional knowledge. Act does not provide any path for informed consent and also fails to define the related traditional knowledge. There is lack of any method to recognise the original traditional knowledge holders.

**c) The Patent Amendment Acts 2002 And 2005<sup>24</sup>**

The Patents Act, 1970 was amended into The Patent Amendments Act 2002 and 2005 which came up with the new provisions for the security of Traditional Knowledge. A new part was put in to section 3 of the Patent Act, 1970 that gives information about the non-patentable inventions. The newly added part have the clause (p) of section 3 of the Act restricts patenting of any such invention which in effect the traditional knowledge or which is a copy of any known properties of traditionally known element. The Act gave liberation to oppose at both pre grant<sup>25</sup> and post grant<sup>26</sup> stage of the Patent application. At the post grant stage i.e.

<sup>14</sup> *Supra* note 11, Section 41

<sup>15</sup> Biological Diversity Act, 2002, available at: [http://nbaindia.org/uploaded/act/BDACT\\_ENG.pdf](http://nbaindia.org/uploaded/act/BDACT_ENG.pdf), (Visited on: 20 March '19)

<sup>16</sup> National Biodiversity Board and State Biodiversity Board, available at: <http://nbaindia.org/>, (visited on: 30 March '2019)

<sup>17</sup> *Supra* note 15, Section 6 and 19

<sup>18</sup> *Id.*, Section 21 (1) & (2)

<sup>19</sup> *Id.*, Section 22

<sup>20</sup> *Supra* note 15, Section 24.

<sup>21</sup> Biodiversity Management Committee, available at: <http://nbaindia.org/>, (visited on: 30 March '2019)

<sup>22</sup> *Supra* note 15, Section 41.

<sup>23</sup> *Id.*, Section 56 and 58.

<sup>24</sup> The Patent Amendment Acts, 2002 and 2005, available at: [http://ipindia.nic.in/writereaddata/Portal/IPOAct/1\\_69\\_1\\_patent\\_2005.pdf](http://ipindia.nic.in/writereaddata/Portal/IPOAct/1_69_1_patent_2005.pdf) (Visited on: 31 March '2019)

<sup>25</sup> *Id.*, Section 25 (1) (j).

after the grant of the patent – if any individual or body finds that claimed invention is a knowledge of native community then they need to submit notice of opposition to the controller. This notice of opposition can be commenced at any time once the patent is granted but should not exceed period of one year from the date of publication of the patent grant.<sup>27</sup>

Whereas, the Act also have the provision to keep an eye on bio-piracy. The Act obligates a duty on the person applying to discover the source or origin of the organic material that is used in the invention. The person applying has to reveal source and complete elements of the biological matter. In case the applicants fails to apply according to the stated laws then the application will be seen as rejected. False information of any biological material is a ground on which the patent can be revoked.<sup>28</sup> The patent is competent to be revoked on the presence of any prior art. If any claim in the patent application indicates any knowledge, which belongs to any native or indigenous community in India or elsewhere then it can be revoked.

### Traditional Knowledge Digital Library

Traditional Knowledge Digital Library is a cooperation project between Council of Scientific and Industrial Research, Ministry of Science and Technology, Department of AYUSH and Ministry of Health and Family Welfare. Main motive of digital library is the documentation of traditional knowledge about Yoga, Ayurveda, Unani, and Sidha in digital form in 5 international languages i.e. English, French, German, Japanese and Spanish.<sup>29</sup>

This is a novel approach which have been appreciated and accepted at International Level. Due to this concept of documentation and digitalisation the approach of misappropriation of Traditional Knowledge will be decreased. This will provide help to eradicate the chances of yielding incorrect patents in other countries in the case Traditional Knowledge of India. Traditional Knowledge Digital library will restrict misappropriation of Traditional Knowledge and bio-piracy, at a certain level, as it act as a prior art search examiners at patent offices of other countries. This also provides recognition to the knowledge holders which make easy for them to ask for benefit sharing. Documentation of the Traditional knowledge act as a weapon that prevents patenting of traditional knowledge.

### Emerging Challenges related to Traditional Knowledge

- a) **Lack of Definition** -The first problem which needs to be resolved is to develop a universally recognised definition of traditional knowledge. Traditional knowledge is something which is multi-dimensional and includes various definitional aspects. So it is not possible to bring a single definition for traditional knowledge.
- b) **Subject matter**- The subject matter of traditional knowledge is mainly variable and dynamic and designed by native and traditional factors than other forms of intellectual property. Since there wide variety in the subject matters which needs protection, therefore a single method to protect them may not work. In the huge variety of traditional knowledge every kind of traditional knowledge demands for a special treatment. As many components of traditional knowledge and practices connects to commercial use and exposure may also need some protection from the intellectual property side also. On the same note the knowledge and practices which relates to biodiversity conservation and management need specific approach in regard of protection. Similarly, traditional knowledge related to farming communities, medicinal communities and various other forms of practices may vary in the kind of protection they require.
- c) **Identification of the benefit holders**- As traditional knowledge is the knowledge which belongs to a particular community or the indigenous community of the region, it becomes very difficult to make one person as the beneficiary of the traditional knowledge. These rights are held collectively by the group of people which generally belongs to economically backward classes and educationally weaker section.
- d) **Absence of Law**-The issue which need to be look into is the implementation and enforcement of a specific Law. There is no agreement or Legislation among the international community's related to the implementation mechanism that can aid to apply sui generis rights. Neither there is any specific national legislation on this issue.
- e) **Intellectual Property Rights**-Many nations preserve and provide security to their traditional knowledge through Intellectual Property Rights system, which actually do not includes traditional knowledge. It is because it fails to fulfil the requisites of novelty, single owner etc. so there are problems to secure indigenous knowledge under intellectual property system.
- f) **Access and benefit sharing**-The current laws in the practice to protect traditional knowledge do not facilitate proper security to the farmers or breeders of the traditional knowledge. They are only been developed a bit by assigning them the right to get compensated as the indirect acknowledgement of their involvement to this research and expansion. Protection of Plant Varieties and Farmer's Rights Act, 2001 section 26 and 41 states about Determination of Benefit sharing and compensation respectively.<sup>30</sup>
- g) **Benefit Sharing Agreements**-Benefit sharing is an indirect mechanism through which the holders of traditional knowledge can settle down when their knowledge becomes the essential base of the product protected under Intellectual

<sup>26</sup> *Id.*, Section 25 (2) (j).

<sup>27</sup> *Supra* note 24, Section 25 (2).

<sup>28</sup> *Id.*, Section 64 (1) as inserted by Act 38 of 2002.

<sup>29</sup> Traditional Knowledge Digital Library, Available at: [https://www.wipo.int/meetings/en/2011/wipo\\_tkd1\\_del\\_11/about\\_tkd1.html](https://www.wipo.int/meetings/en/2011/wipo_tkd1_del_11/about_tkd1.html) (Visited on: 31 March'2019)

<sup>30</sup> *Supra* note 11.

Property Rights law. It is a way of compensation which has been introduced as a method to have an indirect control that provides access to the knowledge. It stands on the compensatory obligation methodology which targets at providing for certain form of appropriate compensation for the use of knowledge.<sup>31</sup>

- h) **Access to Traditional Knowledge**-Access to the traditional knowledge means the conditions through which the users would get the resources they need. Access here means the access across different borders. Access includes the revealing all the information related to origin of the knowledge and benefit sharing. According to the article 15.7 of Convention on Biological Diversity, the benefit earned from the results of the research and development have to be shared in a fair and equitable manner with the country allowing them to access the resources. It is not clearly stated that what is considered as fair and equitable. These terms that are kept before while sharing the resources should be kept mutually. But in case of any dispute there is no International Arbitration established to solve the dispute.
- i) **Prior Informed Consent**-Prior informed consent enables state to setup the conditions through which access is to be granted. Article 15(5) of the Convention on Biological Diversity, 1992 says that to access any genetic resources there is need to take prior informed consent and under Article 15(7) there is a need to enact legislation and setup an administrative body to keep a check on fair benefit sharing system. In India under The Biological Diversity Act, 2002, the national and state authorities have the right to take decisions related to the access to resources. For prior informed consent India has a Biodiversity Management Committees who plays the advisory role to determine access to biological resources. In India it can be observed that there is an absence of proper mechanism or prevalent initiatives which is required while taking prior consent of the indigenous knowledge. Most of the time the knowledge is unknown from our own system. Due to which many foreigners take unwanted advantage of it. Therefore, there is a need of documentation of the knowledge present in the country. This will ultimately prevent bio-piracy and misappropriation to some extent.
- j) **Lack of International Cooperation**-Protecting traditional knowledge cannot be gained solely on the municipal laws or the law of the country. The issue of protection is actually at the global level and that requires a solution by an international association. The convention on biological diversity also needs international exposure and cooperation which will provide aid in protection of the resources and identifying the agreements for the proper utilization of resources.
- k) **Issues under a sui generis system**- Sui generis system has another issue to examine and decide that what is need to be protected and what not. It is to be determined that in which form the protection should be done. The system has a financial plunge which would point at securing the knowledge contrary to unauthorised use and preserving it from further diffusion. Hence these are some issues which are needed to be recognised and addressed properly at the international level.

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<sup>31</sup>WIPO/GRTKF/IC/7/6, available at: [http://www.wipo.int/edocs/mdocs/tk/en/wipo\\_grtkf\\_ic\\_7/wipo\\_grtkf\\_ic\\_7\\_6-main1.pdf](http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_7/wipo_grtkf_ic_7_6-main1.pdf), (Visited on: 05 April, 2019)