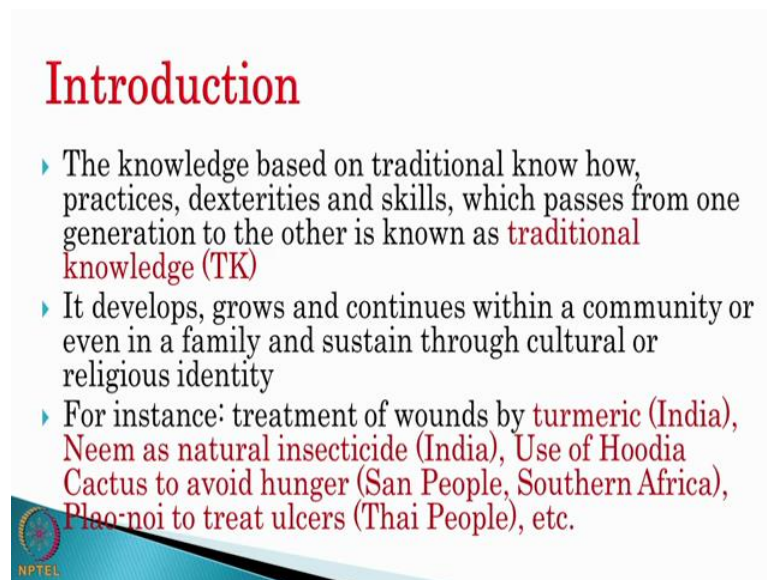


Economics of IPR
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Module – 03
Lecture – 03
Issues Related to traditional knowledge (TK)


As a part of third week lecture, on Issues Related to Intellectual Property Right this particular lecture is devoted to understand issues, which is again linked with the Traditional Knowledge. So, let me begin with the general meaning of Traditional Knowledge.

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Introduction

- ▶ The knowledge based on traditional know how, practices, dexterities and skills, which passes from one generation to the other is known as **traditional knowledge (TK)**
- ▶ It develops, grows and continues within a community or even in a family and sustain through cultural or religious identity
- ▶ For instance: treatment of wounds by **turmeric (India)**, **Neem as natural insecticide (India)**, **Use of Hoodia Cactus to avoid hunger (San People, Southern Africa)**, **Plac-noi to treat ulcers (Thai People)**, etc.

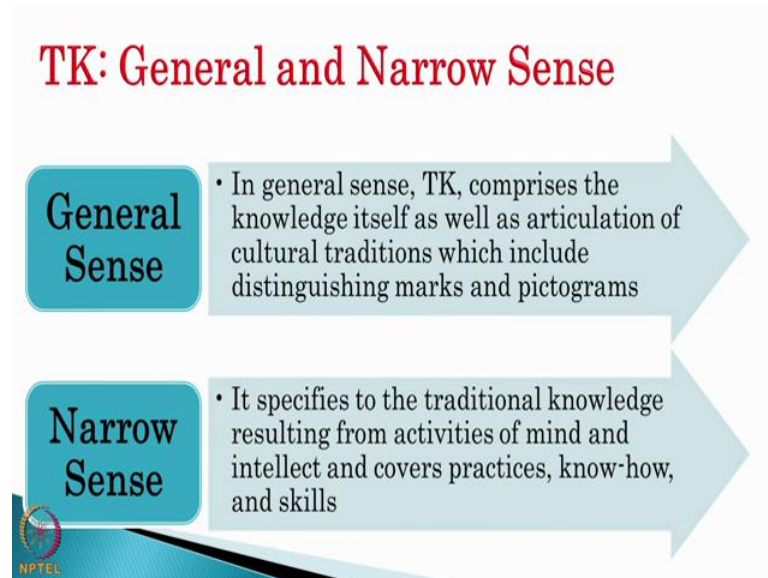


The knowledge which is based on the traditional knows how different practices and skills which pass from generation to generations are known as the Traditional Knowledge. It develops, grows and continues within the community or even in a family and sustain through the cultural or religious identity. So, it is not the property which is related to an individual like patent.

But it is one of the part of intellectual property which is linked with a deep rooted contribution by the society, deep rooted attachment of that with that product to the society and there are certain products for example, turmeric from India, a Neem also in some other country some of the uses of Hoodia Cactus to avoid hunger especially in

Southern Africa and Plao-noi to treat ulcer in Thai People or some of the traditional knowledge which is well established today at the global level.

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So, when we discuss this traditional knowledge there are general sense and narrow sense, related to the 'Traditional Knowledge', generally, traditional knowledge comprises the knowledge itself as well as the articulation of cultural traditions which include distinguishing marks and pictograms. In narrow sense, it specifies to the traditional knowledge resulting from activities of mind and intellectual and covers practices know how and the skills.

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Features of TK

Based on trainings and experiences, TK is pragmatic common sense
It canvasses mutual relationships between people and environment
It is comprehensive and cannot be fragmented and detached from the people or the community who own it
It is dynamic, cumulative and stable
TK is a way of life
It gives credibility to the local people or the communities



So, when we are trying to find out what are the features of 'Traditional Knowledge' we have traditional knowledge based on training and experience. Which is traditional knowledge named or conceived as a pragmatic common sense. It converses mutual relationship between people and environment, and it is comprehensive and cannot be fragmented and detached from the people or the community who own it as I have already mentioned that it is the contribution or the intellectual property which is not very much individualized, but it is very much socialized in nature.

So, it is a dynamic cumulative and a stable type of knowledge and it is in form of the country we find that especially in travel community you find some of the knowledge and some of the treatments are the way of life. So, it gives credibility to the local people or to the communities because, if certain community has already practiced, already survived, on the basis of that knowledge that gives the importance of certain traditional knowledge in the world today.

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Value of TK

- ▶ Traditional knowledge today is recognized as valuable intellectual property globally
- ▶ The value is not only confined to those who rely on TK for their living, but is equally relevant and significant for the industry as well as agriculture
- ▶ A large number of products ranging from medicines, health and beauty products to cosmetics, agricultural and other non-wood forest products (handicrafts) are obtained from the TK

It is equally important for sustainable development



So, there are values involved in Traditional Knowledge. Because, traditional knowledge today is recognized as one of the intellectual property and the value is not only confirm to those who rely on traditional knowledge for their living but it is equally relevant and significant for the industry as well as for the agriculture. Because we find that today a large number of medicines health and beauty products, cosmetic products, agriculture products, and non wood forest products handicrafts are obtained from such traditional knowledge.

So, it is important for a the economics to understand the contribution of traditional knowledge which is linked with the concept of sustainable development as it relates environment, as it relates that this type of knowledge is again related to the forest, related to the to the generations to generations and a society as a whole community, as a whole preserves such knowledge for many generations.

So, ultimately it is more and more linked with the very natural set up of the development of human being not very artificial, but very natural type of the development and that is linked with the sustainable development.

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Defensive Protection

- It is a set of planning that will prevent the unfair and unauthorized use and claim of IPR on TK by others
- Such strategies include revision of International Patent Classification System and the Patent Cooperation Treaty Minimum Documentation of WIPO
- TK database is another one of such strategies which is being developed by many countries including India, in order to restrict granting patents to such claims and will provide information to the patenting authorities worldwide
- In this connection, WIPO has developed a toolkit to assist practical support and knowledge for the documentation of TK

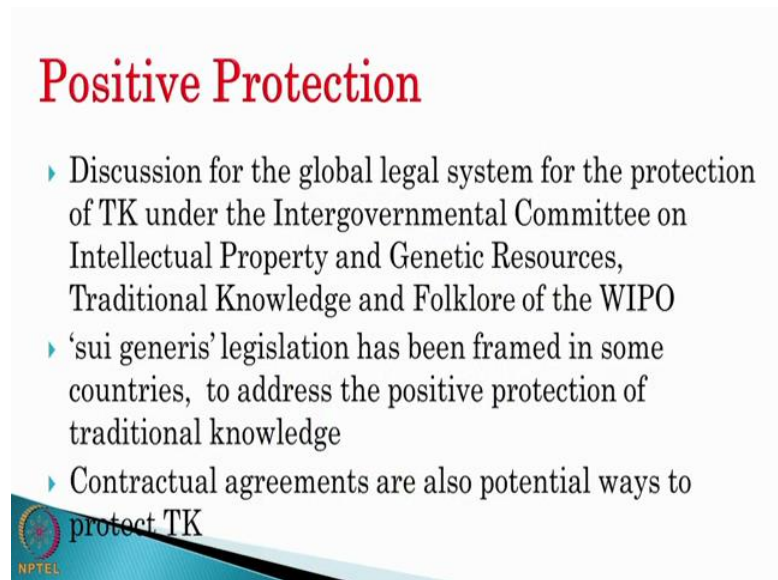
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So, there are 2 types of Protection of traditional knowledge 'Defensive and Positive' protection. So, when we say, Defensive Protection: It is a set of planning and the will that prevent the unfair and unauthorized use of the claim of intellectual property rights on traditional knowledge by others.

So, such strategies include the revision of International Patent Classification System and the Patent Cooperation Treaty Minimum Documentation of World Intellectual Property Organizations. So, the TK database is another one of the strategies which is being


developed by many countries including India, in order to prevent granting patents to such claims and will provide information to the patenting authorities to worldwide. So, in this connection, WIPO has developed a tool kit to assist practical support in knowledge for the documentation of traditional knowledge.

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Positive Protection

- ▶ Discussion for the global legal system for the protection of TK under the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of the WIPO
- ▶ 'sui generis' legislation has been framed in some countries, to address the positive protection of traditional knowledge
- ▶ Contractual agreements are also potential ways to protect TK



So, at the part of Positive Protection: Discussion for the global legal system for the protection of traditional knowledge under the Intergovernmental Committee on Intellectual Property and Genetic Resources, traditional knowledge and Folklore of WIPO is also in the discussion and in some of the country the 'Sui Generis' legislation has been framed in some economy to address the positive production of traditional knowledge.

So, contractual agreements are also potential ways to protect traditional knowledge. So, these are the 2 ways to protect the traditional knowledge positive as well as the defensive protection.

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International Treaty For TK Protection

- ▶ Convention on Biological Diversity (CBD), 1992, accepted the value of TK in order to protect landscapes, species, ecosystems, language, etc. for controlling access and use
- ▶ In this regard, World Intellectual Property Organization entrenched the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC-GRTKF)



And there is certain International Treaties for Traditional Knowledge: Convention of Biological Diversity 1992, which has accepted the value of traditional knowledge in order to protect landscapes, and ecosystems, language, etcetera for controlling the access and use. In this regard, World Intellectual Property Organization entrenched the Intergovernmental Committee on in on Intellectual Property and Genetic Resource, traditional knowledge and Folklore.

So, some of the other Treaties, In order to distinguish farmers rights for supplying original plans, genetic resources from the breeders of modern plant varieties; FAO, in 1989, is staring protecting farmers rights through the intellectual treaty on Plant Genetic Resource; resources for Food and Agriculture, and then Material Transfer Agreement has been introduce to provide benefits of any commercialization of a material.

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International Treaty ...

- ▶ In order to distinguish **farmers rights** for supplying original plant genetic resources from the breeders of modern plant varieties; FAO in 1989 started protecting Farmers Rights through the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGFA) made on 2001
- ▶ **Material Transfer Agreement (MTA)** has been introduced to provide benefits of any commercialization of a material



So, Article 9 of this ITPGFA which lays down the rules that: Each contracting party protects the traditional knowledge of farmer's rights in plant genetic resources. So, right to equitability, right to equitably participate, share benefits from utilization of plant genetic resources and participate in decision making in related matters must be maintains. So, all these legal treaties are giving us a wide range of tools to protect the traditional knowledge.

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Other Measures

Initiatives	Subject
The International Labour Organization's Convention 169 on Indigenous and Tribal Peoples, 1989	It called for affirmative action to protect the rights of indigenous peoples
The Declaration on the Rights of Indigenous Peoples, 2007	set out the rights of indigenous peoples, related to culture, identity, language, employment, health, education and others
The UN's Permanent Forum on Indigenous Issues, 1 st session 2002	concerns and rights of the indigenous communities worldwide



Apart from that the International Labour Organization Convention on Indigenous and Tribal People 1989. And the declaration on the rights of indigenous peoples, 2007, and The UN Permanent Forum on Indigenous Issues, first session 2002 are also some of the measures which has really shows the concern and rights of the indigenous community worldwide and set of the rights of the indigenous people, related to the culture, identity, language, employment, health, education and others.

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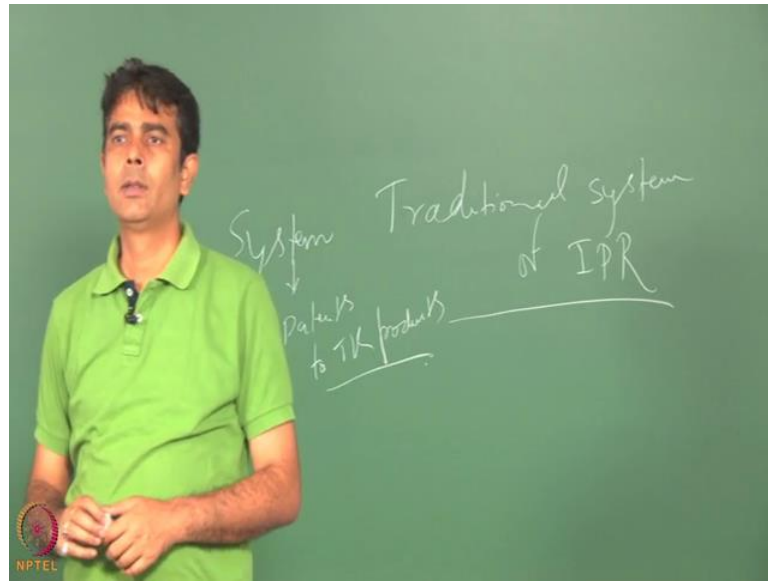
TK and IP

- ▶ Patent, trademark and geographical indications are basic tools of intellectual property that can potentially safeguards innovations based on traditional knowledge
- ▶ TK can be protected as a trade secret or other forms of undisclosed information
- ▶ Nonetheless, TK is not protected by traditional system of IPR, because it is often oral and undocumented
- ▶ A large number of Traditional medicinal plants have been patented by developed countries and by the MNCs



So, we have moved ahead in terms of traditional knowledge and traditional knowledge and it is protection, trade mark patent and geographical indications are basic tools of IP Intellectual Property that can potentially safeguard innovations based on TK and it can be protected as trade secrets or other forms of undisclosed information also. Nevertheless this traditional knowledge is not protected by traditional system of intellectual property rights.

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So, when we say it is not protected by the traditional system of, not protected by the traditional system of IPR, it means that the system which is granting the patents today to the TK products. TK products are not going to really resolve the issues related to traditional knowledge.

So, because it often because traditional knowledge the merit of traditional knowledge is that traditional knowledge is not in the written form it is more in the oral form and undocumented form. So, a large number of traditional material plants have been patented by develop countries and by the multinational corporations.

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Patented Traditional Plants of India in Other Countries

Common Name	US Patent no.	Patentee	Purpose
Kumari	5652265	Michael Collins	Medicine
Amaltas	5411733	Toyoharu, Japan	Antiviral
Kala Jeera	5653981	Hilton, USA	Activates immune system
Pomegranate	5411733	Toyoharu, Japan	Antiviral agent
Harad	5529778	Surendra Rastogi, India	Ayurvedic importance
Aswagandha	5466452	Whittle, USA	Skin disorder



Source: Meeta Biswal and Debidutta Biswal,
<http://www.fao.org/docrep/article/wfc/xii/0911-a3.htm>

This is one of the one of the list which shows us that this list is only including the Traditional Plants from India and we find here, that some of the common names like Kumari, Amaltas, Kala Jeera, Harad and Aswagandha.

These are the plants which have already got the U S Patent, and these are the list of patentees and these are the purpose mostly medicinal and antiviral and mostly ayurvedic and the medicinal and ornamental these cosmetic treatments are linked with these plans.

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Other Patented Products

- ▶ The patenting of turmeric by the US (Patent No. 5401504)
- ▶ The patent of 'Ayahuasca Plant', used by Amazon's indigenous people –US (Patent No. 5751)
- ▶ Basmati patent by Rice-Tec Corporation (Patent No. 5663484)
- ▶ Human genetic material patenting -human cell line of Hagahai tribesmen (Papua New Guinea)- US Patent No. 5397696



So, apart from this if you can also go back and we have also discuss some of the issues related to issues related to Patent where we have discussed about the Patent of Neem and Patent of Basmati Rice. So, we again find out that there is certain patenting of turmeric and patenting of other plants Basmati patent by Rice-tech Company and the Human genetic material are also patenting today.

So, this shows that a huge investment is being made to really work on certain patenting process which includes a large number of traditional plants and varieties and large number of traditional products from a country like India and also, from other country like one of the example which is shown here is the from outside India also.

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India's Response on Patents of TK

- ▶ For safeguarding the traditional knowledge, India is the first country who has started the Traditional Knowledge Digital Library (TKDL)
- ▶ It empowers the country to revoke the unfair patents granted by US, EU, or other developed countries as well as MNCs, to traditional plants and other products of Indian origin



So, what was the Response on the Patents of traditional knowledge from Indian side? For safeguarding the Traditional Knowledge, India is the first country who has started the traditional knowledge Digital Library. And it empowers the country to revoke the unfair patents granted by United States, European Union, or other developed country as well as the Multi-National Corporations to traditional plants and other products of Indian origin.

So, this particular issue the traditional knowledge is not only linked with the patent, but it is also linked with the livelihood of many people and many developing countries population.

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Agriculture: Issues For TK

- Agricultural practices originate from indigenous or traditional knowledge.
- There is need to sustain such knowledge for fair and equitable system.
- Critical views are present for IPR as it increases '*knowledge gap*' towards developed knowledge producers.
- At the same time it is thought that IPR brings knowledge producers close to research based producers.
- Knowledge related to IPR in agriculture is not covered in case of poor countries.



So, Agriculture practice originates from indigenous or traditional knowledge. So, there is a need to sustain such knowledge for fair and equitable system. So, for example, the mixed crop system is one of the system which has which has been practiced by Indian farmers for long time back so, but if this mixed crop system is being challenged by one of the any company today this is not basically the traditional knowledge of India.

But this is our experiment which we have develop from ours form area and now due to the mixed crop there is a, increase in the productivity and such productivity is the matter of patent for us and such knowledge if it is patented today then there is a need to sustain such knowledge for fair and equitable system. Because such knowledge is not the part of other countries and various countries are having different type of agriculture system and that involves the traditional knowledge of farmers.

So, Critical views are present for intellectual property rights as it increases knowledge gap towards developed knowledge producers. So, at the same time it is thought that intellectual property right brings knowledge producers close to research based producers. So, knowledge related to intellectual property in agriculture is not covered in case of poor countries. So, there may be large number of traditional knowledge which is being patented being (Refer Time: 14:04) today and the way some of the Multi-Nationals and some of the countries are very fast enough in patenting those knowledge, it shows that world is really facing a huge uncertainty on the issue of traditional knowledge.

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Agriculture: Issues For TK...

- If genetic resources of farmers are used, their traditional knowledge must be equally protected, participated and shared.
- **Bio piracy** – rights of countries on certain genetic resources are being pirated by others
- The unauthorized extraction of biological resources in the form of patents are serious concerns.



So, if genetic resources of farmers are used, their traditional knowledge must be equally protected, participated and shared, Bio piracy has one of the issue which we are discussing from the beginning of this course that rights of countries on certain genetic resources are being pirated by others and this is one of the emerging and very burning issue for any country especially, the Bio rich country that they are not able to really protect, but at same time the pirates are very much active in taking out the benefit of those materials and they are coming out with a certain products claiming that these are products which they have developed in their labs.

So, the unauthorized extraction of biological resources in the form of patents is one of the serious issue and concern for the world community today.

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TK Under the Doha Round

- ▶ Doha Declaration, 2001 (Paragraph 19), laid down emphasis on the discussion on the traditional knowledge and broadened the negotiations
- ▶ The declaration stressed that the Council on TRIPS, should contour the inter- relations between the TRIPS Agreement and the Convention on Biological Diversity of the United Nations which deals with TK and Folklore protection
- ▶ Further, the Doha Declaration added that considering the Article 7 and Article 8 of the TRIPS Agreement, which deals with the objectives and principles respectively, the Council on TRIPS should focus on these, keeping in mind the developmental goals



So, the recent more debatable round that is the Doha Round, Doha Ministerial conference where the Doha Declaration, 2001 laid down emphasis on the discussion on the traditional knowledge and broadening the negotiations. So, this declaration stressed out that the Council on TRIPS should. So, try to have this inter relation between the TRIPS agreement and the convention of biological diversity of United Nations which deals with T K and Folklore protection.

Further, this Declaration added that considering the article 7 and article 8 of the TRIPS agreement, which deals with the objectives and principles respectively the Council on TRIPS should focus on these, keeping in mind the developmental goals.

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TK: Pharmaceuticals and Biotech

- ▶ Pharmaceutical and biotechnological MNCs often exploit indigenous knowledge, related to medicinal properties of plants and other traditional resources in the developing and least developed countries to reap huge profits
- ▶ Today, bio prospecting has emerged as a billion dollar industry and biotech corporations are employing and building global value chains on an remarkable scale to explore and develop new medicines from the traditional plants and genes extracted from them




When we see the link of traditional knowledge with the Pharmaceutical Industry and bio technological products Pharmaceutical and bio technological Multi-National Corporations often exploit the indigenous knowledge, related to the medicinal properties of patents and other traditional resources in the developing and the least develop countries to reap huge of profits.

So, Today bio prospecting has emerged as a billion dollar industry and bio tech corporations are enjoying or employing and building global value chains on the remarkable scale to explore and exploit and to develop the new medicines from the traditional plants and genes extracted from them. So, it is a huge industry which is already flourishing in many countries and due to the gene piracy, due to the bio piracy, this industry is flourishing in a larger scale.

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Conclusion

- ▶ There is a need to institute proper mechanism and legal system for the effective participation from the indigenous and local communities in decision-making process and policy planning
- ▶ For the conservation and sustainable use of biological diversity, based on TK, it is imperative to respect, preserve and maintain the resource base
- ▶ Need to ensure the equitable sharing of the benefits rising from the application of traditional knowledge
- ▶ Concerns are huge and the protection of the TK is at stake



So, to really see that how, traditional knowledge is important there is a need to institute proper mechanism and legal system for the effective participation from the indigenous and the local communities in decision making process and policy planning, but the point is the important fact related to the traditional knowledge is traditional knowledge is no longer the knowledge which is already a published knowledge.

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It is not a published knowledge, it is not a published knowledge, it is already in from generation to generation from society as a whole or community as a whole is practicing

those knowledge and due to that such knowledge is really a matter of great respect by the country itself, but the point which is also important that what country has done in previous in last few years.

The history shows us that many country was not really serious about such knowledge which is based on the traditions which is based on the generations, knowledge and so, when the countries were not really serious about how to protect, how to really take such knowledge for the betterment of the economy and how to make out those products and how to make out those knowledge meaningful for the next generation the question of TK was very much, the question of traditional knowledge was very much the question of Domestic.

Domestic Economy it is basically, the TRIPS agreement, the basically the TRIPS which has included a new debate which has basically extended the new debate linked with the traditional knowledge because country started, country started patenting so many things because the new patent system has given a very wide range of items to be patented based on the innovations and based on the new contribution to that particular field.

So, when country started working on certain plants, certain genes, and certain product came out then, in that case the controversy and the conflict being started between the developed world and developing or the bio rich country or the bio poor country. So, this bio rich and bio poor countries are being attacked in the new patent system by the new patent system. So, this bio rich country is like India or many other country which has large number of plant variety available and they and they and they country of bio diversity and the country of country of bio diversity they were started a new set of challenge by the world community and this new set of challenge is nothing except the new way of patenting the traditional knowledge.

So, when we are finding that the knowledge, the TK, mostly the traditional knowledge is not published knowledge not a published knowledge. So, the challenge to again argue that this is our traditional knowledge and is again is one of to the challenge at the global level because you have to you have to have a concrete proof that such Knowledge, is the knowledge by your community and your society. So, for the conservation and sustainable use of biological diversity best on traditional knowledge it is indeed important to respect, pressure and maintain the resource base because the history of TK

especially, history of history of TK in many country including India especially, history of protection of TK, we have a rich history of traditional knowledge, but we have a very poor history of protection of traditional knowledge.

So, the country which were rich in traditional knowledge having large number of TK products are not clearly very rich in protecting the TK, Traditional Knowledge. So, at this point when we are discussing the issues related to traditional knowledge and other issues related to intellectual property right we must or a system of intellectual property right at the domestic level, at the country level, it is important to really preserve the biological diversity by any way a government can make a rule, government can make a make a policy, government can provide some of the incentives to the people, to the community, and at somehow, you have to respect, preserve and maintain the resource base because even if a very rich history of TK is not going to help us because we do not have a rich history of protection of the Traditional Knowledge.

So, there is a need to ensure the equitable sharing of the benefits arising from the application of traditional knowledge and at the same time when we are really marketing this traditional knowledge and having this intellectual property of traditional knowledge and establishing our TK products to be globalized, we cannot ignore that community, we should not ignore that community because that is the intellectual property by their particular community which has kept that knowledge from generation to generation which had preserve that knowledge from years and years.

So, the concerned or huge and protection of the TK is at a state. So, we cannot say that we are having a full proof traditional knowledge protection system and, but the current level of patents and the trademarks and geographical indication issues are really motivating us and really giving us a big challenge to protect the traditional knowledge and it is indeed important to protect the traditional knowledge.

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I hope, this particular discussion is going to give you a very wide range of understanding that why TK is important and how traditional knowledge is being targeted by the world community today and what are basically the issues involved in the traditional knowledge protection and, how traditional knowledge protection is going to benefit us because if we will lose certain traditional knowledge and if it is being patented then we are not really authorized to again have that knowledge to be use within the country and that traditional knowledge product or TK products are not being the matter of export.

So, a big challenge and a very multi layered issues involved in traditional knowledge is in front of us. There is a need to really fight with certain issues and to really have, really it is important to take the challenge as soon as possible.

Thank you.