

## **Biodiversity Protection, Farmers and Breeders Right**

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### **Lecture 15: Peoples Biodiversity Registers**

Welcome to the course Biodiversity Protection Farmers and Breeders Rights. This lecture will be about people's biodiversity registers. The concepts covered in this lecture will be people's biodiversity register, the role of BMC in the preparation of people's biodiversity registers or PBR, the role of National Biodiversity Authority and how PBR could be used for protection of traditional knowledge, the role of PBR in conservation of biodiversity. The keywords of this lecture can be seen here. The Convention on Biological Diversity and the Nagoya Protocol recognizes the importance of documenting biodiversity. So, when we say documenting biodiversity, it is not just documenting the biological diversity, but it also includes documenting the traditional knowledge which is associated with the biodiversity.

So, when we look at the preamble of the CBD, it recognizes the lack of information and knowledge regarding biological diversity. So, generally there is a lack of information and knowledge regarding various aspects related to biodiversity. And article 8J states that each contracting party of the Convention shall as far as possible and as appropriate subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities, embodying traditional lifestyle, relevant for conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices. So, CBD also recognizes through article 8J the need for preserving and maintaining traditional knowledge.

So, as we understand traditional knowledge may be existing in different situations. So, some of them may be already codified, some of them may be remaining only as an oral knowledge, some of them may have some sacred sense, some other aspects may also be involved with traditional knowledge. So, article 8J generally says that the state shall take measures to preserve and maintain the traditional knowledge of indigenous people and local communities. The Nagoya Protocol in its preamble further recognizes the unique circumstances for traditional knowledge associated with genetic resource is held in countries which may be oral, documented or in other forms reflecting a rich cultural heritage relevant for conservation and sustainable use of biological diversity. So, as I said sometimes the traditional knowledge may be already in a documented form.

So, sometimes it may be in ancient scripts or in modern day publications, but many times traditional knowledge may be existing only in oral form which is transferred from one generation to another without any kind of documentation. So, there are chances that such knowledge may be lost over a period of time. So, there is a need to document such traditional knowledge and preserve them for future generations. The Biological Diversity Act when it establishes the biodiversity management committees, they are given with the primary function of documenting biodiversity and traditional knowledge. So, why this documentation of traditional knowledge is very important? So, in the past we have seen several instances of biopiracy happening with regard to traditional knowledge and biological resource from India.

So, what is biopiracy? Biopiracy refers to misappropriation of biological resource or associated knowledge through patenting. So, it is unauthorized appropriation of knowledge or genetic resource by seeking exclusive monopoly control through patenting or other forms of intellectual property rights. So, what happens is the traditional knowledge or bio resource from one country will be taken by scientist or industry from another country without any kind of permission and then they will do some research and develop innovations. So, now there is lot of scope for developing innovations using various components of biodiversity. So, once these innovations are developed then they will go for patenting or obtaining any type of intellectual property rights applicable in the scenario and then once the patenting is done then it constitutes a monopoly.

So, that is how misappropriation of genetic resource or traditional knowledge happened which is commonly called as biopiracy. The genetic resource traditional knowledge of a community or a country is accessed without their prior informed consent. So, without any form of consent the knowledge or the resource is taken then innovations are developed using research on these genetic resource and traditional knowledge and subsequently patent or intellectual property rights is obtained on such innovations. So, this appropriation happens without prior informed consent or any kind of fair compensation to the communities or the people or the country from where the traditional knowledge or the genetic resource is accessed. So, in the recent past India has seen several such instances of biopiracy with regard to biological resource and traditional knowledge obtained from India.

In 1994 there was a case where the European patent office granted patent to an invention which is in effect covering the fungicidal properties of neem oil. Similarly, there was another controversy regarding a patent over turmeric which was claiming the wound healing properties of turmeric. So, these are actually traditional knowledge belonging to India. So, but there have been several attempts in the past to patent these types of innovations which are based on traditional knowledge obtained from India. So, these

instances of biopiracy necessitated governmental action to oppose these patents and prevent such cases in future.

So, this necessitated the need for documentation. So, why documentation is required because in order to oppose a patent the prior art has to be shown. So, prior art is any evidence that say that an innovation was already publicly known or available in all or in part before effective filing date of the patent application. So, in order to oppose the patent application which is filed which is the result of a biopiracy a document is required in order to show that there is a prior art existing. So, traditional knowledge should exist as a prior art then only the patent on traditional knowledge can be opposed on that ground.

But many countries requires that the prior art has to be in a published form. So, for example, United States requires that it has to be described in a printed publication. So, unless it is described in a printed publication then it does not constitute prior art. So, this necessitated that even oral knowledge has to be recorded and converted into a documented form in order to protect it from biopiracy. So, that is how the traditional knowledge digital library project was initiated by the government in 2001.

So, the traditional knowledge digital library was started as a collaboration between CSIR, Ministry of AYUSH, Ministry of Health and Family Welfare and Ministry of Science and Technology. So, an interdisciplinary term team is involved in the creation of TKDL for Indian systems of medicine including a traditional medicinal experts from Ayurveda, Unani, Siddha, Yoga, patent examiners, IT experts, scientists and other experts. The traditional knowledge digital library initially focused on converting the traditional knowledge which is already in a documented form in different Indian languages into foreign languages. So, the TKDL was made available to patent examiners in five international languages English, German, French, Spanish and Japanese for establishing the prior art. So, the main purpose was to develop a document which would serve as a prior art in order to oppose future cases of biopiracy.

So, traditional knowledge digital library is in effect a computerized library of traditional knowledge on the use of medicinal and other plants that can be easily navigated by the patent examiners in order to search for prior art. It seeks to prevent the granting of patents for products developed utilizing traditional knowledge where there has been little or any inventive step. So, if the invention is purely based on traditional knowledge then the traditional knowledge digital library provides a documentary proof that there is a prior art which is already existing and thus the patent cannot be granted. It intends to act as a bridge between the information recorded in ancient Indian languages Sanskrit, Urdu, Arabic, Persian and Tamil and then patent examiners who can access this information through the portal and then check whether there is a prior art which is already existing. The traditional

knowledge from the existing literature in local languages like Sanskrit, Urdu, Arabian, Persian, Tamil were converted into digital format and then made available in five international languages.

So, that the patent examiners in different jurisdictions like European patent office, US patent office etcetera can access this information and then check the validity of the patent application. It facilitates access to information which is not easily available to patent examiners. So, searching for a prior art with regard to traditional knowledge is very difficult. So, traditional knowledge digital library eases this process. Patent offices around the world was able to track down and investigate any common usage or prior art with regard to traditional knowledge and then prevent patents from being granted and biopiracy taking place.

It ensures defensive protection of already documented traditional knowledge. So, traditional knowledge digital library in the starting covered only already documented traditional knowledge. So, already documented traditional knowledge which was existing in Indian languages was converted into a digital format and then also translated into different foreign languages. Recently the widening access of traditional digital knowledge digital library database to other users other than patent offices was authorized by the cabinet in August 17, 2022 and the process is undergoing now. So, compared to traditional knowledge digital library the people's biodiversity register has more coverage.

The Indian parliament while enacting the biological diversity act in 2002 provided for a three-tier administrative structure for the implementation of biodiversity governance. So, in this three-tier structure at the central level there is national biodiversity authority in every state there is a state biodiversity board and in every local body there is a biodiversity management committee. And this biodiversity management committee is vested with an important function to document biodiversity in their local jurisdiction. So, every local body in the country has to constitute a biodiversity management committee and the main function of this biodiversity management committee will be to document the biodiversity and the traditional knowledge in their locality and this has to be done in consultation with the local people. So, many times the traditional knowledge which is going to be documented in the people's biodiversity register by the BMC may be in oral form also.

So, while the traditional knowledge digital library was covering only already documented traditional knowledge the people's biodiversity register goes to the next step and then even covers the traditional knowledge which is in oral form. Rule 22 of the biological diversity rules provides for the constitution of biodiversity management committee and details its main functions. The main function of biodiversity management committee is to prepare people's biodiversity register in consultation with local people. So, the preparation of

people's biodiversity register shall be in consultation with the local people. The register shall contain comprehensive information on availability and knowledge of local bio resources, their medicinal or any other use or any other traditional knowledge associated with them.

So, it is not just documenting biodiversity or just traditional knowledge it should have a comprehensive coverage of the availability of knowledge regarding local biological resource, their medicinal or other properties or other traditional knowledge which is associated with them. So, the people's biodiversity register is going to be a comprehensive document which gives full details regarding the species distribution in the locality and the associated traditional knowledge which is available. Rule 22 clause 8 states that the national biodiversity authority shall take steps to specify the form of the people's biodiversity register and the particulars it shall contain and the format for electronic database. So, this is actually two things. So, in the first part who will specify the form and the particulars which has to be contained in the people's biodiversity register.

So, that function is given to the national biodiversity authority. So, the national biodiversity authority should specify the form and the particulars which shall be contained in the people's biodiversity register and that format has to be uniformly forward followed by the biodiversity management committees across the country. And on the second part it also uses the word electronic database. So, the national biodiversity authority also has to develop a format for the electronic database. So, this also gives an indication that people's biodiversity register may not be only in physical format it can also have a electronic database.

So, that is going to be very useful in identifying traditional knowledge and using it this information to prevent biopiracy. The authority and the state biodiversity boards shall provide guidance and technical support to the biodiversity management committees for the preparation of people's biodiversity registers. So, the preparation of people's biodiversity registers is the function of biodiversity management committee. So, it has to be prepared by the biodiversity management committees, but technical support and guidance has to be given by the national biodiversity authority and the state biodiversity boards. The people's biodiversity registers shall be maintained and validated by the biodiversity management committee.

So, the preparation maintaining and validation of people's biodiversity registers is the function of biodiversity management committees. So, that means that the biodiversity management committees have complete control over the development of people's biodiversity registers and its maintenance. So, the biodiversity management committees will be owning the people's biodiversity registers. The role of biodiversity management

committee in the preparation of PBRs. So, section 41 and rule 22 specifically provides that the main function of biodiversity management committee will be to document biodiversity including preservation of habitats, conservation of land races, folk varieties, cultivars, domesticated stocks, breeds of animals and microorganisms and chronicling of knowledge relating to biodiversity.

So, this means that the main function of biodiversity management committee is to document biological diversity and the associated traditional knowledge. But it is not just giving preliminary information, but it should have a comprehensive coverage regarding the biodiversity of that locality. So, it should have information regarding preservation of habitats, conservation of land races, folk varieties and cultivars, information regarding domesticated stocks, breeds of animals, microorganisms and the traditional knowledge which is associated with these biodiversity. So, the preparation of the people's biodiversity registers will be done by the biodiversity management committee and the guidance and technical support for this purpose will be given by the national biodiversity authority and the state biodiversity boards. The role of national biodiversity authority in the preparation of people's biodiversity registers.

Rule 12 states that authority may perform following functions and one of the function is to take steps to build up database and to create information and documentation system for biological resources and associated traditional knowledge through biodiversity registers and electronic databases to ensure effective management, promotion and sustainable So, building up of database and a documentation system or preparation of people's biodiversity registers is not only the job of biodiversity management committee. So, the national biodiversity authority also has a vested function regarding preparation of this database. So, it is the rule specifically provides that building up a database creation of information and documentation system through biodiversity registers and electronic database is a very important function of the national biodiversity authority. The rule 22 provides that the authority shall take steps to specify the form of people's biodiversity register and the particulars it shall contain and the format of electronic database. So, as I said the national biodiversity authority shall specify the form and particulars of the people's biodiversity registers.

So, in exercise of this function the national biodiversity authority has already issued guideline regarding the form or format in which the people's biodiversity registers has to be maintained. And secondly the format of electronic database also has to be specified by the national biodiversity authority. In this context I must also say that there is a exercise going on at national level in order to develop electronic database of all the people's biodiversity registers in the country. The authority and the state biodiversity boards has a function to provide guidance and technical support to the biodiversity management

committees for the preparation of people's biodiversity registers. So, the biodiversity management committees will be existing at the local level.

So, that means, in every local body in the country there will be a biodiversity management committee, but many times the biodiversity management committees will not have the capacity or expertise to document biodiversity and the traditional knowledge in that locality. So, in such context the guidance and the technical support for the development of people's biodiversity registers shall come from the national biodiversity authority and the state biodiversity boards. The protection of traditional knowledge under the biological diversity act. So, apart from people's biodiversity registers there is also another provision section 36 which provides the central government to develop national strategies plans etcetera for conservation of biological diversity. So, in this context the subsection 5 states that the central government shall endeavor to respect and protect the knowledge of local people relating to biodiversity as recommended by the national biodiversity authority through such measures which may include registration of such knowledge at local state or national level and other measures for protection including sui generis system.

So, apart from the people's biodiversity register section 36 clause 5 of the biological diversity act also provides for development of a registration mechanism for the traditional knowledge which is associated with the biological resource. It also provides that a protection mechanism can also be evolved by the central government as recommended by the national biodiversity authority and this can also be in the form of a sui generis system. So, the traditional knowledge is adequately protected under the biological diversity act by preparation of people's biodiversity registers and also through this provision which provides for development of a registration mechanism. The people's biodiversity register has an important role in facilitating access and benefit sharing. The people's biodiversity registers provides comprehensive information regarding the distribution of species and its availability in a locality.

So, people's biodiversity registers will have comprehensive information regarding what are the species that are available in their in that locality the threat status of those species whether the species is abundantly available or whether it is threatened or endangered all this information will be in the people's biodiversity register. So, this document will help in deciding sustainable utilization. So, when an application is received for accessing a particular biological resource from the locality of a biodiversity management committee the appropriate authority can look into the people's biodiversity register and see whether the species is abundantly available threatened or endangered or what is the threat status of that species. But so, if the species is abundantly available then the sustainable utilization can be allowed, but if the species is threatened or endangered then the utilization can be allowed only in a very careful manner. The people's biodiversity register also serves as an

evidence with regard to the ownership of traditional knowledge.

So, when the traditional knowledge is documented the community which is holding the knowledge or the people who are maintaining this knowledge their information will also be recorded in the people's biodiversity register. So, the format provides for giving the details of the community also in the people's biodiversity register. So, when an issue comes or a dispute comes that a people's biodiversity register can also serve as an evidence regarding the ownership or custodianship of traditional knowledge. The people's biodiversity register also helps in the distribution of beneficiary amounts. So, people's biodiversity register gives the information regarding the availability of a species in a locality and the need for conservation initiatives.

So, when the biodiversity authority at the central level or the state biodiversity board is discussing on the distribution of beneficiary amounts then the concerned authorities can also look into the people's biodiversity register and decide upon the allocation of funds from the benefit sharing fund. The people's biodiversity register also has an important role in conservation of biological diversity. So, PBRs contain comprehensive information on the distribution of species and the threat status in that locality. So, it helps in sustainable resource management because the decision makers can easily understand the availability of the species in that locality and its threat status.

It assists in making informed decisions. So, informed decisions is very very important in the context of sustainable utilization or the conservation of biological diversity. So, the people's biodiversity registers assist in making informed choices. It also improves the quality of environmental decision making because many times the environmental decision making is affected due to the lack of information regarding biodiversity. So, when people's biodiversity registers are properly prepared it gives comprehensive information regarding the species distribution in that locality. So, if it is available to the decision maker then it definitely improves the quality of environmental decision making.

So, the role of people's biodiversity register is also relevant for the protection of traditional knowledge. The documentation of people's biodiversity register helps in recording of oral traditional knowledge. So, already documented traditional knowledge is covered in the traditional knowledge digital library also, but when it is in oral form it is not recorded or documented anywhere. But the process of preparation of people's biodiversity register gives an opportunity to record traditional knowledge which is existing only in oral form. Many times over a period of time the traditional knowledge may be lost or forgotten if it is not practiced or documented.

So, the preparation of people's biodiversity register helps in the preservation of such

traditional knowledge. It also serves as an evidence regarding the existence and the ownership of traditional knowledge. So, the document can be used to oppose patent applications in cases of biopiracy. It serves as an evidence regarding the existence of the traditional knowledge and also regarding the ownership of the traditional knowledge. In effect it gives defensive protection to traditional knowledge against misappropriation as it serves as a documentary evidence.

To conclude the people's biodiversity register the documentation of PBRs helps in sustainable resource management, identification of areas that require immediate attention, protection of traditional knowledge and better environmental decision making. The documentation helps the local communities in claiming ownership over biodiversity and traditional knowledge and the process of preparation of PBR with the involvement of local people also leads to creation of mass awareness regarding the importance of conserving biodiversity. The PBRs provides information on local biodiversity hotspots, sacred groups and other biologically significant areas locally endemic and endangered species. The PBRs can also focus on the diversity of people, their involvement with biodiversity, their knowledge and expectation and special features such as rituals and equal and even the ecological history of the area.

Thank you very much for listening to the lecture. I hope you are all enjoying the course.