

Biodiversity Protection, Farmers and Breeders Right

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Lecture 32 : Principles of Biodiversity Governance

Welcome to the course on Biodiversity Protection Farmers and Breeders Right. This lecture will be about Principles of Biodiversity Governance. The concepts covered in this lecture are conservation, sustainable utilization, sustainable development, access and benefit sharing principle, fair and equitable, monetary benefit sharing and non-monetary benefit sharing. The keywords of for this lecture are conservation, sustainable utilization, sustainable development, access and benefit sharing, monetary and non-monetary benefit sharing. The active management of earths natural resources and environment to ensure their quality is maintained and that they are wisely used is the key objective of conservation. The concept is used in the context of biodiversity, environment, natural resources including their protection and management.

It refers to the act of preserving, guarding, protecting and meanwhile keeping in mind the sustainable character and wise use of biodiversity. So, conservation of biodiversity is not just following the protectionist approach. It is understanding the sustainable character of biodiversity and the utilization is allowed only in restricted manner that it will not lead to complete deterioration of biodiversity, but instead the replenishment of resources is always ensured. So, the conservation as a key objective of the conventional biological diversity is always focused on allowing sustainable utilization of biodiversity.

The species that are now disappearing hundreds or even 1000 times faster than the natural rate of extinction. The scientific community has repeatedly sounded the alarm on the triple planetary crisis of climate change, natural and biodiversity loss and pollution and the waste. Over half of the worlds total GDP is moderately or highly dependent on nature which also provides medicine and other social benefits. We are completely dependent upon the nature around us for our sustenance and survival. So, any degradation that is caused to our natural ecosystem has direct impact on the survival of mankind.

The need to conserve biodiversity is not now restricted to terrestrial environment. Biodiversity is not restricted to terrestrial environment, but it includes marine and even atmospheric environment as well. Oceans also play a vital role in mitigating the climate crisis. They also contain countless species of which there is very little information. There could be the source of novel medicines and materials.

So, conservation that is focused on only on the terrestrial environment will not serve any

purpose. So, a holistic approach to environmental conservation is very much needed which will cover all aspects of ecosystem around us which includes marine environment, atmospheric environment and several other components of environment which we see around us. Sustainable utilization is one of the key objectives of the convention on biological diversity. To use biodiversity in a sustainable manner means the use of natural resource at a rate that the earth can renew them. It is a way to ensure that we meet the needs of both present and future generations.

So, the key objective of sustainable utilization is in ensuring that we meet the needs of both the present and the future generations. So, the utilization of biodiversity shall be in a sustainable manner which means that the use of natural resources shall be at a rate that the earth can renew them. As the human population increases so does the pressure on ecosystems since we draw even more resources from them. Our ecological footprint on the planet is unsustainable and will become unbearable unless we change our consumption pattern and our behavior in general. In the past human beings had adapted to changing conditions by increasing productivity, but now we have reached the limit of earth's capacity.

So, the population growth has a direct impact on the environment around us. In order to meet the needs of the growing population the burden has impact on the environment which is around us and now it has already reached the limits of earth's capacity. Today our only option is to manage biodiversity and resources in a sustainable manner that is reducing waste wherever possible using the principles of adaptive management and taking into account the traditional knowledge which contributes to the maintenance of ecosystem services. Within the convention on biological diversity sustainable use principles are applied to sectors that most affect biodiversity such as agriculture, forestry, fisheries, tourism and waste management. Sustainable utilization being the key objective of CBD the while adopting this concept the governments have committed themselves to integrate conservation and sustainable use into their policies at national level by minimizing biodiversity laws and helping local populations to restore degraded areas.

Together we can make this a new era of environmentally sound economic development while adopting the convention on biological diversity governments how committed to its principles. So, this requires adoption of plans and policies and legal frameworks at the national level to give effect to its key objectives. Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. So, sustainable development as a concept is focused on the ability of future generations to meet their own needs. So, whatever we do at the present stage in order to meet our developmental objectives should not compromise the ability of future generations to meet their own needs.

Sustainable development calls for concerted efforts towards building an inclusive sustainable and resilient future for people and the planet. For sustainable development to be achieved it is crucial to harmonize three core elements one is economic growth, second is social inclusion and third is environmental protection. These elements are interconnected all are crucial for the well being of individuals and societies. Eradicating poverty in all its forms and dimensions is an indispensable requirement for sustainable development. To this end there must be promotion of sustainable inclusive and equitable environmental growth creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion and promoting integrated and sustainable management of natural resources and ecosystems.

So, in order to meet the objectives of sustainable development a holistic approach towards environment and the human beings together is required in order to meet the needs of the present generation and the future generations as well. Access and benefit sharing is another core principle within the environmental governance. Access and benefit sharing refers to the way in which genetic resources may be accessed and how the benefits which are resulting from their utilization can be shared between people or countries that utilize the resource and the people or countries that provide them. Providers of genetic resource are either governments or civil society bodies which can also include private landowners and communities within the country who are entitled to provide access to genetic resource and share the benefits resulting from their use. The access and benefit sharing provisions of the Convention on Biological Diversity are designed to ensure that physical access to genetic resources is facilitated and the benefits obtained from their use are shared equitably with the providers.

In some cases this also includes valuable traditional knowledge associated with genetic resources that comes from indigenous people and local communities. So, access and benefit sharing as a principle requires any uses of biodiversity to get the prior approval from the providers of biodiversity. So, the providers of biodiversity can be governments, civil society bodies, it could be landowners, it could be communities, it could be indigenous people, it could be local communities. So, when a user of biodiversity wants to access any component of biodiversity for the purpose of research, commercial utilization or any other advanced type of utilization they have to take the prior informed consent from the provider of biodiversity. The access and benefit sharing provisions which are contained in the Convention on Biological Diversity and its protocol that is the Nagoya Protocol constitutes the international legal framework related to access and benefit sharing.

The benefits to be shared under the Convention on Biological Diversity can be monetary such as sharing of royalties when the resources are used to create a commercial product or

it can also be in non-monetary terms such as development of research skills and knowledge. It is vital that both the users and providers of biodiversity understand and respect institutional framework such as those outlined in the Convention on Biological Diversity and the bond guidelines. These will help the governments to establish their own national framework which will ensure that access and benefit sharing principle happens in a fair and equitable manner. The Convention on Biological Diversity recognized the national sovereignty over biodiversity which is existing within the territory of a signatory. Nagoya Protocol provided for a clear and transparent international regime to give effect for the principles of Convention on Biological Diversity.

Both the CBD and the Nagoya Protocol requires the state parties to develop national legal framework in order to meet the commitments under the international legal framework. So, this requires the state parties to have an access and benefit sharing legislation which will deal with the resources over which that country is having the sovereign rights. It also requires the state parties to institute user country measures which will address the utilization of foreign bio resources within the territory of a state party. Access and benefit sharing is based on prior informed consent being granted by the provider to a user and the negotiations between both the parties to develop mutually agreed terms to ensure that the fair and equitable sharing of genetic resource and associated benefits happens. Prior informed consent is thus a permission given by the competent national authority of a provider country to the user prior to accessing the genetic resource in line with an appropriate national legal and institutional framework.

So, the national institutional framework will define what is prior informed consent in accordance with the national context. So, if a person wants to access a bio resource from a country then he has to comply with the requirement of prior informed consent in accordance with the national legislation of that provider country. Sometimes the prior informed consent has to be obtained from the government. In certain cases it may be from some institutional mechanism which is constituted under the national legal regime. In certain scenarios especially like in the case of traditional knowledge it could be from the local communities or the indigenous people who are the holders of such traditional knowledge or the conservers of biodiversity.

Mutually agreed terms is an agreement reached between the providers of genetic resources and the users on the conditions of access and use of resources the benefits to be shared between both the parties. These conditions are required under article 15 of the CBD which was adopted in 1992 and provides a global set of principles for access to genetic resources as well as fair and equitable distribution of benefits that result from their use. So, mutually agreed terms is in the form of a legal agreement. So, after obtaining the prior informed consent from the community or the provider of biodiversity they also have to discuss the

mutually agreed terms or MAT which will define the legal rights and obligations of both the providers and users of biodiversity. It will also specify the benefit sharing requirement that is the requirement to share the benefits after the utilization of the bio resource which is accessed under the mutually agreed terms.

The providers of genetic resource are the states from which the bio resource is directly accessed. It could be a state which is the country of origin of that genetic resource or a country which has accessed the bio resource in accordance with the Convention on Biological Diversity. CBD recognized that states have sovereign rights over their natural resources under their jurisdiction. Laws within the provider country may entitle others for example, indigenous and local communities to also negotiate terms on access and benefit sharing. So, in certain countries the national legal regime will require that the prior informed consent or the negotiation of mutually agreed terms has to happen between the user of the resource and the indigenous people or local community which is holding the knowledge or conserving the resource.

The participation of indigenous and local communities is necessary especially in cases where traditional knowledge associated with genetic resource is going to be accessed. The users of genetic resource are responsible for sharing the benefits derived from the genetic resource with the providers of resource. They seek access to genetic resource for a wide range of purposes that could be a basic research, it could be research for the development of new products, it could be advanced research and development which is happening in the industrial framework. The Nagoya protocol speaks of the different ways in which monetary and non-monetary benefits could be shared by the user with the provider of bio resource. Monetary benefit sharing can be in many number of ways, it could be in the form of access fees or fee per sample collected or otherwise acquired.

So, that means while accessing the resource itself the user may have to pay an access fees or fee per sample which is directly paid to the provider of the bio resource or to the government in accordance with the national legal framework. The monetary benefit sharing can also be in the form of an upfront payment. So, in case the user is going to use the bio resource for some advanced research or product development. So, in such cases the provider can require the user to give an upfront payment. It can also be in the form of milestone payment wherein the provider will require the user to share the benefits in accordance with the achievement of different milestones.

It can also be in the form of royalties especially in the case of intellectual property rights. It can also fee be in the case of license fees especially in cases of commercialization. Special fees to be paid to some funds supporting the conservation and sustainable use of biodiversity can also be insisted as part of monetary benefit sharing. Salaries and

preferential terms were mutually agreed can also be a type of monetary benefit sharing. Monetary benefit sharing can also be in the form of research funding wherein the user of the resource will fund the research which is undertaken by the provider country or it can be in the form of joint ventures where the user and the provider will enter into a mutually agreed terms so as to constitute a joint venture for the utilization of biodiversity.

In case of intellectual property rights it can also be in the form of joint ownership. So, for example, an invention is developed which is based on traditional knowledge or genetic resource which is given by the provider. So, in such cases once the invention is developed and a patent application is filed then the user can opt to include the provider as one of the co-applicants of the patent. The protocol also provides for different non-monetary benefit sharing options. The non-monetary benefit sharing can be in the form of sharing of research and development results.

So, after the research and development happens the user of the bio resource can share the details of research and development with the provider. It can be in the form of collaboration, cooperation and contribution in scientific research and development programs particularly biotechnological research activities where possible the party is providing genetic resources. So, it could be in the form of collaboration, cooperation and contribution in research project between the providers and users of biodiversity. It can be allowing participation of providers in the product development. So, the user can involve the providers in the product development process.

It can be in the form of collaboration, cooperation and contribution to education and training. It can also be in the form of admittance to excite to facilities of genetic resources and databases. So, in such case the provider will be given access to the facilities where the genetic resource is kept or the database related to advanced research is maintained. It can be in the form of transfer to the provider of genetic resource of knowledge and technology under fair and most favourable terms including on consensual and preferential terms were agreed in particular knowledge and technology that make use of genetic resource including biotechnology or that are relevant to the conservation and sustainable use of biodiversity. The nonmonetary benefit sharing can also be in the form of strengthening capacities for technology transfer.

Nonmonetary benefit sharing can also be in the form of institutional capacity building. So, the provider may have an institutional setup for regulating access to biodiversity and also for utilizing the bio resources for advanced scientific research. In such cases the user can help the provider in institutional capacity building. It can be also in the form of human and material resources to strengthen the capacities of administration and enforcement of access regulations. The nonmonetary benefit sharing can also be in the form of training related to

genetic resources with the full participation of countries providing the genetic resource and were possible in such countries.

The user can also provide some training to the citizens of the provider country or the members of the community from where the traditional knowledge or the resource is accessed. Access to scientific information relevant to conservation and sustainable use of biological diversity is also a form of nonmonetary benefit sharing. Nonmonetary benefit sharing can also be in the form of contributions to local economy, research directed towards priority needs, institutional and professional relationships and it can also be in the form of food and livelihood security benefits. It can also be in the form of social recognition and joint ownership of relevant intellectual property rights. To conclude the earth's biological resources are vital to humanities economic and social development.

As a result there is growing recognition that biological diversity is a global asset of tremendous value to present and future generations. At the same time the threat to species and ecosystems has never been so great as it is today. The species extinction caused by human activities continues at a very alarming rate. The convention on biological diversity was inspired by the world community's growing commitment towards sustainable development. It also represents a dramatic step towards the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the use of genetic resources.

The references of this lecture can be seen here. Thank you very much for listening to the lecture. I hope you are enjoying the course.