KLE LAW ACADEMY BELAGAVI

(Constituent Colleges: KLE Society's Law College, Bengaluru, Gurusiddappa Kotambri Law College, Hubballi, S.A. Manvi Law College, Gadag, KLE Society's B.V. Bellad Law College, Belagavi, KLE Law College, Chikodi, and KLE College of Law, Kalamboli, Navi Mumbai)

STUDY MATERIAL

for

IPR II

Prepared as per the syllabus prescribed by Karnataka State Law University (KSLU), Hubballi

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Course –III: Optional –V

Intellectual Property Rights – II

Study Materials on Intellectual Property Rights – II

Objectives:

Intellectual Property law has assumed great importance in recent times as a result of the recognition that "knowledge is property". The creations of the human brain as IP Legislations are required to be understood and protected. The syllabus encompassing all relevant IP Legislations in India with a view to understand and adjust with changing needs of the society because creative works useful to society and law relating to innovation/creativity i.e. Intellectual Property is one of the fastest growing subjects all over the globe because of its significance and importance in the present era. Disseminate information on national and international IPR issues. The course is designed with view to create IPR consciousness; and familiarize the learners about the documentation and administrative procedures relating to IPR in India.

Course Contents-

Unit- I

Introduction, Overview and History of the concept of Copyright

Introduction and Overview

Copyright is a legal right created by the law of a country that grants the creator of original work exclusive rights for its use and distribution. This is usually only for a limited time. The exclusive rights are not absolute but limited by limitations and exceptions to copyright law, including fair use.

Copyright is a form of intellectual property, applicable to certain forms of creative work. Under US copyright law, legal protection attaches only to *fixed* representations in a tangible medium. It is often shared among multiple authors, each of whom holds a set of rights to use or license the work, and who are commonly referred to as rights holders. These rights frequently include reproduction, control over derivative works, distribution, public performance, and "moral rights" such as attribution.

Typically, the *duration* of a copyright spans the author's life plus 50 to 100 years. Some countries require certain copyright formalities to

establishing copyright, but most recognize copyright in any completed work, without formal registration. Generally, copyright is enforced as a civil matter, though some jurisdictions do apply criminal sanctions.

Most jurisdictions recognize copyright limitations, allowing "fair" exceptions to the creator's exclusivity of copyright and giving users certain rights. The development of digital media and computer network technologies have prompted reinterpretation of these exceptions, introduced new difficulties in enforcing copyright, and inspired additional challenges to copyright law's philosophic basis. Simultaneously, businesses with great economic dependence upon copyright, such as those in the music business, have advocated the extension and expansion of copyright and sought additional legal and technological enforcement.

The word ‘copyright’ is derived from the expression ‘copier of word’ first used in the context. The word ‘copy’ is presumed to date back to 1485 A D and was used to connote a manuscript or other matter prepared for printing.

Word ‘copy’ according to Black’s Law Dictionary means “transcript, imitation, reproduction of an original writing, painting, instrument or the like”.

Copyright as defined in the Oxford English Dictionary is an exclusive right given by law for a certain term of years to an author, composer, etc., (or his assignors) to print, publish and sell copies of his original work.

Copyright in some form seems to have been recognized in ancient times. The Roman law adjudged that if one man wrote anything on the paper or parchment of another, the writing should belong to the owner of the blank material; meaning thereby the mechanical operation of writing by the scribe deserved to receive satisfaction.

The statutory definition of copyright means the exclusive right to do or authorize others to do certain acts in relation to –

1. Literary, dramatic or musical works;
2. Artistic work;
3. Cinematograph film; and
4. Sound recording.

History of Copyright

Copyright came about with the invention of the printing press and with wider literacy. As a legal concept, its origins in Britain were from a reaction to printers' monopolies at the beginning of the 18th century. Charles II of England was concerned by the unregulated copying of books and passed the Licensing of the Press Act 1662 by Act of Parliament, which established a register of licensed books and required a copy to be deposited with the Stationers' Company, essentially continuing the licensing of material that had long been in effect.

In the beginning copyright was confined to books only. That was under the reign of Queen Anne in 1709. Engravers got protection under copyright in 1734, textile designers in 1787, sculptors in 1798, painters, artists & photographers in 1862.

Performer's rights got recognition in 1830 and copyright was extended to musical works in 1842. Copyright Act of 1911 was extended to cover the right to production of records and prevent unauthorized reproduction of recordings. In 1956, three more rights of the author namely:

1. Copyright in Cinematograph film,
2. Broadcasting, and
3. Topographical formats were included.

That was about the Copyright Act in England.

Indian Copyright Act followed the same pattern of development ever since the enactment of the first Copyright Act in 1914 which was modelled on British Act of 1911.

After independence the Act needed a thorough revision in view of the advanced means of communications like broadcasting and litho photography. There also arose the necessity of creating administrative bodies to implement the several provisions of the Act. Accordingly Copyright Act of 1957 was reenacted making a provision for establishment of Copyright Office and a Copyright Board.

The 1886 Berne Convention first established recognition of copyrights among sovereign nations, rather than merely bilaterally. Under the Berne Convention, copyrights for creative works do not have to be asserted or

declared, as they are automatically in force at creation: an author need not "register" or "apply for" a copyright in countries adhering to the Berne Convention.

As soon as a work is "fixed", that is, written or recorded on some physical medium, its author is automatically entitled to all copyrights in the work, and to any derivative works unless and until the author explicitly disclaims them, or until the copyright expires.

The Berne Convention also resulted in foreign authors being treated equivalently to domestic authors, in any country signed onto the Convention. The UK signed the Berne Convention in 1887 but did not implement large parts of it until 100 years, later with the passage of the *Copyright, Designs and Patents Act of 1988*. The United States did not sign the Berne Convention until 1989.

The regulations of the Berne Convention are incorporated into the World Trade Organization's TRIPS agreement (1995), thus giving the Berne Convention effectively near-global application. The 2002 WIPO Copyright Treaty enacted greater restrictions on the use of technology to copy works in the nations that ratified it.

While the adoption of the Berne Convention has had many benefits for the creators of original works, the systems for protecting unpublished works remain fragmented internationally, with some states offering optional registration services within their own jurisdiction, while others offer no kind of registration at all. Without registration, it can be difficult to judge who the rightful owner of a copyrighted work is.

The national registration systems may not be willing to offer support in a dispute in another country. The **Intellectual Property Rights Office** (also known as the **IP Rights Office** and the **IPRO**) was created in an effort to create a central international point of deposit for unpublished works from around the world, via its **Copyright Registration Service**. The hope is that this can provide a standard point of registration for all citizens of Berne Convention nations.

Nature and Salient Features of Copyright Act

Introduction

Copyright is a form of intellectual property protection granted under the Indian Copyright Act 1957 to the creators of original works of authorship such as literary works (including computer programmes, tables and compilations), dramatic, musical and artistic works, cinematographic films and sound recordings.

It is fairly clear that "modern" copyright is a creation of statute, and in particular, the creation of the 1709 Statute of Anne. Although there did exist proto-copyright mechanisms in various parts of the world, it would appear that none of them were comparable to the form of copyright contemplated by the 1709 statute.

The changes which have been observed over the last three hundred or so years in the realm of copyright law have for the most part dealt with the nature of works protected, the nature of the protection granted to copyrightable works, and the length of time for which protection would be granted.

Nature of Copyright Protection

Automatic

Copyright is an unregistered right which subsists automatically as soon as the work that is eligible for protection is created and recorded on some medium.

Originality

The work protected need not be new. However, it must be original in the sense that it is not copied from some other source but is the result of an application of effort by the creator of the work.

Exclusions

Copyright protects the expression of ideas but not the idea or concept underlying a piece of work. For that reason, procedures, methods of operation and mathematical concepts are excluded from copyright protection.

Salient Features

The salient features of copyright protection are:

- It protects aesthetic creations without formalities.
- Registration is not necessary.
- It protects forms of expression of ideas only, not the ideas themselves.
- It is not concerned with the quality of the work.
- It gives protection to original works only.

Indian Copyright Law

In India the first Copyright Act was passed in 1914. The Act, presently in force was legislated in the year 1957.

Main Features of Copyright Act of 1957

1. Creation of Copyright Office and a Copyright Board to facilitate registration of Copyright and to settle certain kinds of disputes arising under the Act and for compulsory licensing of Copyright.
2. Definition of various categories of work in which Copyright subsists and the scope of the rights conferred on the author under the Act.
3. Provisions to determine the first ownership of copyright in various categories of works.
4. Terms of copyright for different categories of works.
5. Provisions relating to assignment of ownership & licensing of copyright including compulsory licensing in certain circumstances.
6. Provisions relating to performing rights of or by societies.
7. Broadcasting rights.
8. International Copyright.
9. Definition of infringement of Copyright.
10. Exception to the exclusive right conferred on the author or acts, which do not constitute infringement.
11. author's special rights
12. Civil & Criminal remedies against infringement.
13. Remedies against groundless threat of legal proceedings.

India being a member both of the Berne Convention and the Universal Copyright Convention, amended its Copyright Act of 1957, in 1983, 1984, 1992, 1994, 1999 and 2012 to bring the Indian law in conformity with the these international conventions.

The Copyright Act consists of 15 chapters

Chapter I – Section 1 to 8 contains the usual preliminary sections including the definitions. Some new rights also came to be recognized, with the result that some new terms have been incorporated and defined.

Chapter II – Section 9 to 12 establishes a copyright office under the control of the Registrar of Copyrights who, in turn, is required to act under the supervision and directions of the Central Government.

A register kept at the Copyright Office, in which the names of titles or works and the names and addresses of authors, publishers, and owners of copyright are entered. The Copyright Board can examine the reasonableness of the charges or royalties claimed by a copyright society and to consider applications for the grant of licences for public performances of works etc.

Chapters III to IV – Section 13 to 16 & Section 17 to 21 of the Act are really the heart and they deal with the meaning of a copyright and the works in which a copyright subsists, the ownership of a copyright and the rights of the owner (including on assignment of the copyright), the terms of the copyright and licences, etc.

The **term of a copyright is dealt with in Chapter V – Section 22 to 29** of the Act. Initially, the term was fixed at 50 years but by an amendment to the Act, the period was increased to 60 years. In the case of a published literary, dramatic, musical and artistic work (other than a photograph) the period is reckoned from the beginning of the year after the death of the author. In the case of a photograph, cinematograph film or a sound recording the period is reckoned from the year following the publication of the work.

Chapter VI – Section 30 to 32 of the Copyright Act deals with licensing of the copyright. The owner of a copyright is entitled to grant any interest in the copyright by a Licence given by him in writing.

Chapter VII – Section 33 to 36 concerns itself with Copyright Societies which is a new concept so far as the Copyright Act is concerned in as much as prior to the amendment of the Act in 1994.

Chapter VIII – Section 37 to 39 of the Act concerns itself with the rights of broadcasting organizations and of performers. This right subsists for 25 years. An amendment made in 1999 this right now subsists for 50 years.

Chapter IX – Section 40 to 43 of the Act deals with a copyright obtained in a foreign country. The applicability of the Copyright Act to foreign works is reciprocal.

Chapters X and XI – Section 44 to 50 & Section 51 to 53 of the Act deal with the Registration and Infringement of copyright while **Chapters XII to XIV – Section 54 to 62, Section 63 to 70 & Section 71 to 73** deal with civil remedies, criminal offences and Appeals under the Act.

The civil remedies postulated by the Act are those of an injunction, damages, and rendition of accounts, etc. The punishment for a criminal violation was, initially, punishable with imprisonment up to a period of one year or with fine or both but after piracy became a major problem, the period of imprisonment has been made a minimum of six months and it may extend up to three years. Similarly, a minimum fine of Rs.50,000/- can be imposed which may extend up to Rs.2,00,000/-

Chapter XV – Section 74 to 79 of the Act deal with the Miscellaneous Provisions.

Application Format for Registration

SUBJECT MATTER OF COPYRIGHT

Subject Matter of Copyright

In order to secure copyright protection what is required is that the author must have bestowed upon the work,

1. Sufficient judgment,
2. Skill, and
3. Labour or Capital.

In ***Walter v. Lane***, (1990) AC 539, it is immaterial whether the work is wise or foolish, accurate or inaccurate, or whether it has or has not any literary merit.

In another case ***Ravencraft v. Herbert***, (1980) RPC 103, copyright protects the skill and labour employed by the author in the production of his work.

The owner of a copyright has no monopoly in the subject matter. Others are at liberty to produce the same result (from common source) provided by do so independently and their work is original.

It has been said that in ***Ravencraft v. Herbert***, (1980) RPC 103, another person may create another work in the same general form provided he does so from his own resources and makes the work he so originates a work of his own by his own labour and industry bestowed upon it.

Case laws on copyright protection in form and not in idea

Jeffreys v. Boosey, (1854) 4 HCL 815.

Donoghue v. Allied Newspapers Ltd, (1937) 3 All ER 503.

Works in which Copyright subsists

Section 13 of the Act lists out the work, in which copyright subsists.

Subject to the provision of this section and the other provisions of this Act, copyright shall subsists throughout India in the following classes of works,

a) Original literary, dramatic, musical & artistic work,
b) Cinematograph films, and
c) Sound recording.

Literary work

It includes computer programmes, tables, compilations including computer database.

Dramatic work

It includes any piece for recitation, choreographic work or entertainment in a dumb show, the scenic arrangement or acting form of which is fixed in writing or otherwise but does not include a cinematograph film.

Musical work

Consists of music and includes any graphical notation of such work, but does not include any works or any action intended to be sung, spoken or performed with the music.

Artistic work

It means painting, a sculpture, a drawing, an engraving or a photograph, whether or no any such work possesses artistic quality.

A work of 'architecture' means any building or structure having an artistic character or design or any model for such building or structure.

Cinematograph film

Means any work of usual recording on any medium produced through a process from which a moving image may be produced by any means and includes a sound recording accompanying such visual recording and 'cinematograph' shall be construed as including any work produced by any process analogous to cinematography including video films.

Sound recording

A recording of sounds from which such sounds may be re-produced regardless of the medium on which such recording is made or method by which the sounds are produced.

Qualification for Copyright Subsistence

In order to qualify for copyright the work, apart from being original, should also satisfy the following conditions (except in the case of foreign works) –

1. The work is first published in India.
2. Where the work is first published outside India, the author at the date of publication must be a citizen of India. If the publication was made after the author's death the author must have, at the time of his death, been a citizen of India.
3. In the case of unpublished work the authors is on the date of making of the work, a citizen of India or domiciled in India. This however, does not apply to works of architecture.

These provisions do not apply to foreign works or works of International organizations. Section 40 of the Act empowers the Central

Government, by an order published in the official gazette, to bring foreign works within the scope of the Copyright Act so that all or any of the provisions of this Act shall apply to them.

Section 41 lays down the conditions with relating to the works of International organizations would be entitled to copyright throughout India –

1) Where

a) any work is made or first published by or under the direction or control of any organization to which this section applies, and

b) There would, apart from this section, be no copyright in the work in India at the time of the making or, as the case may be, of the first publication thereof, and

c) either –

i. the work is published in pursuance of an agreement in that behalf with the author, being an agreement which does not reserve to the author the copyright, if any, in the work, or

ii. under Section 17 any copyright in the work would belong to the organization;

there shall, by virtue of this section, be copyright in the work throughout India.

2) Any organization to which this section applies which at the material time had not the legal capacity of a body corporate shall have & be deemed at all material times to have had the legal capacity of a body corporate for the purpose of holding, dealing with and enforcing copyright & in connection with all legal proceedings relating to copyright.

3) The organizations to which this section applies are such organizations as the Central Government may, by order published in Official Gazette, declare to be organization of which one or more sovereign powers or the Governments thereof are members to which it is expedient that this section apply.

Literary work – What is Protected

It is the product of the labour, skill and capital of one man which must not be appropriated by another, not the elements, like, the raw

materials upon which the labour, skill and capital of the author have been expended.

To secure copyright for the product, it is necessary that the labour, skill and capital should be expended sufficiently to impart to the product some quality or character which the raw material did not possess and which differentiates the product from the raw material used.

Literary Quality

A literary work need not be of literary quality. Even so prosaic a work as an index of railway stations or a list of stock exchange quotations qualifies as a literary work if sufficient effort has been expended in compiling it, to give it a new and original character.

In ***Gleeson v. Denne***, (1975) RPC 471, it was held that, if one works hard enough, walking down the streets, taking down the names of people who live at houses and makes a street directory as a result of that labour, this has been held to be an exercise sufficient to justify in making claim to copyright in the work which is ultimately produced.

Some illustration of Copyright in Literary Work

Adaptation of Literary work

Copyright subsists in the original adaptation of another literary work because the adaptation itself can be a literary work. Adaptation in relation to literary work means the conversion of the work into a dramatic work by way of performance in public.

According to Section 2(a)(v) of the Act adaptation in relation to any work includes any use of such work involving the rearrangement or alteration.

Where the owner of a copyright in an original work licences another person to arrange or adapt it, e. g., to base a film script or a play upon a book, the copyright in the arrangement then vests in the arranger. The owner of the copyright in the original work does not own the copyright in the arrangement.

Abridgement of literary work

A genuine abridgement of a literary work is an original work and can be subject of copyright. It is entitled to copyright if it is new and original and the author has bestowed sufficient skill and labour upon it.

In ***Govindan v. Gopalakrishnan***, AIR 1995 Madras 391, the view expressed on Abridgement was that 'abridgement' is the reproduction of an original work in a much more precise and concise way. So a genuine abridgement of a literary work is an 'original work' and is the subject-matter of copyright.

Translation

In ***Blackwood v. Parasuraman***, AIR 1959 Madras 410, it was held that a translation of a literary work is itself a literary work and is entitled to copyright protection if it is original and the author has expended sufficient labour and skill on it.

Reports of Judicial Proceedings

The judgment or order of court, tribunal or other judicial authority is exempted from copyright protection.

Judgments of courts in Law Reports are collected by lawyers practicing in various courts. If the reporters or lawyers, along with the judgment also supply head notes prepared by them as part of their report, copyright in the head notes will vests in them.

In ***Jagdish Chandra v. Mohim Chandra***, AIR 1915 Cal 112, it was held that in the reports of judgments the reporter has no copyright but it cannot be said that in the selection of cases & in the arrangement of the reporting, the reporter does not have the protection of copyright law.

Head notes of law reports

The head notes of law reports are, therefore, original literary work which is entitled to copyright protection.

Historical work

The knowledge built upon a historical work can, however, be extracted. Such an extraction of knowledge from historical work can claim copyrighting in itself.

Letters

Copyright subsists in private letters, commercial letters and government letters as they are original literary works.

Private letters – The one who writes the letter

Commercial or Government letters – The employer in accordance with the provisions of Section 17(a) of the Act.

In ***Walter v. Lane,*** (1990) AC 539, it was held that letters addressed by one person to another are original literary work entitled to copyright and when a letter is dictated to a stenographer or a typist the copyright in the letter belongs to the person who has dictated the letter.

writer's Transcripts

Donoghue v. Allied Newspapers Ltd, (1973) 3 All England Reporter 503

Questionnaire for Collecting Statistical Information

Catalogues

Dictionaries

Compilation

Computer Programmes – Section 2(ffc)

Pocket diaries, calendars – Not Copyrightable

Single Word – Not Copyrightable

Code words

Question paper set for examination

Research Thesis and Dissertation

MEANING OF DRAMATIC, MUSICAL AND ARTISTIC WORKS

According to Section 13(1)(a), copyright subsists in original dramatic, musical and artistic work. Hence an understanding of the three terms, dramatic, artistic, and musical works is required.

Dramatic Work

According to Section 2(h), a dramatic work includes any piece of recitation, choreographic work or entertainment in dumb show, the scenic arrangement or acting form of which is fixed in writing or otherwise but does not include a cinematograph film.

Choreography and scenic arrangement or acting

Choreography is the art of arranging or designing of ballet or stage dance in symbolic language but in order to qualify for copyright protection, it must be reduced to writing since arrangement to qualify for copyright protection must be reduced to some permanent form.

Copyright subsists not only in the actual words of the work but in dramatic incidents created in the work. The use of such incidents by another would amount to infringement.

Film based on Newspaper Article

An interesting case in ***Indian Express v. Jagmohan,*** AIR 1985 Bombay 229, where the defendant made a stage play & a movie based on the central theme of certain series of articles published by the plaintiff namely purchase of a woman by the name Kanta by a journalist to highlight the flesh trade flourishing in some parts of the country. The article published contained as autobiographical account of the part actually played by the author in the affair. In the film emphasis was on human bondage particularly of Indian women. The court held that stage play on the movie was not an infringement of the copyright in the article.

Musical Work

Copyright is recognized in original musical work under the provisions of Section 13(1)(a). Section 2(p) defines 'Musical Work' as a work consisting of music and includes any graphical rotation of such work but does not include any words or any action, intended to be sung, spoken or performed with music.

Adaptation of a musical work is also entitled to copyright protection. Adaptations in common parlance are usually termed as arrangement, e.g., a musical work may be modified by the accompanying orchestra.

In ***Redwood Music v. Chappel*** (1938), RPC 109, it was held that if a musical arranger so decorates, develops, transfers to a different medium or otherwise changes the simple music of a popular song so as to make his arrangement fall within the description of an original musical work, such arrangement or adaptation is capable of attracting an independent copyright.

Song

There is no copyright in a song, the words of the song create a copyright in the author of the song and the music of the song is the copyright of the composer but the song itself has no copyright.

In a case where a song is written and the music composed by the same man, he would own the copyright in the song.

Artistic Works

According to Section 2(c), Artistic work means –

i. Painting, a sculpture, a drawing including a diagram, map, chart or plan, an engraving on a photograph whether or not only such work possesses artistic quality:
ii. A work of architecture; and
iii. Any other work of architecture craftsmanship.

Engraving

Section 2(i) defines engraving to include etchings, lithographs, woodcuts, prints and other similar works not being photographs. Engraving is the art of inscribing or covering figures upon surfaces particularly hard surfaces, or cutting figures, etc., in lines on metal surfaces for printing.

Painting

Painting is an artistic work even if it possess no aesthetic quality. What is sufficient to entitle it for a copyright is that it must be original, i.e., the painting should be the creation of the painter and not a mere copy of another painting.

Only a painting on a tangible surface is entitled to copyright protection.

Drawing

According to Section 2(c)(i) defines drawing including a map, diagram chart or plan is covered by definition of artistic work and qualifies for copyright protection irrespective of the quality of work. It must satisfy only the condition of originality meaning thereby that it should originate from the person who draws it.

In ***Merchant Adventures v. M. Grew & Company***, (1973) RPC 1, it has been held that drawings for the purpose of copyright would include any

legends or explanatory notes which describe in general terms what the drawing represents.

Industrial or Engineering Drawing

Engineering drawings are 'Artistic works' within the broad meaning of the term but each individual case has to be judged accordingly, to prevent a situation where every industrial or engineering drawing would claim the protection of a copyright and be outside the realm of even fair use for instructing students or of any use of such a nature.

Allibert v. O'Connor, (1982) FSR 317

Photograph

A photograph is an artistic work entitled to copyright. A photograph must be original, i.e., originally taken by a the photographer to be entitled to protection and to be a original, investment of some amount of skill and labour must be evident.

In ***Associated Publishers v. Bashyam***, AIR 1961 Mad 114, where a portrait of Mahatma Gandhi was made based on two photographs, it was held that a portrait based on photographs will be entitled to copyright if it produced a result different from the photograph & the portrait itself is original.

Work of Architecture

Section 2(b) provides that a work of architecture means any building or structure having an artistic character or design or any model for such building or structure.

In order to quality for copyright protection, the work besides being original must also possess artistic quality, this is in contrast to other artistic works like painting, drawing, etc., which does not require artistic quality for copyright protection.

As per Section 13(5), copyright does not extend to the process or the method of construction.

Any building or structure which constitutes a work of architecture, is built on the basis of plan enjoys a separate copyright apart from the copyright in the building.

Work of Artistic Craftsmanship

Section 13(1) confers copyright on the works of artistic craftsmanship. Lord Reid in the course of arguments in ***George Hensher v. Restawile Upholstery,*** (1975) RPC 31, declared that the primary purpose of conferring copyright on a work protects the man who puts on to the market, articles each one of which is a work of artistic craftsmanship, a product of his over handcraft, from reproduction whether by hand, machine or otherwise.

Cinematograph Film

A copyright subsists in a cinematograph film by virtue of Section 13(1)(b).

A cinematograph film means any work of visual recording on any medium produced through a process from which a moving image may be produced by any means and includes a sound recording accompanying such visual recording and cinematograph shall be construed as including any work produced by any process analogous to cinematograph including video films.

The sound track associated with the film is a part of the cinematograph film which is the subject of copyright. In ***Balwinder Singh v. Delhi Administration,*** AIR 1984 Delhi 379, and in ***Tulsidas v. Vasantha Kumari,*** (1991) 1 LW (Mad) 220 at 229, it was held that video and television are both cinematograph films.

Section 13(3)(a), makes it clear that a copyright will not subsist in a cinematograph film if a substantial part of the film is an infringement of the copyright in any other work.

Rights granted to a holder of Cinematograph film

Section 14(d) confers on the author of cinematograph film in which copyright subsists some exclusive rights:

1. To make a copy of the film including a photograph of any image forming a part of the film.
2. To sell or give on hire or offer for sale or hire any copy of the film, regardless of whether such copy has been sold or given on hire on earlier occasions.

3. To communicate the film to the public. The sound recordings embedded in the film have a separate copyright of its own which is not affected by the copyright in the film as a whole.

Sound Recording

Copyright subsists in a sound recording. According to Section 2(xx), a sound recording means a recording of sounds from which such sounds may be produced regardless of the medium on which such recording is made or the method by which the sounds are reproduced.

Copyright in the music vests in the composer and the copyright in the music recorded vests in the producer of the sound recording.

Author and Ownership of Copyright

Introduction

The concept of 'author' and 'ownership' are vital when the question of propriety over the copyright arises. The copyright provisions do not recognize any copyright in an idea. The originator of an idea is not the owner of the copyright; it belongs to the persons who give concrete form to the idea.

In ***Donoghue v. Allied Newspapers,*** (1937) 3 All ER 503, the view expressed was 'since there is no copyright in ideas even if they are original, the originator of a brilliant idea is not the owner of the copyright in the work, unless he is also the creator of the work.

According to provisions of Section 17, the author of the work is the first owner of the copyright in the work.

Nationality requirement for Ownership of Copyright

The nationality of an author is not the prime determinant of the entitlement of the author to a copyright under the Indian Act. However, the subsistence of copyright has certain requirements under Section 13(2).

i. Published Work

ii. Unpublished Work

iv. Architectural Work

Ownership of Copyright

Section 17 statutorily recognizes the author of the work to be the first owner of the copyright therein. This is however, subject to some exception.

Literary, Dramatic or Artistic Work

Section 17(a) provides-

Where a work is made by the author in the course of his employment by the proprietor of a newspaper, magazine or a periodical under a contract of service or apprenticeship for the purpose of publication in a newspaper, magazine or periodical, the said proprietor, in absence of any agreement to the contrary, will be the first owner of the copyright in the work in so far as it relates to the publication.

In ***Thomas v. Manorama***, AIR 1989 Ker. 49, it was held that in case of termination of the employment, the employee is entitled to the ownership of copyright in the works created subsequently and the former employer has no copyright over the subsequent works so created.

The copyright in a work done by an employee on his own time and not in the course of his employment belongs to him.

Photograph, Painting, Portrait

Section 17(b) provides –

Where a photograph is taken or a painting or a portrait drawn, or an engraving or a cinematograph film is made, for valuable consideration at the instance of any person, such person, in the absence of any agreement to the contrary, shall be the first owner of the copyright therein.

Work made in the Course of Employment

Section 17 (c) provides –

Where a work is made in the course of employment under a contract of service or apprenticeship, the employer in absence of contract to the contrary, the employer will be the first owner.

Lectures Delivered in Public

Section 17(cc) provides –

Where any person has delivered any address or speech in public that person will be first owner of the copyright. If the address or speech is

delivered on behalf of any other person, such other person will be the owner of the copyright therein.

Government Work

Section 17(d) provides –

In the case of government work, the government is the owner of the copyright in the absence of an agreement to the contrary.

Work made on behalf of a Public Undertaking

Section 17(dd) –

By the Amendment Act of 1983, the Copyright Act contain this provision, in case of a work made or first published by or under the direction or control of any public undertaking, such public undertaking shall, in the absence of any agreement to the contrary, be the first owner of the copyright therein.

Meaning of Public Sector Undertaking

i. An undertaking owned & controlled by Government,
ii. A Government company as defined in the Companies Act, 1956 (2013); or
iii. A body corporate established by or under any Central or Provincial or State Act.

Government will include both Central & State Governments.

Work of Certain International Organization

Section 17(e) provides –

When a work is considered to be a work of certain international organization under the provision of Section 41, in such cases the international organization concerned shall be the first owner of the copyright therein.

Work created at the instance of another

Work created at the instance of another for a valuable consideration belongs to the provider of such valuable consideration. Some examples of such works are:

i. Person writing a report on a subject as a part of a research project being conducted by the company;
ii. A composer composing a song for a film company;

iii. A painter draws a portrait at the instance of another.

Apprenticeship – An apprentice is a student

In ***Dunk v. George Waller***, (1970) 2 WLR 241, it was held that an apprentice is a student bound to another for the purpose of learning his trade, the contract being of such a nature that the master teaches & the other serves the master with the intention of learning. Hence, the work belongs to the teacher.

Shorthand writer

The person who dictates the verbatim is the owner of the copyright.

Employee Teacher

If he writes a book on the subject he teaches, he is considered as the first owner of the copyright over the book which he has written.

Question paper Setter of an Examination

Ownership of copyright vests in the person who sets the paper and not with the Board of Examination or any such other authority.

Collective Works

Collective works include encyclopedia, dictionary, year book, newspaper, magazine or generally a work in which works or parts by different authors are incorporated. The first owner of the copyright in the collective work as a whole is a person who has collected, edited & organized the work.

Musical Work

The first owner of a copyright in a musical work is the composer of the work.

If the work is composed in the course of employment under a contract of service, the employer will be the first owner of copyright.

The person who commissions a musical work, e.g., a film producer who commissions a music composer to compose the music for his film does not become the owner of the copyright but only gets a licence to use the work for the purpose for which it is commissioned. The producer only gets the right to incorporate the music in the film. All other rights are retained by the music composer.

Artistic Work

a) The artist who created the work is the first owner of copyright.
b) Where a work is created in the course of employment unless a contract to the contrary exists, the employer will be the owner of the copyright.
c) Where the employer is the owner of a newspaper, magazine, he possesses only a limited right to use the work for publication in the newspaper or magazine.
d) When the creation of artistic work is a commissioned work for valuable consideration, the person who commissioned the work is the owner of the copyright.

Plan

The plan of a building or a structure is the copyright of the architect. His ownership can be eliminated only by an agreement to the contrary. The client is not authorized to make copies of the plan except for his own study. He cannot use the pre-existing plan even for making an extension of the building constructed on the basis of the previous plan.

Photograph

Within the meaning of Section 2(s), photograph includes photolithographs or any work produced by any process analogous to photography but does not include a cinematograph film.

a) The person taking the photograph is the owner of copyright.
b) Where the photograph is taken for a valuable consideration at the instance of any person, such a person in the absence of any agreement to the contrary, is the first owner of copyright therein.
c) Where the photographer takes a photograph in the course of employment by a proprietor of a newspaper or magazine under a contract of service or apprenticeship for the purpose of publication in the newspaper or magazine; the said proprietor is the first owner of copyright in the photograph. In all other respects, the author will be the first owner of the copyright in the photograph.

d) **Distinction between Contract of Service & Contract for Service**

e) The author may create work independently or he may crate a work under a contract of service or contract for service.

f) ***Contract of Service***

g) Where a man employs another to do work for him under his control so that he can direct the time when the work shall be done, the means to be adopted to bring about the end, and the method in which the work shall be arrived at, then the contract is a contract of service.

h) ***Beloff v. Pressdram,*** 1973 RPC 765

i) In the case of contract of service, the status of the author is that of an employee. For example, whenever an employee of a solicitor's firm drafts a document in the course of his employment, the employer is the first owner of copyright.

Contract for Service

If a person employs another to do a certain work but leaves it to the other to decide how that work shall be done, what steps shall be taken to produce that desired effect, then it is a contract for service.

His status is that of an independent contractor who himself decides about the manner of doing work, in such cases the copyright vests in him and not with the employer.

University of London Press v. Tutorial Press, (1916) 2 Ch. 601.

Rights Conferred by the Copyright

Nature of Rights

1. Statutory Rights
2. Negative Rights
3. Multiple Rights
4. Economic Rights
5. Moral Rights

Statutory Rights

The copyright in a work is a creation of statute. A person owns a copyright because the law recognizes the existence of such a right. The

rights which an author of a work has by virtue of creating the work are well defined. Section 14 of the Copyright Act defines as under:

For the purposes of this Act, "copyright" means the exclusive right subject to the provisions of this Act, to do or authorizes the doing of any of the acts in respect of a work or any substantial part thereof, namely-

a) **In the case of a Literary, Dramatic or Musical Work, not being a computer programme -**

i. to reproduce the work in any material form including the storing of it in any medium by electronic means;

ii. To issue copies of work to the public not being copies already in circulation;

iii. To perform the work in public, or communicate it to the public;

iv. To make any cinematograph film or sound recording in respect of the work;

v. to make any translation of the work

vi. To make any adaptation of the work;

vii. To do, in relation to a translation or an adaptation of the work, any of the acts specified in relation to the work in sub-clauses i. to vi.

b) In case of a Computer Programme –

i. To do any of the acts specified in clause (a)

ii. To sell or give on hire, or offer for sale or hire any copy of the computer programme, regardless of whether such copy has been sold or given on hire on earlier occasion

c) In the case of an Artistic Work –

i. To reproduce the work in any material form including depiction in two dimensions of a three dimension work;

ii. To communicate the work to the public;

iii. To issue copies of the work to the public not being copies already in circulation

iv. To include the work in any cinematograph film;

v. To make adaptation of the work;

vi. To do in relation to an adaptation of the work any of the acts specified in relation to the work in sub-clauses (i) to (iv);

d) In case of Cinematograph Film –

i. To make a copy of the film, including a photograph of any image forming part thereof;

ii. To sell or give on hire or offer for sale or hire, any copy of the film, regardless of whether such copy has been sold or given on hire on earlier occasions;

iii. To communicate the film to the public;

e) In the case of a Sound Recording –

i. To make any other sound recording embodying it;

ii. To sell or give on hire or offer for sale or hire, any copy of the sound recording, regardless of whether such copy has been sold or given on hire on earlier occasions;

iii. To communicate the sound recording to the public.

Negative Rights

Copyright is a negative right in the sense that it stops the others from exploiting the work of the author for their own benefit without the consent or license of the author. It does not confer any positive right on the author himself.

Multiple Rights

Copyright is not a single right but a bundle of rights which can exist and be exploited independently. The nature of these multiple rights depends upon the categories of works.

The literary, dramatic and musical works are grouped together for the purpose of defining these exclusive rights. The rights relating to artistic works are distinct from those of cinematograph films and sound recording.

Economic Rights

The rights conferred by Section 14 on a copyright owner are economic rights because the exploitation of the work by the author by exercising these rights may bring economic benefit. The author may exploit the work himself or license others to exploit any one or more of the rights for a consideration which may be in the form of royalty, a lump sum payment.

Moral Rights

The copyright besides conferring economic benefits also confers moral rights on the author. Such rights though not statutorily defined are as follows –

1. The right to decide whether to publish or not to publish the work, i.e., the right of publication.
2. The right to claim authorship of a published or exhibited work.
3. The right to prevent alteration and other actions that may damage the author's honour or reputation – the right of integrity

The Berne Convention recognizes some of these rights and requires member states to provide the author with the right to claim authorship and to object to alteration. These rights remain with the author even after the transfer of copyright & such rights last throughout the entire term of copyright.

These moral rights are recognized as author's 'Special Rights' under the Section 57 of the Act (Amended by 1994).

These rights are:

a) To claim authorship of the work

b) To restrain or claim damages

The above rights are conferred on the author even after the assignment of the copyright.

The author's computer programmes are treated differently

Works of Joint Authorship

A work may be created by a single author or by more than one author, a work of joint authorship can also claim copyright.

Section 2(2) provides "A work of joint authorship means a work produced by the collaboration of two or more authors in which contribution

of one author is not distinct from the contribution of the other author or authors".

Levy v. Rutley, (1871) LR 6 CP 523

In the case of ***Tale v. Fullnbrook,*** (1908) 1 KB 821, it was held that a person who only suggested the idea or subject-matter of the work cannot be considered a joint author.

In ***Luksenan v. Weiderfeld,*** (1985) FSR 525, it was held by the court that, mere suggestion of idea which is embodied by author in a work written by him does not make the originator of the idea the author of the same. Contribution of some ideas, catch uses or words is not sufficient to claim joint authorship to the work written by another.

TERM OF COPYRIGHT

Term of Copyright

The term of copyright is fixed keeping in view of the interest of the author and that of the general public. The interest of the author is in protecting his work as long as possible whereas the interest of the public is in making the work a public property as soon as possible.

The protection of the interest of the author assumes primary importance in view of the fact that the assurance that their work will bear their name, and be protected by law serves as a stimulant to creative minds to produce literary works.

The interest of the public is served by recognizing the principle of fair dealing where the use of the copyright work by a person other than the author himself does not constitute infringement of the copyright.

The term of the copyright varies according to the nature of the work.

Term of Copyright in literary, dramatic, musical or artistic works

Section 22 provides –

Copyright shall subsists in all the above work other than the photograph, published within the lifetime of the author until 60 years from the beginning of the calendar year next following the year in which the author dies.

Term of Copyright in Anonymous and Pseudonymous Works

Section 23 provides –

1. In the case of literary, dramatic, musical or artistic work (other than the photograph) which is published anonymously or pseudonymously, copyright shall subsist until 60 years from the beginning of the calendar year next following the year in which the work is first published.

Provided that where the identity of the author is disclosed before the expiry of the said period, copyright shall subsist until 60 year in which the author dies.

2. In sub-section (1), references to author shall, in the case of an anonymous work of joint ownership, be construed, -

a. Where the identity of the authors is disclosed, as references to that author;
b. Where the identity of more authors than one is disclosed, as references to the author who dies last from amongst such authors

3. In sub-section (1), references to the author shall, in the case of a pseudonymous work of joint authorship, be construed –

a) Where the name of one or more of the authors are pseudonymous or his & their identity is not disclosed, as references to the author whose name is not a pseudonym, or, if the names of two or more of the authors are not pseudonyms, as references to such of those authors who dies last;

b) Where the names of one or more of the authors are pseudonymous and the identity of one or more of them is disclosed, as references to the author who dies last from amongst the authors whose names are not pseudonyms and the authors whose names are pseudonyms and are disclosed; and

c) Where the names of all the authors are pseudonyms and the identity of one of them is disclosed, as references to the author whose identity is disclosed or if the identity of two or more of such authors is disclosed, as references of those authors who die last.

Term of Copyright in Posthumous works

Section 24 of the Act provides –

Where copyright subsists at the date of death of the author who dies last (in case of joint authors) and the work or/and adaptation of which has

not been published before that date, i.e., the date of death of such an author, the copyright will subsist until 60 years from the beginning of the calendar year next following the year in which the work is first published.

Where any adaptation of such a work has already been published earlier, i.e., prior to the publication of the original work, the 60 year period will commence from the calendar year next following that year. Calendar year means the year commencing on the first day of January.

Term of Copyright in Photographs

Section 25 provides –

In the case of photograph, copyright shall subsist until 60 years from the beginning of the calendar year next following the year in which the photograph is published.

Term of Copyright in Cinematograph Films

Section 26 provides –

Copyright in a cinematograph film subsists until 60 years from the beginning of the calendar year next following the year in which the film is published.

Term of Copyright in Sound Recording

Section 27 provides –

Copyright subsists in a sound recording until 60 years from the beginning of the calendar year next following the year in which the work is first published.

Term of Copyright in Government Works/Public Undertakings

Section 28 provides –

The Government is the first owner of the copyright, the copyright shall subsist until 60 years.

Term of Copyright in works of International Organization

Section 29 provides –

In the case of a work of an international organization to which the provision of Section 41 applies, copyright shall subsist until 60 years.

Broadcast Reproduction Right

Section 37(2) provides that broadcast reproduction right shall subsist until 25 years.

Performers' Right

According to Section 38(2), the performer's right shall subsist until 25 years from the beginning of the calendar year next following the year in which the performance is made.

Assignment / Licence and relinquishment of Copyright

Introduction

One of the rights of the copyright owner is the right to transfer his rights u/s,14 of the copyright Act either wholly or partially by assignment or license, even exclusive license. In the case of tangible property by assignment of his property he loses his rights over it but in the case of IP even after its assignment the owner can still enjoy the property depending upon the right assigned.

This major difference is due to the nature of intellectual property from other property. In the case of copyright the transfer of right depends upon diverse nature of IP. Even though there is exclusiveness in the copyright but copyright owner cannot exclude independent creators of work. It is only expression that is protected not the idea is based on its implication in public interest.

Assignment / Licence of Copyright

Change of concept of indivisibility to licensing of copyright is due to changing technologies and tremendous advancement in the field of communication technology. One of the characteristics of the copyright is that it has the potential to be used by a range of different users at the same time.

The Indian copyright recognizes two types of transfer of IP i.e., license and assignments, it always depends upon nature of property transferred. Depending upon the nature of monopoly created by IP and its implication on public interest has created problems in respect of licensing and assignment. The terms and conditions incorporated in the agreement determines whether the party intended is assignment or license i.e. from the intention of the parties.

The manner of exploitation of copyright in a work can be numerous. Copyright is a bundle of rights comprising of multiple rights, they can be exercised independently of each other. A novel can be published as a volume, serialized in a newspaper or magazine or can be licensed for being made into a film.

Each of these rights can be assigned or licensed for a limited term. While assignment is a transfer of ownership in rights to the assignee, a Licence is a permission to do something in respect of the work.

Difference between Assignment and License

Assignment of copy right and copyright license are two forms of contract involved in the exploitation of copyright work by a third party. Each has its own distinct characteristics.

A license is an authorization of an act without which authorization would be an infringement. Licensing usually involves licensing of some of the rights and not the whole. Licenses can be exclusive or non exclusive.

An assignment involves the disposal of the copyright: the author (assignor) assigns the copyright to another person (assignee) or transfer of ownership of the copyright.

In the case of license only specified interest in IP is transferred not the ownership is transferred to the licensee. A license normally does not confer any right to licensee against licensor or third party but exclusive licensee has substantial rights against the licensor, even to sue the licensor. And by **Section 30** if the licensee in the case of future work dies before the work comes into existence his legal representatives shall be entitled to such works, in the absence of any provision to the contrary.

A licensee has a right to make alterations except in so far as his license expressly or impliedly restricts the right. A failure to pay royalties enables the licensor to revoke the license. But in the case of assignment it is not possible.

But if there is any harsh terms which affect the author can lead to revocation if a complaint is made to the copyright Board.

The expression "assignee" as respects the assignment of the copyright in any future work includes the legal representatives of the assignee, if the

assignee dies before the work comes into existence. The owner of the copyright has the power to assign his entire rights or assign only some of the rights. In case the rights are split up there is only partial assignment. Assignee will be the owner of the copyright as regard rights so assigned, the owner will be the owner of the copyright of remaining rights. The assignment could be for whole duration of the copyright or for a short duration.

Assignment of Copyright

Section 18, 19 and 19A of the Copyright Act deal with the assignment of copyright. Assignment of copyright may be for the whole of the rights or for part of the rights only.

Assignment of copyright may be general, i.e., without any limitation being placed on the assignee or the assignment may be subject to certain limitations.

Assignment may be for the full term of the copyright or for a limited period of time.

Assignment may be on a territorial basis, i.e., for a particular territory or country.

An owner of a copyright can assign his right in the above combination of forms.

Example:

An author assigns the right to serialize the work into a television serial to a producer for a period of 20 years provided the serial is broadcast only within the territory of India. Here the author makes a limited assignment for a limited period of time placing territorial restrictions at the same time.

Mode of Assignment

Section 19 of the Act elaborates the mode of assignment –

1. Assignment is valid only when it is in writing signed by the assignor or by his duly authorized agent.

2. The assignment instrument shall identify the work and specify the rights assigned and the duration and territorial extent of such assignment.

3. The instrument of assignment of copyright shall also specify the amount of royalty payable, if any, to the author or his legal heirs during the subsistence of the assignment and the assignment shall be subject to

revision, extension or termination on terms mutually agreed upon by the parties.

4. If the assignee does not exercise the rights assigned to him within one year from the date of assignment, the assignment in respect of such rights shall be deemed to have lapsed after the expiry of the said period unless otherwise specified in the assignment instrument.

5. When the period of assignment is not stated, the period shall be deemed to be five years from the date of assignment.

6. If the territorial extent of any assignment of the rights is not specified, it shall be presumed to extend within India.

7. When the assignment has been made before the coming into force the Copyright (Amendment) Act, 1994, the above provisions of the above sub-sections (2), (3), (4), (5), (6) shall not be applicable. However, even such an assignment has to be through a written statement.

An assignee, to whom certain rights have been assigned by the assignor, can restrain the author from exercising those rights which have already been assigned to him by moving court of competent jurisdiction for infringement.

Section 18 provides that copyright can be assigned even in respect of **future work** of the author before their coming into existence. But in that case, the assignment will take effect only when the work comes into existence.

The owner of the copyright in an existing work or the prospective owner of the copyright in a future work may assign to any person the copyright, either wholly or partially and either generally or subject to limitations and either for the whole term of the copyright or any part thereof. However, in the case of the assignment of copyright in any future work, the assignment shall take effect only when the work comes into existence. When new rights are granted by the legislature on existing works due to the technological development, problem arises as to the ownership of the new rights, whether the assignor who assigned already all the existing rights on the work or the assignee is the owner of the future rights.

Transmission of Copyright by Operation of Law

Copyright is a kind of personal movable property. It can be transferred by assignment or by operation of law, e.g., when the owner of copyright whether it is published or unpublished, dies. The copyright will pass on to his personal representatives as part of the estate, if such a person dies intestate .

Section 20 provides that if a manuscript of literary, dramatic or musical work or an artistic work has been bequeathed to a beneficiary without specifically bequeathing copyright, the bequest will carry with it the copyright to the work also. In case the owner of copyright becomes bankrupt, the copyright will vest in the official receiver & will pass to the trustee of the bankrupt's estate as assets for distribution among the creditors.

Relinquishment of Copyright

According to Section 21, the author of a work may relinquish all or any of the rights comprised in the copyright in the work by giving notice to the Registrar of Copyright.

Licencing of Copyright

A licence can transfer the interest in a copyright. In a licence the rights granted are limited. The ownership in the rights remains with the author. In the case of assignment, the ownership in the rights is transferred to the assignee.

Example:

When an author licences only the right of circulation of his work to a publisher, the publisher is only entitled to cause circulation of the work. As assignee of the copyright, however, would be entitled to the accompanying benefits of circulation of the work.

In the case of ***Dharam Dutt Dhawan v. Ram Lal Suri,*** AIR 1953 Punjab 279, the plaintiff entered into an agreement with the defendants (publishers) to publish a book written by them on a royalty basis. In the agreement, the author agreed that the publishing and selling rights shall be vested in and remain with the publishers. The preamble defined the parties so as to include their respective heirs, executors, administrators or assignees.

It was held that this was partial assignment of publishing rights and not a mere licence.

The relevant provisions of the Copyright Act concerning licences of copyright are –

Licences by Owners of Copyright

Section 30 provides –

The owner of copyright in any existing work of the prospective owner of the copyright in any future work may grant any interest in the right by licence in writing signed by him or by his duly authorized agent.

Application of Sections 19 and 19A

Section 30A stipulates –

The provisions of Section 19 and 19A shall, with any necessary adaptation and modifications, apply in relation to a licence under Section 30 as they apply in relation to assignment of copyright in a work.

Compulsory licence in works withheld from public

Section 31 provides –

1) If at any time during the term of copyright in any Indian work which has been published or performed in public, a complaint is made to the Copyright Board that the owner of copyright in the work -

a) Has refused to republish or allow the republication of the work, performance in the public by reason of such refusal the work is withheld from the public; or
b) Has refused to allow communication by broadcast, on terms which the complainant considers reasonable the Copyright Board, after giving to the owner of the copyright a reasonable opportunity of being heard and after holding such inquiry as it may deem necessary, may, if it is satisfied that the grounds for such refusal are not reasonable, direct the Registrar of Copyright to grant to the complainant a licence to republish the work.

2) Where two or more persons have made a complaint under sub-section (1), the licence shall be granted to the complainant who in the opinion of the Copyright Board would best serve the interests of the general public.

Compulsory licence in Unpublished Indian works

1) Where, in the case of an Indian work referred to in sub-section (iii) of clause (1) of Section 2, the author is dead or unknown or cannot be traced, any person may apply to the Copyright Board for a licence to publish such work or a translation thereof in any language.
2) Before making an application, the applicant shall publish his proposal in one issue of the daily newspaper in the English language having circulation in the major part of the country.
3) Every such application shall be made in such form as may be prescribed & shall be accompanied with a copy of the advertisement issued under sub-section (2) & such fee as may be prescribed.
4) Where an application is made to the Copyright Board under this Section, it may, after holding such inquiry as may be prescribed, direct the Registrar of Copyrights to grant to the applicant a licence to publish the work or a translation thereof in the language mentioned in the application.
5) Where a licnece is granted, the Registrar, by order, direct the applicant to deposit the royalty in the public account of India or in any other account specified by the Copyright Board.
6) Without prejudice to the foregoing provisions of this section, in case of a work referred to in sub-section (1), if the original author is dead, the CG may, if it considers that the publication is desirable in the national interest, requires heirs, executors or legal representatives to publish within such period as may be specified by it.
7) Where any work is not published within the period specified by the CG under sub-section (6), the Copyright Board may, on an application made by any person for permission to publish the work on payment of such royalty as the Copyright Board may determine in the prescribed manner.

Licence to Produce & Publish Translation

Section 32 provides –

Any person may apply to the Copyright Board for a licnece to produce and publish a translation of a literary or dramatic work in any language after a period of Seven years from the first publication of the work.

Licence to Reproduce & Publish works for certain purposes

Section 32A(1) provides –

Where after the expiration of the relevant period from the date of the first publication of an edition of a literary, scientific or artistic work –

a) The copies of such edition are not available in India

b) Such copies have not been put on sale in India for a period of Six months

Section 32A(4) provides –

Where an application is made to the Copyright Board under this section, it may, after holding such an inquiry as may be prescribed, grant to the applicant a licence, not being an exclusive licence, to produce and publish a reproduction of the work mentioned in the application subject to the condition.

Termination of Licences

Section 32B provides –

1. if, at any time after the granting of a licence to produce and publish the translation of work in any language under sub-section (1A) of Section 32, the owner of the copyright in the work or any person authorized by him publishes a translation of such work in the same language & which is substantially the same in content at a price reasonably related to the price normally charged in India for the translation of works of the same standard on the same or similar subject, the licence so granted shall be terminated.
2. if, at any time after the granting of a licence to produce & publish the reproduction or translation of any work under Section 32A, the owner of the right of reproduction or any person authorized by him sells or distributes copies of such work or a translation thereof, as the case

may be, in the same language & which is substantially the same in content at a price reasonably related to the price normally charged in India, for works of the same standard on the same or similar subject, the licence so granted shall be terminated.

Computer Software and Copyright Protection

Introduction

Copyright was usually associated with artistic products, but today in addition to all this copyright is now an important tool in protecting computer software.

In the 1970s and 1980s, there were extensive discussions on whether the patent system, the copyright system, or a *sui generis* system, should provide protection for computer software.

These discussions resulted in the generally accepted principle that computer programs should be protected by copyright, whereas apparatus using computer software or software-related inventions should be protected by patent.

Copyright law and patent law provide different types of protection. Copyright protection extends only to expressions, and not to ideas, procedures, methods of operation or mathematical concepts as such, whereas a patent is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem.

The Copyright Act provides copyright protection for original works of authorship fixed in any concrete medium of expression. The Act gives the copyright owner exclusive rights over the reproduction, preparation of derivative works, distribution.

Indian Law

In India, computer software does not form the subject matter of patents as it does not fulfill the requirements for a patentable product. India has adopted most of the international instruments like TRIPS, Berne Convention, WIPO Copyright treaty etc and has also incorporated law on

software protection. The major statutes that cover software protection in India are the Copyrights Act, 1957 and Patents Act, 1970.

Copyrights Act, 1957

The Copyright Act of 1957 is the law governing copyrights in India. The Act was amended in 1999 so as to make the Act compatible with the provisions of TRIPS.

The Act defines computer and computer programs. "Computer Program" means a set of instructions expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result. "Literary work" is defined as that which includes computer programs, tables and compilations including computer databases. Copyright, in relation to a computer program means the exclusive right to do or authorize to do any of the following acts :

(1) To reproduce the work in any material form including the storing of it in any medium by electronic means;
(2) To issue copies of the work to the public not being copies already in circulation;
(3) To perform the work in public, or communicate it to the public;
(4) To make any cinematographic film or sound recording in respect of the work;
(5) To make any translation of the work;
(6) To make any adaptation of the work;
(7) To do, in relation to a translation or an adaptation of the work any of the acts specified in relation to the work in the above;
(8) To sell or give on commercial rental or offer for sale or for commercial rental any copy of the computer program. Commercial renting does not apply to computer programs where the program itself is not the essential object of the rental.

To do any of the above acts related to the computer program or to use it, a license is required from its owner. Any person who knowingly makes use of an infringing copy of a computer program is liable to be punished

with imprisonment for a term of at least seven days and can be extended to three years and with fine of at least Rs. 50,000.

The term of copyright in published literary work published within the lifetime of the author is 60 years from the beginning of the calendar year following the year in which the author dies. In case of anonymous or pseudonymous works, the duration is 60 years from the calendar year following the year in which the work is first published. Thus, the minimum term of 25 years stipulated in the Berne Convention is not applicable in India.

Protection

The basis of protection as literary work is that the work must not be copied from another work, but must be the original work of the author. Author, with regard to computer software, is the person who causes the work to be created. Copyright subsists in a computer program provided sufficient effort or skill has been spent to give it a new and original character.

Other than the condition of "originality," a computer program also has to conform to the requirement of first publication as stated in the Act. The work must be first published in India and if it is published outside India, then the author should be a citizen of India at the time of publication. As regards unpublished work, the author should be a citizen of India or domiciled in India at the date of making of the work.

The government of India passed the International Copyright Order, 1958 whereby any work first published in any country which is a member of the Berne Convention or the UCC (Universal Copyright Convention) will be accorded the same treatment as if it was first published in India. The registration of copyright is not compulsory in India but registration offers better protection to the author in cases of infringement of copyright.

Acts not amounting to Infringement

In compliance with the provisions of the TRIPS, the Act has clarified that the following acts do not constitute infringement of copyright in software:

a) Making copies or adaptation of a computer program by a lawful possessor of a copy of such computer program from such copy in order to utilize the program for the purpose for which it was supplied or to make back-up copies purely as a temporary protection against loss, destruction or damage in order only to utilize the computer program for the purpose for which it was supplied.

b) Doing any act necessary to obtain information essential for operating inter-operability of an independently created computer program with other programs by a lawful possessor of a computer program provided that such information is not otherwise readily available.

c) Observation, study or test of functioning of the computer program in order to determine the ideas and principles which underline any elements of the program while performing such acts necessary for which the computer program was supplied.

d) Making copies or adaptation of the computer program from a personally legally obtained copy for non-commercial personal use.

Patents Act, 1970

The Patents Act, 1970 states that a computer program per se other than its technical application to industry or a combination with hardware is not patentable. Thus, software can be registered as a patent only if it is in combination with hardware and not otherwise.

The duplicated and pirated software affects all software users. There is a need for stronger legal protection. The primary protection for computer software in India is found in the Copyrights Act, 1957. There are very few cases pertaining to protection of software in India, most of them with Microsoft Corporation as the aggrieved party.

In ***Microsoft Corporation vs. Ms. K. Mayuri and Ors.*** **2007 (35) PTC 415 (Del),** the Delhi High Court awarded punitive and exemplary damages against the wrongdoer who were involved in piracy activities by hard-disk loading. With the growth of importance of software in every business, more and more companies want protection under the legal regime to eliminate and stop software piracy.

Infringement of Copyright

Introduction

The purpose of recognizing and protecting the copyright of an author is to statutorily protect his work and inspire him to exercise his creativeness further.

A copyright confers exclusive right on the copyright owner, *inter alia*, to the reproduction of the work in a material form, storing the work in any medium by electronic means, publication of the work, performance of the work in public, making of its adaptation and translations.

These rights are conferred on the owner of the copyright to enable him to reap monetary benefits. If any of the above acts are carried out by a person other than the owner of copyright, without a licence from the owner, it constitutes infringement of the copyright.

Acts Constitute Infringement

Since the forms of creative works are numerous, the acts which would constitute infringement would depend upon the nature of the work.

Section 51 of the Act defines infringement of a copyright not specifically with respect to each kind of creative work, but in general terms. According to Section 51 of the Act, copyright in a work shall be deemed to be infringed:

a) When any person without a licence from the owner or the Registrar of Copyrights does anything, the exclusive right to do which is by this Act conferred upon the owner of copyright, or permits for profit, any place to be used for the communication of the work to the public, unless he was not aware & had no reasonable ground for believing that such communication would be an infringement of copyright; or

b) When any person:

i) Makes for sale or hires or sells or lets for hire or by way of trade displays or offers for sale or hire any infringing copies of the work covered by copyright; or

ii) Distributes, either for the purpose of trade or to such an extent as to affect prejudicially the owner of the copyright, any infringing copies of the work; or

iii) Exhibits in public by way of trade any infringing copies of the work; or

iv) Imports into India any infringing copies of the work except the copy of any work for the private and domestic use of the importer.

For the purpose of this section, the reproduction, of a literary, dramatic, musical or artistic work in the form of a cinematograph film shall be deemed to be an infringing copy.

Illustration

A printer takes a copy of the latest book released by another publishing house, makes copies of the same and circulates them in the market. His act amounts to infringement.

An Act whether infringement or not – Factors to be Considered

In judging whether an act would amount to infringement or not the facts which are taken into consideration are:

i) Whether copying has a casual connection, deliberately made or is a unintentional, indirect copying. Casual connection can be found where the infringer has some overt motive to produce a copy, for instance reaping monetary reward.

Illustration

A poem is copied verbatim by another & published in his own name. a third person borrows the idea of the poem & paraphrases it. In the first case, the person is directly infringing the copyright. In the latter case, infringement may be indirect depending upon the degree of similarity between the two works. Both cases, however, involve infringement.

ii) In determining whether an act amounts to infringement the extent of defendant's alteration of the original work; the manner in which defendant attempts to take advantage of the plaintiff's work; the nature and extent of plaintiff's effort involved in the original work; are the material factors considered.

General Principles

The general principles is that no infringement of the plaintiff's rights takes place where a defendant has bestowed such mental labour upon what he has borrowed and has subjected it to such revision and alteration as to produce an original result. The ultimate test is "has there been a reproduction of the plaintiff's work in a substantial form?"

The defendant is not at a liberty to take away the result of another man's labour or the benefits arising out of the product of such labour

The elements need to be present to make an act an infringement within the meaning of the Act is:

i. Substantial copying; and
ii. Direct evidence of copying from the source in which copyright subsists.

Acts not constitute infringement – Statutory Exception

The use of a copyright work by any person other than the owner of copyright is an infringement. However, the Copyright Act recognizes certain acts which though done by a person other than the owner of copyright would not amount to infringement of the copyright.

The purpose of recognizing these exceptions is to enable the reproduction of the work for certain public purposes for encouragement of private study and research and promotion of education. These exceptions can be pleaded in defence by the defendant in an action for infringement of copyright.

Section 52 lists the acts which do not constitute infringement of copyright. These are:

i. A fair dealing with a literary, dramatic, musical or artistic work – for private purpose like research criticism or review, making copies of computer programmes.

ii. Reproduction of judicial proceedings and reports – exclusively for the use of members of legislature.

iii. Reading or recitation in public of extracts of literary or dramatic work.

iv. Publication in a collection for the use in educational institutions in certain circumstances.

v. Reproduction by teacher or pupil in the course of instructions or in question papers or answers.

vi. Performance in the course of the activities of educational institutions in certain circumstances.

vii. The making of sound recording.

viii. The causing of a sound recording to be heard in public utilizing it in an enclosed room or in clubs in certain circumstances.

ix. Performance in an amateur club given to a non-paying audience or for religious institutions.

x. Reproduction in newspaper & magazine of an article on current economic, political, social or religious topics.

xi. Publication in newspapers or magazines a report of a lecture delivered in public.

xii. Making a maximum of 3 copies for the use of a public library.

xiii. Reproduction of unpublished work kept in a museum or library for the purpose of study or research.

xiv. Reproduction or publication of any matter published in Official Gazette or reports of Government Commission or other bodies appointed by Government.

xv. Reproduction of any judgment or order of court, tribunal or other judicial authority not prohibited from publication.

xvi. Production or publication of a translation of Acts of Legislature or Rules

xvii. Making or publishing of a painting, drawing or photographs of a work of architecture.

xviii. Making or publishing of a painting, drawings, or photographs or engraving of sculpture or other artistic work permanently situate in a public place.

xix. Inclusion in a cinematograph film of any artistic work permanently situate in a public place & other artistic work by way of background.

xx. Reproduction for purpose of research or private study or with a view to publication of an unpublished works kept in library, museum or other institution to which the public has access.

Acts which do not amount to infringement in Respect of Computer Programmes

Section 52(1)(aa) provides that in respect of computer programmes, the following acts do not constitute infringement –

The making of copies or adaptation of a computer programme by the lawful possessor of a copy of such computer programme from such copy –

i. In order to utilize the computer programme for the purpose for which it was supplied; or
ii. To make back-up copies purely as temporary protection against loss, destruction or damage in order only to utilize the computer programme for the purpose for which it was supplied.

The following clauses have been inserted after clause (aa) in sub-section (1) of Section 52 by the Copyright (Amendment) Act, 1999.

(ab) The doing of any act necessary to obtain information essential for operating inter-operability of an independently created computer programme with other programmes by a law possessor of a computer programme provided that such information is not otherwise readily available.

(ac) the observation study or test of function of the computer programme in order to determine the ideas and principles which underline any elements of the programme while performing such acts necessary for the functions for which the computer programme was supplied.

(ad) the making of copies or adaptation of the computer programme from a personally, legally obtained copy for non-commercial personal use.

Remedies against Infringement of Copyright

Kinds of Remedies

There are three kinds of remedies against infringement of copyright:

1. Civil Remedies
2. Criminal Remedies
3. Administrative Remedies

Civil Remedies

Injunction, damages or account of profits, delivery of infringing copies and damages for conversion.

Illustration

An author sues another for reproducing the copies of his books & selling them in the market. The civil remedies he can claim are:

1. Stopping such an infringement, i.e., injunction.
2. Damages in the form of monetary amount.
3. Account of profit, i.e., the profits which the defendant wrongly appropriated by sale of infringing copies.
4. Damages for conversion can be claimed when an infringer stages a play based on the authors work, i.e., the infringer converts the form of the work without the consent of the author and causes infringement in copyright.

Criminal Remedies

Imprisonment of the accused or imposition of fine or both. Seizure of infringing copies.

Administrative Remedies

It consists of moving the Registrar of Copyright to ban the import of infringing copies into India when the infringement is by way of such importation and the deliver of the confiscated infringing copies to the owner of the copyright and seeking the delivery.

Protection of Authors' Special Rights

Besides the infringement of copyright, which is actionable, the moral rights of the author known as "special rights" are also protectable. These special rights are

1. To claim authorship of the work, and
2. To restrain or claim damages if in respect of any distortion, mutilation, modification or other act in relation to the said work which is done before the expiration of the term of copyright, if such distortion, mutilation, modification or other act would be prejudicial to his honour or reputation.

This special right is not available in respect of any adaptation of a computer programme for certain purposes or to make back up copies for protection against loss, destruction, or damage.

Defences which may be set up by the Defendant

1. No copyright subsists in the work alleged to be infringed.
2. The plaintiff is not entitled to sue as he is not the owner of the copyright.
3. The alleged copyright work itself is not original, it is in itself an infringed copy.
4. The alleged copyright is not entitled to protection being immoral, seditious or otherwise against public policy.
5. The defendant's work is independent & is not copied from plaintiff's work.
6. The defendant's action does not constitute infringement of the plaintiff's work & is permissible under one or more of the exceptions to infringement under Section 52.
7. The suit is barred by limitation.
8. The plaintiff is guilty of estoppel, latches or acquiescence or consent.
9. The infringement was innocent & on the date of infringement the defendant was not aware & had no reasonable ground for believing that copyright subsisted in the work.

Kinds of Civil Remedies

1. Anton Pillar Order
2. Interlocutory injunction
3. Damages or account of profits

Anton Pillar Order

The procedure of law always provides equal opportunities to both the parties to present their case. However, in certain cases the court may, on an application by the plaintiff, pass an *ex-parte* order requiring the defendant to allow the plaintiff to enter his premises & make an inspection of relevant documents & articles & take copies thereof or remove them for safe custody. Such order is called Anton Pillar Order. ***(Anton Piller KG v Manufacturing Processes Limited,* [1975] EWCA Civ 12.)**

Such orders are necessary when there exists an apprehension in the mind of the plaintiff.

Such order is, however, passed very cautiously by the court.

Interlocutory Injunction

It secures the immediate protection of copyright from an existent infringement or from the continuance of infringement or an anticipated infringement. A plaintiff may pay for an interlocutory injunction pending trial or further orders.

For obtaining this injunction the plaintiff has to establish:

1. A *Prima facie* case,

2. Balance of convenience in his favour,

3. That refusal to grant interlocutory injunction would cause irreparable injury to the plaintiff.

Interlocutory injunction may be refused when:

1. The interest of the plaintiff can be protected by ordering the defendant to keep an account of profit,
2. The defendant has pleaded & established *bonafide* fair dealing,
3. The plaintiff has been guilty of undue delay in coming to the court., or
4. His conduct amounted to acquiescence in the infringement,
5. There is a substantial doubt about the plaintiff's right to succeed in the action.

The grant of interlocutory injunction would depend on the overall circumstances of the case.

Damages on Account of Profits

The plaintiff is entitled to two types of damages:

1. One for infringement of his copyright. and
2. The other for conversion of his copyrighted work into another form.

Account of Profits

A plaintiff, if successful, is also entitled to account of profits as an alternative to damages.

Criminal Proceedings against infringement

The infringement of copyright has been declared as an offence, punishable with imprisonment which may extend from a minimum period of 6 months to a maximum of 3 years & with a fine of Rs. 50,000 to Rs. 2 lakhs.

Where proceedings to be initiated

No court inferior to that of Magistrate of First Class can try offence under the Act. The court trying the offence may order that all copies or instruments for making infringing copies in possession of the alleged offender be delivered to the owner of the copyright without any further proceedings.

The court may also order a police officer of the rank of Sub-Inspector & above to seize without warrant, all infringing copies of the work & accessories for making infringing copies & produce them before the Magistrate.

Unit – II

Introduction & Overview of Biological Diversity

Introduction

Biodiversity is a generic term that can be related to many environments and species, for example, forests, freshwater, marine and temperate environments, the soil, crop plants, domestic animals, wild species and micro-organisms.

Biodiversity or Biological diversity is a term that describes the variety of living beings on earth. In short, it is described as degree of variation of life. Biological diversity encompasses microorganism, plants, animals and ecosystems such as coral reefs, forests, rainforests, deserts etc.

Biodiversity also refers to the number, or abundance of different species living within a particular region. It represents the wealth of biological resources available to us. It's all about the sustaining the natural area made up of community of plants, animals, and other living things that is begin reduced at a steady rate as we plan human activities that is being reduced by habitat destruction.

The United Nations designated 2011–2020 as the United Nations Decade on Biodiversity. In biodiversity, each species, no matter how big or small has an important role to play in ecosystem. Various plant and animal species depend on each other for what each offers and these diverse species ensures natural sustainability for all life forms. A healthy and solid biodiversity can recover itself from variety of disasters.

Why is Biodiversity Important?

Biodiversity has a number of functions on the Earth. These are as follows:

Maintaining balance of the ecosystem: Recycling and storage of nutrients, combating pollution, and stabilizing climate, protecting water resources, forming and protecting soil and maintaining eco balance.

Provision of biological resources: Provision of medicines and pharmaceuticals, food for the human population and animals, ornamental plants, wood products, breeding stock and diversity of species, ecosystems and genes.

Social benefits: Recreation and tourism, cultural value and education and research.

The role of biodiversity in the following areas will help make clear the importance of biodiversity in human life:

Biodiversity and food: 80% of human food supply comes from 20 kinds of plants. But humans use 40,000 species for food, clothing and shelter. Biodiversity provides for variety of foods for the planet.

Biodiversity and human health: The shortage of drinking water is expected to create a major global crisis. Biodiversity also plays an important role in drug discovery and medicinal resources. Medicines from nature account for usage by 80% of the world's population.

Biodiversity and industry: Biological sources provide many industrial materials. These include fiber, oil, dyes, rubber, water, timber, paper and food.

Biodiversity and culture: Biodiversity enhances recreational activities like bird watching, fishing, trekking etc. It inspires musicians and artists.

Overview on Biological Diversity

Biological diversity or biodiversity is simply the full variety of life on earth – plants, animals and microorganisms – including genes, species and even the entire ecosystems, and the vital services these ecosystems provide to society.

Importance of Biodiversity

i. Sustains our life support system on earth/ Contributes to environmental stability.
ii. Provides options for the present and future in terms of bio-resources.

Biodiversity is a concern that has direct linkage to poverty and development. The poor in the rural areas are directly dependent on biodiversity resources for food, fuel, shelter, medicines and livelihoods. This variety of living organisms together with its environment provide critical services that are necessary for survival such as air and water purification, soil conservation, disease control, and reduced vulnerability to disasters such as floods, droughts and landslides.

When these resources or its environment are subjected to pressures that exceed their capacity to be resilient or to bounce back to its original state, imbalance in the ecosystem is created. Examples of these pressures are over-exploitation, unsustainable practices and pollution which could result to less production, increased health risks and vulnerability to natural disasters, and loss of livelihood.

When imbalance is created, degradation occurs. When situations like these arise, they make lives especially in the rural areas more difficult therefore making development efforts more challenging.

MEANING AND SCOPE OF BIOLOGICAL DIVERSITY

Meaning & Scope Biological Diversity

Most straightforwardly, biological diversity or biodiversity is 'the variety of life', and refers collectively to variation at all levels of biological organization. Thus, one can, for example, speak equally of the biodiversity of some small or large part of an area, of the area as a whole, of the several areas in a region, of a continent or an ocean basin, or of the entire Earth.

Many more formal definitions of biological diversity or biodiversity have been proposed, which develop this simple one. Of these, perhaps the most important and far-reaching is that given in **Article 2 the Convention on Biological Diversity**.

"Biological diversity' means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

Much of the usage of the term 'biodiversity' is value laden. It carries with it connotations that biodiversity is *per se* a good thing, that its loss is bad, and that something should be done to maintain it. Consequently, it is important to recognize that there is rather more to use of the term than a formal definition in the Convention, or for that matter elsewhere, and its application often reveals just as much about the values of the person using it.

ELEMENTS OF BIODIVERSITY

Ecological Diversity	**Organismal Diversity**
Biomes	Domains or Kingdoms
Bioregions	Phyla
Landscapes	Families
Ecosystems	Genera
Habitats	Species
Niches	Subspecies
Populations	Populations
	Individuals

Genetic Diversity

Populations
Individuals
Chromosomes
Genes
Nucleotides

The variety of life is expressed in a number of different ways. Some sense of this variety can begin to be made by distinguishing between different key elements. These are the basic building blocks of biodiversity. They can be divided into three groups:

i. Genetic Diversity;
ii. Organismal Diversity; and
iii. Ecological Diversity

Genetic diversity encompasses the components of the genetic coding that structures organisms and variation in the genetic make-up between individuals within a population and between populations.

Organismal diversity encompasses the taxonomic hierarchy and its components, from individuals upwards to species, genera and beyond.

Ecological diversity encompasses the scales of ecological differences from populations, through niches and habitats, on up to biomes.

Genetic Diversity

Ecological diversity

An ecological niche is the role and position a species has in its environment - how it meets its needs for food and shelter, how it survives, and how it reproduces. A species' niche includes all of its interactions with the biotic and abiotic factors of its environment.

Organismal Diversity

Biological classification, or scientific classification in biology, is a method of scientific taxonomy used to group and categorize organisms hierarchically. Rank-based systems use a fixed number of levels in the hierarchy, such as kingdom, family, genus or species. Rankless

MEASURING BIODIVERSITY

NUMBER AND DIFFERENCE

For many purposes the concept of biodiversity is useful in its own right, as it can provide a valuable shorthand expression for what is a very complex phenomenon. However, for more general applicability, one needs to be able to measure biodiversity – to quantify it in some way.

From the definition alone, it is clear that no single measure of biodiversity will be adequate. Indeed, given its great complexity, it would be foolish to believe that the variety of life in an area, however small or large that area might be, could be captured in a single number.

Measures of diversity in general, and not solely of biodiversity, are commonly found in basic ecological texts. Essentially, many of these measures have two components:

1. **the number of entities; and**
2. **the degree of difference (dissimilarity) between those entities.**

For example, species richness (the number of species) places emphasis on the number of elements. But, weighting each of these species by, say, the numbers of individuals, would be one way of incorporating a metric of the differences between them into a measure. In the case of biodiversity the entities are one of its elements.

Two samples of insects from different locations, illustrating two of the many different measures of biodiversity: species richness and species evenness. Sample A could be described as being the more diverse as it contains three species to sample B's two. However, in sample B there is less chance than in sample A that two randomly chosen individuals will be of the same species.

In measuring biodiversity, the breadth of ways in which differences can be expressed is potentially infinite. Think, for example, of the ways in which one could discriminate between just two species. These might include facets of their biochemistry, biogeography, evolutionary history, genetics, morphology or physiology, or perhaps the ecological role they play in a particular community (shredder, decomposer, predator, etc.).

Value

Measures of biodiversity are commonly used as bases for making decisions about conservation action, or for planning more generally. It should now be clear that the choice of measure employed might not be neutral with regard to the outcome of such decisions. Different measures of biodiversity may suggest different answers.

Moreover, it is important to remember that concentration on a particular element of biodiversity essentially places differential value on that facet of the variety of life. Both what you are measuring and how you are measuring it reveal something about what you most value.

SPECIES RICHNESS AS A COMMON CURRENCY

Whilst biodiversity can be measured in a host of ways, in practice it tends most commonly to be measured in terms of species richness, the number of species. There are several reasons why this is so.

1. Practical application. Species richness has proven to be measurable in practice, at least to the point where different workers will provide much the same estimation of the number of species of a given status (e.g. present, breeding, wintering) in a given taxon in a given area at a given time.

2. Existing information. A substantial amount of information already exists on patterns in species richness, and this has been made available in the scientific literature.

3. Surrogacy. Species richness acts as a surrogate measure for many other kinds of variation in biodiversity.

4. Wide application. The species unit is commonly seen as the unit of practical management, of legislation, of political discourse, and of tradition (folk taxonomies have frequently been found to conform closely to modern ones). For a wide range of people, variation in biodiversity is pictured as variation in species richness.

The above said, the measurement of biodiversity in terms of species richness does have some significant limitations:

Value of Biodiversity

Biological diversity is the variability among all living organisms existing on earth in various ecosystems and ecological complexes. This diversity is the basis of continuous evolution of life forms and in turn maintaining the life-sustaining systems of the biosphere. The conservation of all biological diversity is a common concern of human kind and it is vital to anticipate, prevent and tackle the causes of loss or reduction of biological resources.

The dependence of human beings on biological diversity is undoubted, as evident in everyday life. The food, fibre, fuel, fodder, shelter, health and other needs of the growing world population are dependent on various components of biodiversity.

Therefore, a fundamental question that demands both an intellectual and a practical response is “does biodiversity matter?” What are the sorts of things that might be valued about biodiversity and why? Here the term ‘value’ is used in the broadest sense and not simply as a shorthand for monetary worth. The values of biodiversity can be divided into two broad and largely self-explanatory groups:

1. Use values and

i. Direct use-values

ii. Indirect use-values

2. Non-use values.

These categories are not always clear-cut, but they are still helpful as long as one is mindful of their limitations.

Direct-use Value

Direct-use value derives from the direct role of biological resources in consumption or production. It essentially concerns marketable commodities. Under some broad headings, selected types of the direct-use value of biodiversity are for food, medicine, biological control, industrial materials, recreational harvesting and ecotourism.

Food

Biodiversity provides food for humans, and hence is the foundation of all our food industries and related services. This food takes forms that include vegetables, fruit, nuts, meat, and adjuncts to food in the form of food colourants, flavouring and preservatives.

Medicine

As well as providing sustenance, biodiversity plays other vital direct roles in maintaining the health of the human population. Natural products have long been recognized as an important source of therapeutically effective medicines, and more than 60% of the world's human population relies almost entirely on plant medicine for primary health care. Of 520 new drugs approved between 1983 and 1994, 39% were natural products or were derived from them.

Taxol.

The Pacific yew tree *Taxus brevifolia was routinely discarded by logging o*perations as being of no commercial value. However, it was found to contain the compound taxol, which kills cancer cells in a manner unlike that of other chemotherapeutic agents and has been shown to be one of the most promising drugs for the treatment of breast and ovarian cancer.

Cone snail venom.

A wide diversity of peptide compounds have been found to occur in the venoms of tropical reef cone snails. These compounds have been found to block a variety of ion channels, receptors and pumps in neuromuscular systems. One, omega-conotoxin, a calcium channel blocker, has been found to be a potent analgesic and to provide a means of keeping nerve cells alive following ischaemia (insufficient flow of blood and oxygen to an organ).

Acetyl cholinesterase (ACE)-inhibiting drugs

These drugs have played a significant role in the decline of human deaths from stroke and heart attack.

Biological Control

The use of natural enemies to control species regarded as problems is increasingly widespread and is often seen as an environmentally friendly alternative to the use of pesticides. Biocontrol programmes have been attempted against several hundred species of plants and insects, with approximately 30% of weed biocontrol and 40% of insect biocontrol programmes being successful. Biological control has included introductions of agents to control populations of pests in or on crops, populations of disease vectors (e.g. mosquitoes) and populations of invasive species.

Industrial Materials

A wide range of industrial materials, or templates for the production of such materials, have been derived directly from biological resources. These include building materials, fibres, dyes, resins, gums, adhesives, rubber, oils and waxes, agricultural chemicals (including pesticides) and perfumes. For wood alone, in 1989 the total worldwide value of exports was estimated to be US$ 6 billion, and more than 3.8 billion cubic metres are estimated to be harvested annually worldwide, for fuel, timber and pulp. Including agriculture, food processing, industrial chemical and pollution control sectors, the biotechnology industry made sales of US$10–12 billion in 1993 in the USA alone (these are projected to reach US$100 billion by 2035).

Recreational Harvesting

Examples of recreational harvesting are multifarious but include hunting and fishing, the harvesting of animals (e.g. fish, reptiles, birds,

mammals) for display and as pets, and the harvesting of plants for personal and private gardens.

Thus, for example, in the British Isles alone, 25,000 plant species are grown in botanic gardens, and some 65,000 named plant taxa are sold for horticulture, of which 14,000 represent distinct species grown out of doors. Likewise, an estimated 14–30 million fish may be traded each year for aquaria, about two-thirds of the species of which are from coral reefs.

The global international legal net trade in wildlife and wildlife products reported by the Convention on International Trade in Endangered Species of Wild Fauna and Flora_(CITES) in 1997 included 26,000 live primates, 235,000 live parrots, 76,000 live tortoises, 948,500 live lizards, 259,000 live snakes, 344,000 wild orchids, 22,000 cat skins, 850,000 crocodile skins, 1,638,000 lizard skins and 1,458,000 snake skins.

In the late 1990s an illegally smuggled pair of Lear's macaws Anodorhynchus leari were gram for gram more valuable than heroin, fetching US$75,000.

Ecotourism

In 1988 an estimated 157–236 million people took part in international ecotourism (i.e. in countries of which they were not nationals), contributing between US$93 and US$233 billion to national incomes.

In 1998, an estimated 9 million people went whale-watching alone, with expenditures on just this activity of US$1 billion.

A single male black-winged stilt *Himantopus himantopus* that since 1993 has been resident at the Royal Society for the Protection of Birds (RSPB) reserve at Titchwell, UK has been argued to be the most watched bird in Britain, and is estimated to have been seen by more than half a million people.

In Britain, at least US$7.5 billion is spent each year by urban visitors to the countryside in the course of more than 650 million day-visits;

Bird-watching contributes more than US$1500 million per annum to the economy of South Africa and

Marine wildlife tourism contributes US$14 million per year to the Scottish Highlands and Islands.

Indirect-use value

Some ecosystem services provided by biodiversity.

- Atmospheric regulation
- Climatic regulation
- Hydrological regulation
- Nutrient cycling
- Pest control
- Photosynthesis
- Pollination
- Soil formation and maintenance

Some natural environments have both a direct and an indirect value. Take, for example, a tropical forest. This may provide a number of direct use values, including those of timber, medicinal plants, other forest products, hunting and fishing, recreation and tourism. It may also provide indirect-use values, including soil conservation and soil productivity, and watershed protection.

Biodiversity and Ecosystem Function

The importance of biodiversity for ecosystem functions is evident, it is less obvious how much biodiversity is required to provide those functions. Indeed, the relationship between levels of biodiversity and ecosystem functioning has emerged as a dominant issue in ecology.

Three mechanisms have been proposed to explain why there should be a relationship between biodiversity and ecosystem functioning.

1. Sampling effect. If in a regional pool of a large number of species some have strong impacts on ecosystem processes, then the more species that are drawn from this pool to form a local assemblage the greater the probability that some of these strongly impacting species will be included.

2. Species complementarity. If species differ in their resource use, then the more species that are included in a local assemblage the more thoroughly will the available set of resources be exploited, with the actions of different species complementing one another.

3. Positive interactions. Increasing numbers of species in a local assemblage could result in increases in the number of mutual, facultative or positive indirect effects among them, increasing ecosystem functioning. In practice, all three of these mechanisms may often be operating, with the research challenge being to find ways to determine their relative contribution to ecosystem functioning.

Non-Use Value

Non-use value is that associated with biological resources even if they are not directly or indirectly exploited. Non-use value can be divided into at least four components:

a) Option value;
b) Bequest value;
c) Existence value; and
d) Intrinsic value.

a. Option Value

In addition to the necessity that biodiversity be maintained for its current direct and indirect-use value, one might equally argue that it should be retained for the options for future use or non-use that it provides.

There is, for example, huge unexploited potential for the use of biodiversity, particularly with the possible medicinal and industrial uses of much of the variety of life remaining unexplored.

b. Bequest Value

Closely related, but distinct from option value, is bequest value. This is the value of passing on a resource, in this case biodiversity, intact (or as near as possible) to future generations. The philosopher John Locke suggested that each generation should bequeath 'enough and as good for others' to future generations not just because they should, but because justice demands it.

The modern version of this is the slightly more elaborated 'justice as opportunity' view that says we should compensate our children in the future for the loss of wealth, production or ecosystem services for which the present generation is responsible.

c. Existence Value

All of the values of biodiversity considered in one way or another, on marketable commodities and nonmarket goods and services. They assume that value is expressed solely in terms of the wellbeing of humanity. However, biodiversity may equally be seen as having value to people irrespective of the uses to which it may or may not be put. That is, value may be placed simply on its existence.

d. Intrinsic Value

Direct- and indirect-use values, and option, bequest and existence non-use values rest on human judgments of worth. Whether from a philosophical perspective values can exist independently of such judgments is a contentious issue; however if they can, then biodiversity may be seen to have an intrinsic value.

Biological Diversity: Concerns and issues

1. Loss of Biodiversity and Extinctions

It has long been feared that human activity is causing massive extinctions. Despite increased efforts at conservation, it has not been enough and biodiversity losses continue. The costs associated with deteriorating or vanishing ecosystems will be high. However, sustainable development and consumption would help avert ecological problems.

2. Nature and Animal Conservation

Preserving species and their habitats is important for ecosystems to self-sustain themselves.

Yet, the pressures to destroy habitat for logging, illegal hunting, and other challenges are making conservation a struggle.

3. Effect of Climate Change on Biodiversity

Rapid global warming can affect on ecosystems chances to adapt naturally.

The Arctic is very sensitive to climate change and already seeing lots of changes. Ocean biodiversity is already being affected as are other parts of the ecosystem.

4. Endangered Coral Reefs

One type of ecosystem that perhaps is neglected more than any other is perhaps also the richest in biodiversity—the coral reefs.

Coral reefs are useful to the environment and to people in a number of ways. However, all around the world, much of the world's marine biodiversity face threats from human and activities as well as natural. It is feared that very soon, many reefs could die off.

5. Addressing Biodiversity Loss

At the 1992 UN Conference on Environment and Development (the "Earth Summit"), the Convention on Biological Diversity (CBD) was born. 192 countries, plus the EU, are now Parties to that convention. In April 2002, the Parties to the Convention committed to significantly reduce the loss of biodiversity loss by 2010.

Perhaps predictably, that did not happen. Despite numerous successful conservations measures supporting biodiversity, the 2010 biodiversity target has not been met at the global level.

BIOLOGICAL RESOURCES AND TRADITIONAL KNOWLEDGE

Introduction

The indigenous people of the world possess an immense knowledge of their environments, based on centuries of living close to nature. Traditional knowledge (TK)- knowledge system held by indigenous communities, often relating to their surrounding natural environment like agriculture knowledge, scientific knowledge, technical knowledge, ecological knowledge, medicinal knowledge.

"Expressions of folklore" are found in the form of music, dance, song, handicraft designs, stories, art work, biodiversity conservation, food techniques; tradition based literary works, information and all other tradition-based innovations, healing knowledge, etc.

Traditional knowledge is practical common sense based on teachings and experiences passed on from generation to generation. It covers knowledge of the environment and the relationships between things. As the

elders die, the full richness of tradition is diminished, because some of it has not been passed on and so is lost.

Key Characteristics of Traditional Knowledge

1. It is preserved and transmitted in a traditional context from generation to generation.
2. It pertains to a particular traditional or indigenous people or community
3. It is not static, but rather evolves as communities respond to new challenges and needs
4. It may be collective or individual in nature.

- About 370 million indigenous and tribal people all around the world are the real custodian and holders of traditional knowledge
- Up to 80% of the world's population depends on traditional medicine for its primary health care
- This knowledge is indispensable for the poorest segments of society
- Traditional knowledge also prevents land and soil degradation, fisheries depletion, biodiversity erosion and deforestation

Bioprospecting

Bioprospecting is the search for biological resources and accompanying indigenous knowledge for the purpose of commercial exploitation. It is a process of appropriation and commercialization of natural products ranging from plants and animals. Bioprospecting could be a useful tool in economic conservation.

BIOPIRACY

What is Bio-Piracy?

Biopiracy is a situation where indigenous knowledge of nature, originating with indigenous people, is used by others for profit, without permission from and with little or no compensation or recognition to the indigenous people themselves.

Developed countries are exploiting genetic resources of the developing countries and the traditional knowledge of the indigenous communities in the name of patents on the inventions derived from those genetic resources. This leads to biopiracy.

Biopiracy operates through unfair application of patents to genetic resources and traditional knowledge. Biopiracy is the theft or usurpation of genetic materials especially plants and other biological materials by the patent process. For example, use of indigenous knowledge of medicinal plants for patenting by medical companies without recognizing the fact that the knowledge is not new, or invented by the patenter, and thereby the piracy deprives the indigenous community to the rights to commercial exploitation of the technology that they themselves had developed.

Threats Posed by Biopiracy

Following are the main threats posed by biopiracy:

• Knowledge and/or genetic resources belonging to a region, community or country are stolen or claimed as one's own

• The use of this knowledge or genetic resource in the area of its origin or traditional usage may be hampered

• The patent holder will unfairly profit from the patent

• The patent claimed and awarded illegally and unethically is bound to disturb an established system somewhere in the world.

Bioprospecting *vs.* Biopiracy

Bioprospecting involves "the exploration, extraction and screening of biological diversity and indigenous knowledge for commercially valuable genetic and biochemical resources". Unfortunately, indigenous people are all too often unaware of the value of their knowledge. Legislation has attempted to prevent such unrestricted bioprospecting or what is often referred to as "biopiracy."

Bioprospecting or collecting biological samples, can help medical and other scientific research, while Biopiracy or illegal collection, can:

1. infringe on the sovereign rights of nations
2. decrease the economic health of indigenous communities
3. deplete or destroy species.

Biopiracy and Traditional Knowledge

Traditional knowledge has always been an easily accessible treasure and thus has been susceptible to misappropriation. The traditional knowledge, particularly, related to the treatment of various diseases has provided leads for development of biologically active molecules by the technology rich countries.

In other words, traditional knowledge is being exploited for bio-prospecting. Also Traditional knowledge is often misappropriated, because it is conveniently assumed that since it is in public domain, communities have given up all claims over it. Traditional Knowledge includes both the codified (documented) as well as non-codified information (not documented but may be orally transmitted).

Bio-piracy of codified Indian traditional knowledge continues, since, this information exists in regional languages, and there exists a language barrier due to which the patent offices are unable to search this information as prior art, before granting patents.

The reliability of the traditional medicine systems coupled with the absence of such information with patent offices, provides an easy opportunity for interlopers for getting patents on these therapeutic formulations derived from traditional medicine systems.

Misappropriations of Traditional Knowledge

The grant of patents on non-patentable knowledge (related to traditional medicines), which is either based on the existing traditional knowledge of the developing world, or a minor variation thereof, has been causing a great concern to the developing world.

Some of the examples illustrate the biopiracy of traditional knowledge and in many of these cases the country had to fight for revocation of the granted patents, Revocation, may not be a feasible option possible for all the

patents taken on the traditional knowledge since it involves huge costs and time.

Patent examiners, in the international patent offices, while examining the patentability of any claimed subject matter, use available resources for searching the appropriate non-patent literature sources. Patent literature, is usually wholly contained in several distinctive databases and can be more easily searched and retrieved. Therefore, a need was felt to create more easily accessible non-patent literature databases on traditional knowledge of India.

Traditional Knowledge Digital Library (TKDL)

Traditional Knowledge Digital Library is a tool for prevention of misappropriations of traditional knowledge. It targets Indian Systems of Medicine, viz., Ayurveda, Unani, Siddha and Yoga available in public domain. This is being documented by sifting and collating the information on traditional knowledge from the existing literature existing in local languages such as Sanskrit, Urdu, Arabic, Persian and Tamil in digitized format, which will be available in five international languages which are English, German, Spanish, French and Japanese.

Traditional Knowledge Resource Classification (TKRC), an innovative structured classification system for the purpose of systematic arrangement, dissemination and retrieval was evolved for about 5,000 subgroups against few subgroups available in International Patent Classification (IPC), related to medicinal plants.

TKDL software with its associated classification system i.e., TKRC converts text in local languages into multiple languages as mentioned above. It may be noted that the software does not transliterate, rather it does a knowledge-based conversion, where data abstracted once is converted into several languages by using Unicode, Metadata methodology. Software also converts traditional terminology into modern terminology, for example, Jwar to fever, Turmeric to Curcuma longa, Mussorika to small pox etc.

TKDL includes a search interface providing full text search and retrieval of traditional knowledge information on IPC and keywords in multiple languages.

TKDL acts as a bridge between formulations existing in local languages and a Patent Examiner at a global level, since the database will provide information on modern as well as local names in a language and format understandable to Patent Examiners. It is expected that the issue of the gap on lack of access to prior art traditional knowledge shall get addressed.

Examples of Bio-Piracy of Traditional Knowledge

Turmeric (Curcuma longa Linn.)

The rhizomes of turmeric are used as a spice for flavouring Indian cooking. It also has properties that make it an effective ingredient in medicines, cosmetics and dyes. As a medicine, it has been traditionally used for centuries to heal wounds and rashes.

In 1995, two expatriate Indians at the University of Mississippi Medical Centre (Suman K. Das and Hari Har P. Cohly) were granted a US patent (no.5, 401,504) on use of turmeric in wound healing.

The Council of Scientific & Industrial Research (CSIR), India, New Delhi filed a re-examination case with the US PTO challenging the patent on the grounds of existing of prior art. CSIR argued that turmeric has been used for thousands of years for healing wounds and rashes and therefore its medicinal use was not a novel invention.

Their claim was supported by documentary evidence of traditional knowledge, including ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association. Despite an appeal by the patent holders, the US PTO upheld the CSIR objections and cancelled the patent. The turmeric case was a landmark judgment case as it was for the first time that a patent based on the traditional knowledge of a developing country was successfully challenged. The US Patent Office revoked this patent in 1997, after ascertaining that there was no novelty; the findings by innovators having been known in India for centuries.

Neem (Azadirachta indica A. Juss.)

Neem extracts can be used against hundreds of pests and fungal diseases that attack food crops; the oil extracted from its seeds can be used

to cure cold and flu; and mixed in soap, it provides relief from malaria, skin diseases and even meningitis.

In 1994, European Patent Office (EPO) granted a patent (EPO patent No.436257) to the US Corporation W. R. Grace Company and US Department of Agriculture for a method for controlling fungi on plants by the aid of hydrophobic extracted Neem oil. In 1995, a group of international NGOs and representatives of Indian farmers filed legal opposition against the patent. They submitted evidence that the fungicidal effect of extracts of Neem seeds had been known and used for centuries in Indian agriculture to protect crops, and therefore, was non-patentable.

In 1999, the EPO determined that according to the evidence all features of the present claim were disclosed to the public prior to the patent application and the patent was not considered to involve an inventive step.

The patent granted on was Neem was revoked by the EPO in May 2000. EPO, in March 2006, rejected the challenge made in 2001 by the USDA and the chemicals multinational, W. R. Grace to the EPO's previous decision to cancel their patent on the fungicidal properties of the seeds extracted from the neem tree.

Basmati Rice (Oryza sativa Linn.)

Rice Tec. Inc. had applied for registration of a mark "Texmati" before the UK Trade Mark Registry. Agricultural and Processed Food Exports Development Authority (APEDA) successfully opposed it.

This US utility patent was unique in a way to claim a rice plant having characteristics similar to the traditional Indian Basmati Rice lines and with the geographical delimitation covering North, Central or South America or Caribbean Islands. The US PTO granted the patent to Rice Tec on September 2, 1997.

Eventually, a request for re-examination of this patent was filed on April 28, 2000. Soon after filling the re-examination request, Rice Tec chose to withdraw claims15-17 along with claim 4.

Biopiracy of traditional knowledge is not limited to India alone. In fact, there have been several examples from other countries where traditional

knowledge biopiracy has become a concern. Some of these examples are given below:

Kava (Piper methysticum Forster)

Kava is an important cash crop in the Pacific, where it is highly valued as the source of the ceremonial beverage of the same name. Over 100 varieties of Kava are grown in the Pacific, especially in Fiji and Vanuatu, where it was first domesticated thousands of years ago. In North America and Europe, Kava is now promoted for a variety of uses. French company L'Oreal - a global giant with US $10 billion a year in sales - has patented the use of Kava to reduce hair loss and stimulate hair growth.

Ayahuasca (Banisteriopsis caapi Mort.)

For generations, Shamans of indigenous tribes throughout the Amazon basin have processed the bark of B. caapi Mort. to produce a ceremonial drink known as “Ayahuasca”. The Shamans use Ayahuasca (which means “wine of the soul”) in religious and healing ceremonies to diagnose and treat illness, meet with spirits, and divine the future.

American, Loren Miller obtained US Plant Patent (no.5, 751 issued in 1986).

The Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA), which represents more than 400 indigenous tribes in the Amazon region, along with others, protested about a wrong patent that was given on a plant species.

On re-examination, USPTO revoked this patent on 3rd November 1999. However, the inventor was able to convince the USPTO on 17th April 2001, the original claims were reconfirmed and the patent rights restored to the innovator.

Criticism of Biopiracy

• Unfair, Unethical and a threat to the existence of indigenous cultures;

• Companies that take genetic resources from indigenous communities and develop product based on that knowledge and having patent on it;

• Indigenous communities are so barred from using or exporting their biological resources and traditional knowledge that they have developed. Eventually causes traditional knowledge to become extinct.

NEED TO PROTECT TRADITIONAL KNOWLEDGE

• Legal recognition of the rights of the holders of the traditional knowledge who are mainly the tribal and indigenous people of India is the need of the hour.

• The indigenous and tribal people who is conserving biodiversity by adopting sustainable method deserves to be recognized and compensated goes without saying.

• We need to sensitize the people on these issues as the public awareness about traditional knowledge is very low.

BIOLOGICAL DIVERSITY ACT, 2002

Background of the Act

After the Convention on Biological Diversity (CBD) was adopted by the United Nations, in June 1992, the contracting countries were required to integrate consideration of conservation and sustainable use of biological diversity into relevant legal procedures, programmes and policies.

The Biological Diversity Act was passed by the Parliament in 2002 after a process of consultation among stakeholders. The Act provides for conservation of biological diversity, sustainable use of its components and equitable sharing of benefits arising out of the use of biological resources. Agro-biodiversity which is a subset of total biological diversity is a major concern for the world food security and the issues of conservation and management of agro-biodiversity are one of the high priorities for a diversity-rich country like India.

Therefore, the sustainable use of biological diversity at the national as well as international level is of critical importance. For the same reason, the access to and sharing of both genetic resources and technologies for their sustainable use among nations are essential.

Salient Provisions of the Act

Some of the salient provisions made in the BDA for regulation of access to biological diversity, its conservation and sustainable use are:

1. Conservation and sustainable use of biological diversity.

2. Conservation and development of areas important from the standpoint of biological diversity by declaring them as biological diversity heritage sites.

3. Protection and rehabilitation of threatened species.

4. To respect and protect knowledge of local communities related to biodiversity.

5. Regulation of access to biological resources of the country with the purpose of securing equitable share in benefits arising out of the use of biological resources, and associated knowledge relating to biological resources.

6. To secure sharing of benefits with local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources.

7. Involvement of institutions of self-government in the broad scheme of the implementation of the Act through constitution of committees.

IMPORTANT DEFINITIONS

Some of the definitions in the context of the Act are:

'Benefit claimers' means the conservers of biological resources, their byproducts, creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application.

'Biological diversity' means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and of ecosystems.

'Biological resources' means plants, animals and micro-organisms or parts thereof, their genetic material and by-products with actual or potential use or value but does not include human genetic material.

'Bio-survey' and 'bio-utilization' means survey or collection of species, subspecies, genes, components and extracts of biological resources for any purpose and includes characterization, inventorization and bioassay.

'Equitable benefit sharing' means sharing of benefits as determined by the National Biodiversity Authority under Section 21 of the Act.

'National Biodiversity Authority' means the National Biodiversity Authority established under Section 8 of the Act.

'State Biodiversity Board' means the State Biodiversity Board established under Section 22 of the Act.

'Biodiversity Management Committee' means a committee established by each local body (panchayat) under Section 41 of the Act.

'Sustainable use' means the use of components of biological diversity in such manner and at such rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

Regulation of Access to Biological Diversity

For the effective implementation of the BDA, the Central Government would undertake activities to develop national strategies, plans and programmes for conservation and sustainable use of biological resources, with the following proposed institutional mechanisms.

It would take measures for identification and monitoring biodiversity-rich areas and notify threatened species.

It would also undertake promotion of incentives for research, training, public awareness and education with respect to biodiversity, and make assessment of environment impact of any activity likely to have adverse impact on biological diversity.

It would regulate, manage or control the risks associated with use and release of living modified organisms resulting from biotechnology, likely to have adverse impact on conservation and sustainable use of biodiversity and human health.

It may also declare some resources to be exempted from the provisions of this Act, including resources normally traded as commodities.

It is proposed to have National Biodiversity Authority (NBA), State Biodiversity Boards (SBB) and Biodiversity Management Committees (BMC) for effective implementation of the Act.

It is also proposed to set-up 'Biodiversity Funds' at central, state and local levels. The monetary benefits, fees and royalties received as a result of approvals by NBA will be deposited in the 'National Biodiversity Fund'. The Fund will be used for conservation and development of areas from where resources have been accessed, including management and conservation of heritage sites wherever applicable.

Traditional knowledge associated with biological resources is proposed to be protected. It is also proposed that the State Governments will notify National Heritage Sites, which are important from the standpoint of biodiversity, in consultation with institutions of local self governments.

National Biodiversity Authority (NBA)

The NBA will deal with matters relating to requests for access by foreign individuals, institutions or companies, and those relating to transfer of results of research to any foreigner. Imposition of terms and conditions to secure fair and equitable sharing of benefits arising out of utilization of biological resources and approvals for seeking any form of Intellectual Property Rights (IPR) in or outside India for an invention based on research or information pertaining to a biological resource or knowledge associated thereto obtained from India, would also be dealt with by the NBA.

Powers and Functions of NBA

The duties of the NBA are defined under Section 18. It would regulate activities, issue guidelines for access to and equitable benefit sharing and it may grant approval for undertaking any activity referred to in Sections 3, 4 and 6.

The NBA would advise the Central Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources; advise the State Governments in the selection of important areas of biodiversity to be notified as heritage sites and measures for the

management of such heritage sites; perform such other functions as may be necessary to carry out the provisions of this Act.

The NBA may also take measures necessary to oppose the grant of IPR in any country outside India, on behalf of the Central Government on any biological resource obtained from India or knowledge associated with biological resource which is derived from India.

Determination of Equitable Benefit Sharing by NBA

The manner of determination of equitable benefit sharing is provided in Section 21. The NBA, while granting approvals under Section 19 or Section 20, would ensure that the terms and conditions subject to which approval is granted, secure equitable sharing of benefits arising out of the use of accessed biological resources, their by-products, innovations and practices associated with their use and applications and knowledge relating thereto in accordance with mutually agreed terms and conditions between the person applying for such approval, local bodies concerned and the benefit claimers.

The NBA shall determine the benefit sharing subject to any regulations made in this behalf, which shall be given effect in all or any of the following manners:

(a) Grant of Joint ownership of intellectual property rights to the National Biodiversity Authority, or where benefit claimers are identified, to such benefit claimers.

(b) Transfer of technology.

(c) Location of production, research and development units in such areas which will facilitate better living standards to the benefit claimers.

(d) Association of Indian scientists, benefit claimers and the local people with research and development in biological resources and bio-survey and bio-utilization.

(e) Setting up of venture capital fund for aiding the cause of benefit claimers.

(f) Payment of monetary compensation and other nonmonetary benefits to the benefit claimers as the National Biodiversity Authority may deem fit.

Where any amount of money is ordered by way of benefit sharing, the NBA may direct the amount to be deposited in the National Biodiversity Fund.

Benefit-Sharing Mechanisms

The CBD mandates its member countries to enact national laws that would facilitate prior informed consent and benefit sharing in a fair and equitable manner, prior to access and use of biological resources and traditional knowledge.

Several countries have already enacted laws to put in place the access and benefit sharing (ABS) regime. Under Section 6 of the Indian Biological Diversity Act, there is a clear message that nobody can apply for IPR without taking prior permission from NBA.

The NBA can impose benefit-sharing fee or royalty or both, or ask for sharing financial benefit arising out of commercialization of the material. Section 7 envisages that nobody except local communities and *vaids can have access to* biological resources for commercial purpose without prior intimation to the SBB concerned.

State Biodiversity Board

SBB would be constituted for every state in India to deal with matters relating to access by Indians for commercial purposes and restrict any activity which violates the objectives of conservation, sustainable use and equitable sharing of benefits.

Functions of State Biodiversity Board

Section - 23

The functions of the State Biodiversity Board shall be to–

(a) advise the State Government, subject to any guidelines issued by the Central Government, on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources;

(b) regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians;

(c) perform such other functions as may be necessary to carry out the provisions of this Act or as may be prescribed by the State Government.

Power of State Biodiversity Board to restrict certain activities

Section – 24

1) Any citizen of India or a body corporate, organization or association registered in India intending to undertake any activity referred to in Section 7 shall give prior intimation in such form as may be prescribed by the State Government to the State Biodiversity Board.

2) On receipt of an intimation under sub-section (1), the State Biodiversity Board may, in consultation with the local bodies concerned and after making such enquires as it conservation, may deem fit, by order, prohibit or restrict any such activity if it is of opinion that such activity is detrimental or contrary to the objectives of conservation and sustainable use of biodiversity or equitable sharing of benefits arising out of such activity:

Provided that no such order shall be made without giving an opportunity of being heard to the person affected.

3) Any information given in the form referred to in sub-section (1) for prior intimation shall be kept confidential and shall not be disclosed, either intentionally or unintentionally, to any person not concerned thereto.

Provisions of sections 9 to 17 to apply with modifications to State Biodiversity Board

Section – 25

The provisions of sections 9 to 17 shall apply to a State Biodiversity Board and shall have effect subject to the following modifications, namely:

a) references to the Central Government shall be construed as references to the State Government;

b) references to the National Biodiversity Authority shall be construed as references to the State Biodiversity Board;

Provisions of sections 9 to 17 to apply with modifications to State Biodiversity Board.

c) reference to the Consolidated Fund of India shall be construed as reference to the Consolidated Fund of the State.

Constitution of SBB – Section 22(4)

The Board shall consist of the following members, namely:

a) A Chairperson who shall be an eminent person having adequate knowledge and experience in the conservation and sustainable use of biological diversity and in matters relating to equitable sharing of benefits, to be appointed by the State Government;

b) Not more than five ex officio members to be appointed by the State Government to represent the concerned Departments of the State Government;

c) Not more than five members to be appointed from amongst experts in matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources.

The head office of the State Biodiversity Board shall be at such place as the State Government may, by notification in the Official Gazette, specify. **(Section – 22(5)).**

Biodiversity Management Committee and its Functions

Institutions of self-government in their respective areas would constitute a BMC for conservation, sustainable use, documentation of biodiversity and chronicling of knowledge relating to biodiversity. BMC shall be consulted by the NBA and SBB on matters related to use of biological resources and associated knowledge within their jurisdiction.

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee.

The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

Unit - III

Law on Protection of Plant Varieties and Farmers Rights

Introduction

One of the major impacts of General Agreement of Trade and Tariffs (GATT) after 1995 has been the need to harmonize National Laws dealing with Intellectual Property Rights. Knowledge is now being used as an economic tool in trading. In such an atmosphere where agriculture is also a trade issue, protection of plant varieties by legal enactments, becomes a necessity and mandatory.

However, in an agrarian economy like in the Indian context, enactment of laws in compliance with the standards set by WTO is becoming increasingly complex especially when consideration of the stake holders and food security concerns have to be taken.

Global IPR regime as with international law is in a state of continuous evolution.

The recent enactment of Government of India on “Protection of Plant Varieties and Farmers Right Act” (PPVFR Act) is a result of intense discussion across the country on different platforms. The Act emerged from a process that attempted to incorporate the interests of various stakeholders including private sector breeders, public sector institutions, NGOs and farmers within property rights framework.

The General Agreement on Trade and Tariffs (GATT), the predecessor to the World Trade Organization (WTO), was started to restore world trade after the end of the Second World War in 1945. Several rounds in GATT starting from 1948, dealt with the quotas and duties of tradable commodities between nations. The 1986 GATT Round, popularly known as Uruguay Round (UR), brought in new elements into trade discussions, specially relating to agriculture.

One of the most conscientious agreements of the UR is the one relating to granting of Intellectual Property Rights (IPR) on biological materials embodied in the Trade-related intellectual Property (TRIPS) chapter. This is administered by the World Trade Organization and is important because it is the first and only international treaty, which seeks to establish enforceable universal minimum standards of protection for all major intellectual property rights.

Thus, IP confers legal ownership to the person or a business of a discovery or an invention attached to a particular product or process, which prohibits others from unauthorized use. While this agreement had specified minimum standards with reference to Berne and Paris conventions it notably made no such specifications on any minimum standards for plant varieties.

Article 27 of the TRIPs Agreement states that all qualifying inventions in all fields of technology, whether products or processes, shall be eligible for patents. Further countries may decide, as per this Agreement, not to patent within their territories plants and animals, and essentially biological processes for their production. Nevertheless, they will be obliged to patent microorganisms, and non- biological as well as microbiological processes.

Where patent shall not be provided for plants, it will be obligatory as per the TRIPs Article 27.3 (b) to provide for the protection of plant varieties by a patent or by an effective *sui generis* system or by combination thereof.

Thus, with respect to the protection of plant varieties, TRIPS is very clear that plants and animals may be excluded from patentability. The choice is left to member countries to protect plant varieties either by patent or by an effective *sui generis* system or by combination of both these IPR systems.

International Treaties relating to PVP

The Protection of Plant Varieties and Farmer's Rights Act, 2001(PPVFR Act) of India has been enacted after consideration of several international systems. Useful features from many international treaties have also been borrowed or modified in the Act. A brief resume of some of the features of such parallel agreements considered by the makers of the Indian Act are –

International Union for the Protection of New Varieties of Plants

It was during the early part of the twentieth century that the potential benefit of systematic plant breeding to society and the lack of an effective protection and reward system was first felt which led to the formation of the Inter - governmental ***International Union for the Protection of New Varieties of Plants***, commonly known as UPOV with mostly developed countries as member states, after an International Convention in Paris in 1961.

The convention has undergone revisions in 1972, 1978 and 1991 and has as on today 53-member states. The purpose of the UPOV convention is to ensure Plant Breeder's Right (PBR) by making available to them an exclusive property right on New Plant Varieties in order to provide incentive to the development of agriculture and to safeguard the interests of plant breeders. It provides a framework for intellectual property protection of plant varieties.

To be eligible for protection, varieties have to be

(i) Distinct from existing commonly known varieties

(ii) Sufficiently uniform i.e. remain true to description after repeated reproduction

(iii) Stable and new in the sense that they must not have been commercialized.

Under the UPOV'78, a new plant variety produced by a breeder could only be produced and marketed by him. The plant breeder right (PBR) gives to the breeder, a monopoly via marketing right sale of seed. (Article 14). But the system allowed two important exemptions. One, the breeder's exemption, which allowed other plant breeders to use the protected variety for breeding purposes and the other one was that of the farmer's rights. The farmers were allowed to use the seeds from their harvest to plant the next crop, even if the seed was protected by the PBR.

The Convention on Biological Diversity and the Conference of the Parties and Intellectual Property

The CBD, which entered into force in 1993, has three objectives, "the conservation of biological diversity, and the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

The most important parts of the Convention here are Articles 15 and 8 (j). Article 15 (Access to genetic resources) recognizes the sovereign rights of States over their natural resources, and their authority to determine access to genetic resources, and that access, where granted, shall be on mutually agreed terms and subject to prior informed consent of the provider party.

Article 8 (j) requires parties to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional life-styles relevant for the 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 the benefits arising from the utilization of such knowledge, innovations and practices.

Since there is no reference in the TRIPs Agreement to the CBD requirement of prior informed consent (PIC) or encouragement of benefit sharing, developed countries that provide for the patenting of genetic resources usually grant such patents without examining the origin of the genetic material, the existence of prior informed consent on the part of indigenous communities, or whether the patentee is committed to sharing the commercial benefits with the provider of the genetic material.

In addition, IPRs may inhibit, due to their exclusiveness, "appropriate access" to genetic resources, which is one of the CBD's objectives. Therefore, the question of how to interpret the relationship between the TRIPs Agreement and the CBD has been the source of considerable controversy in the TRIPs Council.

In the CBD, intellectual property is explicitly referred to only in the context of technology transfer, which is supposed to be one of the main

kinds of benefit for provider countries to receive. Article 16 on access to and transfer of technology requires Parties to the Convention to undertake to provide and / or facilitate access and transfer of technologies to other parties under fair and most favorable terms.

Article 16.5 is a little more controversial, requiring the Parties to cooperate to ensure that patents and other IPRs "are supportive of and do not run counter to" the CBD's objectives. This reflects the profound disagreement during the negotiations between those who believed that IPRs conflict with the CBD's objectives and others that saw no contradiction.

At the Sixth Meeting of the Conference of the Parties, which took place in The Hague in May 2002, the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable sharing of the Benefits Arising out of their Utilization were officially adopted.

The guidelines, which are used when developing and drafting legislative, administrative or policy measures on access and benefit sharing (ABS) and contracts, have a number of provisions relating to IPRs. They suggest to Parties with genetic resource users under their jurisdiction to consider adopting "measures to encourage the disclosure of the country of origin of the genetic resources and of the origin of traditional knowledge, innovations and practices of indigenous and local communities in applications for intellectual property rights.

The Food and Agriculture Organization (FAO) and the International Treaty on Plant Genetic Resources for Food and Agriculture

During the 1980s the FAO became the principle battleground of what came to be known as "the seed wars".

The main bone of contention was that the developed countries were allegedly abusing the free exchange principle. The main criticisms were, first, that most of the world base-crop collections were held in the developed world even though most of the accessions had come from the developing world. Second, while folk varieties were treated as being the common heritage of humankind, plant breeders in the developed countries were securing IPR protection for their own varieties.

In 1983, the FAO Commission on Plant Genetic Resources (CPGR) was created to provide a forum where governments could meet for discussion, and monitor the non-binding agreement known as the "International Undertaking on Plant Genetic Resources"(the Undertaking), whose objectives were "to ensure the safe conservation and promote the unrestricted availability and sustainable utilization of plant genetic resources for present and future generations, by providing a flexible framework for sharing the benefits and burdens".

These negotiations were finally concluded in November 2001, when a text for the revised undertaking was adopted and then converted into a legally binding treaty. The treaty was finalized in November 2001 and will come into effect after the 40th signatory country has ratified it.

So far 31 countries, including India have committed to the treaty. The protection of plant varieties and farmers rights act of India includes within it all the major provisions of this treaty.

The treaty seeks to protect the material in the gene banks and the crops in the farmers fields from being directly patented and encourages countries to protect farmers' rights.

In response to the developed countries' insistence on excluding IPR – protected plant varieties from application of the common heritage principle, the "Farmers' Rights" concept was included in the Undertaking from 1989. In this context, it should be noted that the term "Farmers' Rights" has to be distinguished from "farmers' privilege".

The latter is a clearly defined exception to the breeders' exclusive right, "Farmers' Rights" is not an IPR as such, but it is frequently suggested as a principle that could be implemented as a compensation of benefit-sharing mechanism. Officially "Farmers' Rights" is an attempt to acknowledge, "the contribution farmers have made to the conservation and development of plant genetic resources, which constitute the basis of plant production throughout the world."

Unit – III

Objectives of the Act and Plant Varieties & Farmers Rights Protection Authority

Introduction

The Protection of Plant Varieties and Farmers' Rights Act 2001 was enacted in India to protect the new plant varieties. Rules for the same were notified in 2003. The Act has now come into force. The Protection of Plant Varieties and Farmers' Rights Authority has been set up and is responsible to administer the Act. The office of the Registrar has started receiving applications for registration of twelve notified crops viz. rice, lentil, maize, green gram, kidney bean, black gram, chickpea, pearl millet, pigeon pea, sorghum, field pea, bread wheat.

Under the TRIPS agreement it is obligatory on part of a Member to provide protection to new plant variety either through patent or an effective *sui generis* system or a combination of these two systems. India was therefore under an obligation to introduce a system for protecting new plant variety. India opted for *sui generis* system and enacted The Protection of Plant Varieties and Farmers' Rights Act 2001. However, in many countries such plants can be protected through Breeders' Rights, patents and UPOV Convention.

The genesis of the Indian legislation

In India, agricultural research including the development of new plant varieties has largely been the concern of the government and public sector institutions. Earlier, India did not have any legislation to protect the plant varieties and, in fact, no immediate need was felt. However, after India became signatory to the Trade Related Aspects of Intellectual Property Rights Agreement (TRIPs) in 1994, such a legislation was necessitated.

Article 27.3 (b) of this agreement requires the member countries to provide for protection of plant varieties either by a patent or by an effective *sui generis system or by any combination thereof.* Thus, the member countries had the choice to frame legislations suiting their own system and

India exercised this option. The existing Indian Patent Act, 1970 excluded agriculture and horticultural methods of production from patentability.

The *sui generis system for protection of plant* varieties was developed integrating the rights of breeders, farmers and village communities, and taking care of the concerns for equitable sharing of benefits. It offers flexibility with regard to protected genera/species, level and period of protection, when compared to other similar legislations existing or being formulated in different countries.

The Act covers all categories of plants, except microorganisms. The genera and species of the varieties for protection shall be notified through a gazette, after the appropriate rules and by-laws are framed for the enforcement of the Act.

Objectives

The objectives of the Act are as follows:

(i) To provide for the establishment of an effective system for protection of plant varieties.

(ii) To provide for the rights of farmers and plant breeders.

(iii) To stimulate investment for research and development and to facilitate growth of the seed industry.

(iv) To ensure availability of high quality seeds and planting materials of improved varieties to farmers.

v) to stimulate investments for research and development both in the public and the private sectors for the developments of new plant varieties by ensuring appropriate returns on such investments .

vi) to facilitate the growth of the seed industry in the country through domestic and foreign investment which will ensure the availability of high quality seeds and planting material to Indian farmers; and

vii) to recognize the role of farmers as cultivators and conservers and the contribution of traditional, rural and tribal communities to the country's agro biodiversity by rewarding them for their contribution through benefit sharing and protecting the traditional right of the farmers.

Important Definition

The important definition in the context of the Act are placed below along with some of the concerns raised while interpretation of these definitions.

Variety (Section 2 (*za*))

A plant grouping except microorganisms within a single botanical taxon of the lowest known rank, which can be

i) Defined by the expression of the characteristics resulting from a given genotype of plant grouping;

ii) Distinguished from any other plant grouping by expression of at least one of the said characteristics; and

iii) Considered as a unit with regard to its suitability for being propagated, which remains unchanged after such propagation and includes propagating material of such variety, extant variety, transgenic variety, farmers' variety and essentially derived variety.

Extant Variety (Section 2 (j))

Means a variety available in India which is—

(i) notified under Section 5 of the Seeds Act, 1966 (54 of 1966); or

(ii) farmers' variety; or

(iii) a variety about which there is common knowledge; or

(iv) any other variety which is in public domain.

Essentially Derived Variety (Section 2 (i))

In respect of a variety (the initial variety) shall be said to be essentially derived from such initial variety when it—

(i) is predominantly derived from such initial variety, or from a variety that is itself predominantly derived from such initial variety, while retaining the expression of the essential characteristics that results from the genotype or combination of genotype of such initial variety;

(ii) is clearly distinguishable from such initial variety; and

(iii) conforms (except for the differences which result from the act of derivation) to such initial variety in the expression of the essential characteristics that result from the genotype or combination of genotype of such initial variety.

Farmer (Section 2 (k))

Means any person who—

(i) cultivates crops either by cultivating the land himself; or

(ii) cultivates crops by directly supervising the cultivation of land through any other person; or

(iii) conserves and preserves, severally or jointly, with any person any wild species or traditional varieties or adds value to such wild species or traditional varieties through selection and identification of their useful properties.

Farmers' Variety (Section 2 (l))

Means a variety which—

(i) has been traditionally cultivated and evolved by the farmers in their fields; or

(ii) is a wild relative or land race of a variety about which the farmers possess the common knowledge.

Gene Fund (Section 2 (m))

Means the National Gene Fund constituted under subsection (1) of Section 45;

Salient features of the Act

Some of the features embodified in the Act which impede its implementation have also been raised. These are put forth with an intention that initial bottlenecks of implementing of this unique Act should not hamper policy makers, scientists, legal authorities, NGOs and farmers from pursuing its ideals and concerted efforts are made to set the process in motion.

1. **Provides an optimum balance between:**
   - ❖ Breeder's right and farmers' right
   - ❖ IPR and right on genetic resources used to develop a variety, where applicable

2. Provides protection to

- ❖ New varieties

- ❖ Extant varieties, including farmers' varieties, and the varieties of common knowledge
- ❖ Essentially derived varieties

Protection of Plant Varieties and Farmers' Rights Authority

Establishment of Authority. (Section – 3)

(1) The Central Government shall, by notification in the Official Gazette, establish an authority to be known as the Protection of Plant Varieties and Farmers' Rights Authority for the purposes of this Act.

(2) The Authority shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power to acquire, hold and dispose of properties, both movable and immovable, and to contract, and shall by the said name sue and be sued.

(3) The head office of the Authority shall be at such place as the Central Government may, by notification in the Official Gazette, specify and the Authority may, with the previous approval of the Central Government, establish branch offices at other places in India.

(4) The Authority shall consist of a Chairperson and fifteen members.

(5) ***(a)*** The Chairperson to be appointed by the Central Government, shall be a person of outstanding caliber and eminence, with long practical experience to the satisfaction of that Government especially in the field of plant varietal research or agricultural development.

(b) The members of the Authority, to be appointed by the Central Government, shall be as follows, namely—

(i) the ***Agriculture Commissioner***, Government of India, Department of Agriculture and Cooperation, New Delhi, Member ex-officio;

(ii) the ***Deputy Director General*** in charge of Crop Sciences, Indian Council of Agricultural Research, New Delhi, ex-officio;

(iii) the ***Joint Secretary*** in charge of Seeds, Government of India, Department of Agriculture & Cooperation, New Delhi, ex-officio;

(iv) the ***Horticulture Commissioner***, Government of India, Department of Agriculture & Cooperation, New Delhi, ex-officio;

(v) the ***Director***, National Bureau of Plant Genetic Resources, New Delhi, ex-officio;

(vi) One member not below the rank of ***Joint Secretary*** to the Government of India, to represent the Department of Bio-Technology, Government of India, ex-officio;

(vii) One member not below the rank of ***Joint Secretary*** to the Government of India to represent the Ministry of Environment and Forests of the Government of India, ex-officio;

(viii) One member not below the rank of ***Joint Secretary*** to the Government of India to represent the Ministry of Law of the Government of India, ex-officio;

(ix) One representative from a ***National or State level farmers' organization*** to be nominated by the Central Government;

(x) One representative from a ***tribal organization*** to be nominated by the Central Government;

(xi) One representative from the ***Seed industry*** to be nominated by the Central Government;

(xii) One representative from an ***Agricultural University*** to be nominated by the Central Government;

(xiii) One representative from a ***National or State level Women's organization*** associated with agricultural activities to be nominated by the Central Government;

(xiv) Two representatives of ***State Governments*** on rotation basis to be nominated by the Central Government.

(c) The ***Registrar General*** shall be the ex-officio Member-Secretary of the Authority.

(6) The term of office of the Chairperson and the manner of filling the post shall be such as may be prescribed.

(7) The Chairperson shall appoint a Standing Committee consisting of five members, one of which shall be a member who is a representative from a farmers organization to advise the Authority on all issues including farmers rights.

(8) The Chairperson shall be entitled to such salary and allowances and shall be subject to such conditions of service in respect of leave, pension, provident fund and other matters as may be prescribed. The allowances for non-official members for attending the meeting of the Authority will be as such as may be prescribed. The allowances for non-official members for attending the meeting as prescribed.

(9) The Chairperson may resign his office by giving notice thereof in writing to the Central Government and on such resignation being accepted, he shall be deemed to have vacated his office.

(10) On the resignation of the Chairperson or on the vacation of the office of Chairperson for any reason, the Central Government may appoint one of the members to officiate as Chairperson till a regular Chairperson is appointed in accordance with clause (a) of subsection (5).

Meetings of Authority (Section – 4)

(1) The Authority shall meet at such time and place and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings and the transaction or business of its Standing Committee appointed under subsection 7 of section 3) as may be prescribed.

(2) The Chairperson of the Authority shall preside at the meetings of the Authority.

(3) If for any reason the Chairperson is not able to attend any meeting of the Authority, any member of the Authority chosen by the members present at the meeting shall preside at the meeting.

(4) All questions which come before any meeting of the Authority shall be decided by a majority of the votes of the members of the Authority present and voting and in the event of equality of votes, the Chairperson of the Authority or in his absence, the person presiding shall have and exercise a second or casting vote.

(5) Every member who is in any way, whether directly, indirectly or personally, concerned or interested in a matter to be decided at the meeting shall disclose the nature of his concern of interest and after such disclosure, the member concerned or interested shall not attend that meeting.

(6) No act or proceeding of the Authority shall be invalid merely by reason of—

(a) any vacancy in, or any defect in the constitution of the Authority; or

(b) any defect in the appointment of a person acting as the Chairperson or a member of the Authority; or

(c) any irregularity in the procedure of the Authority not affecting the merits of the case.

Committees of Authority (Section – 5)

(1) The Authority may appoint such committees as may be necessary for the efficient discharge of its duties and performance of its functions under this Act.

(2) The persons appointed as members of the committee under sub-section (1) shall be entitled to receive such allowances or fees for attending the meetings of the committee as may be fixed by the Central Government.

Officers and employees of Authority *(Section – 6)*

Subject to such control and restriction as may be prescribed, the Authority may appoint such other officers and employees as may be necessary for the efficient performance of its functions and the method of appointment, the scale of pay and allowances and other conditions of service of such other office. and employees of the Authority shall be such as may be prescribed.

Chairperson to be Chief Executive (Section – 7)

The Chairperson shall be the Chief Executive of the Authority and shall exercise such powers and perform such duties as may be prescribed.

General Functions of Authority (Section – 8)

1) It shall be the duty of the Authority to promote, by such measures as it thinks fit, the encouragement for the development of new varieties of plants and to protect the rights of the farmers and breeders.

(2) In particular, and without prejudice to the generality of the foregoing provisions, the measures referred to in sub-section (1) may provide for—

(a) the registration of extant and new plant varieties subject to such terms and conditions and in the manner as may be prescribed;

(b) developing characterization and documentation of varieties registered under this Act;

(c) documentation, indexing and cataloguing of farmers' varieties;

(d) compulsory cataloguing facilities for all varieties of plants;

(e) ensuring that seeds of the varieties registered under this Act are available to the farmers and providing for compulsory licensing of such varieties if the breeder of such varieties or any other person entitled to produce such variety under this Act does not arrange for production and sale of the seed in the manner as may be prescribed;

(f) collecting statistics with regard to plant varieties, including the contribution of any person at any time in the evolution or development of any plant variety, in India or in any other country, for compilation and publication;

(g) ensure the maintenance of the National Register of plant variety.

Authentication of orders of Authority (Section – 9)

All orders and decisions of the Authority shall be authenticated by the signature of the Chairperson or any other member authorized by the Authority in this behalf.

Delegation (Section – 10)

The Authority may, by general or special order in writing, delegate to the Chairperson, any member or officer of the Authority subject to such conditions or limitations, if any, as may be specified in the order, such of its powers and functions (except the power to make regulations under Section 94) under this Act as it may deem necessary.

Power of Authority (Section – 11)

In all proceedings under this Act before the Authority or the Registrar—

(a) the Authority or the Registrar, as the case may be, shall have all the powers of a civil court for the purposes of receiving evidence, administering oaths, enforcing the attendance of witnesses, compelling the discovery and production of documents and issuing commissions for the examination of witnesses;

(b) the Authority or the Registrar may, subject to any rules made in this behalf under this Act, make such orders as to cost as it considers reasonable and any such order shall be executable as a decree of a civil court.

National Register of Plant Varieties & Procedure for Registration

National Register of Plant Varieties (Section 13)

(1) For the purposes of this Act, a register called the National Register of Plant Varieties shall be kept at the head office of the Registry, wherein shall be entered the names of all the registered plant varieties with the names and addresses of their respective breeders, the right of such breeders in respect of the registered variety, the particulars of the denomination of each registered variety, its seeds or other propagating material along with specification of salient features thereof and such oilier matters as may be prescribed.

(2) Subject to the superintendence and direction of the Central Government, the register shall be kept under the control and management of the Authority.

(3) There shall be kept at each branch office of the Registry a copy of the register and such other documents as the Central Government may, by notification in the Official Gazette, direct.

Registration of Plant Varieties

A variety is protected under the Act, only when it is registered. The benefits of the Act are extended to the persons who register the variety. Application for registration of varieties can be made by the breeder of the variety, his successor, or assignee, any farmer or group of farmers. Every application shall be made in writing and signed by the applicant and delivered to the Registrar or the Authority at its office.

Application and all other documents have to be filed in triplicate. All affidavits required to be filed under the PPV & FRs Rules shall be dated & signed at the foot & contain a statement that the facts & matters stated therein are true to the best of the knowledge, information and belief of the person making the affidavit.

Where an application for registration is made by the successor or assignee of the breeder, he shall furnish proof to that effect at the time of application or within six months of making such application. Each application should assign a single & distinct denomination of the variety to which the registration is being sought.

There must also be a statement describing all the details of the variety that brings out its characteristics of registering the variety. The applicant shall also make available such quantity of seed as is required for testing to evaluate whether it satisfies the standards specified. The Authority shall conduct DUS testing which shall be field & multilocation based for at least two crop seasons. DUS testing should be done at a minimum of two locations. When DUS testing fails to establish the requirement of distinctness, special test shall be conducted by the Authority. Special tests shall be laboratory based.

DUS test is required for all varieties except essentially derived varieties. The samples of seeds or propagules and the parental lines submitted for testing shall be deposited at the National Gene Bank.

The applicant must also declare that the parental materials acquired for breeding the variety has been lawfully acquired. He must also provide a complete passport data of the parental lines along with the geographical location in India from the generic material has been taken including contribution made by the local communities if any in the evolution of that variety.

Farmers' varieties can be registered without stating any of these conditions in his application. An application for protection has to assign a single & distinct denomination to the variety.

The registrar on receipt of the application can either accept it, require it to be amended or rejected. On acceptance of the application for registration, the Registrar shall advertise such application calling for objection from the persons interested in the matter. The advertisement shall mention the place where a specimen of the variety may be inspected. The advertisement shall include:

1. Name, passport data & source of parental line or initial variety used to develop the variety in respect of which an application for registration has been made;

2. Description of the variety bringing out its character profile as specified under the DUS test schedule;

3. Essential characteristics conferring distinctiveness to the variety;

4. Important agronomic & commercial attributes of the variety;

5. Photographs or drawings if any, of the variety submitted by the applicant; and

6. claim, if any, on the variety.

An application shall not be rejected by the Registrar without giving a reasonable opportunity to the applicant to present his case. Any person can, within three months from the date of the advertisement, give in writing a notice of opposition to the registration. Opposition to the registration can be made on the grounds:

1. That the person opposing the application is entitled to the breeders right as against the applicant; or

2. That the variety is not registrable under the Act; or

3. That the grant of certificate of registration may not be in public interest; or

4. That the variety may have adverse effect on the environment.

The notice of opposition shall be sent to the applicant within ***three months*** from the last date of filing of application. The applicant is required to file his counter-statement within ***two months***. All evidence upon which the opponent relies shall be submitted in duplicate to the Registrar with a copy to the applicant within ***one month*** from the date of the counter statement of the applicant.

Within ***30 days*** from the date of receipt of the opponent's evidence, any evidence on which the applicant relies shall be submitted in duplicate with a copy to the opponent. The Registrar shall decide whether registration is to be permitted after giving an opportunity of being heard.

The time schedule provided shall not be extended and failure to comply in time shall result in forfeiture of the opportunity granted.

When an application for registration of a variety other than an essentially derived variety has been accepted & on registration, the Registrar shall issue to the applicant a certificate of Registration. Where registration of a variety is not completed within ***12 months*** from the date of application, due to default on the part of the applicant, the application will be considered as abandoned after giving notice to the applicant.

The Act has provisions for registration of essentially derived varieties & also gives rights similar to the breeder of a variety as provided in Section 28 of the Act.

An application for registration of an essentially derived variety shall be accompanied by –

1. An affidavit sworn by the applicant stating that such a variety does not contain any gene or gene sequence involving terminator technology;

2. A statement giving details of the brief description of the characteristics of the variety to substantiate novelty, distinctiveness, uniformity and stability; and

3. The details of parental material used.

Where an essentially derived variety is derived from a farmer's variety, the authorization shall be given only after obtaining consent from the farmers or the group of farmers of community who have made contribution in the preservation and development of the variety.

Rights on Registration

A certificate of registration confers on the breeder or his assignee an exclusive right to produce, sell, market, distribute, import or export the variety (Section – 28).

On sale of a registered variety, there is an implied warranty that the denomination is a genuine denomination and is not falsely applied. The owner of an extant variety shall be the Central Government unless the breeder establishes his right or in case of an extant variety notified under Section 5 of the Act, the State Government will be the owner of the right.

The Act also confers on the breeder to authorize any person to produce, sell, market, distribute or deal with the variety registered under the Act.

The registered agent is not entitled to transfer such right. The agent or licensee is entitled to call upon the breeder or his successor to take proceeding to prevent infringement.

The certificate of registration confers on the breeder rights valid for a period of nine years in the case of trees and vines and six years in the case of other crops.

After this period, the certificate can be renewed for a further period till 18 years in the case of trees and vines from the date of registration and in the case of extant variety for a period of 15 years from the date registration & in all other cases for 15 years from the date of registration.

The breeder of a variety registered under the Act may after giving notice, surrender his certificate of registration. On receipt of the notice, the Registrar shall notify every registered agent or licensee relating to such certificate. The agents or licensee are entitled to file their opposition and the Registrar shall on receipt of the opposition intimate the breeder of the opposition.

The Registrar shall after hearing the parties if satisfied that the certificate of registration may be surrendered, revoke the certificate of registration.

Farmers' Rights

&

The Concept of Benefit Sharing

Farmers' Right

The concept of farmer's right is basically contradictory to the principles of intellectual property. IPR are intended to provide incentive for a limited as a reward for the innovation. Farmers' Right is a retrospective reward of unlimited duration for the conservation of plant genetic resources. The rights provide in addition for the innovations done on the farms, reward for the past innovations.

Farmers' rights are the countervailing force to breeders' right and patents on seeds & plants. The knowledge & rights of local community has to be strengthened in order to conserve our biodiversity.

The concept of farmer's right had its origin in the FAO International Undertaking on Plant Genetic Resources. The Resolution defines farmers' rights as "rights arising from the past, present and future contribution of farmers in conserving, improving and making available plant genetic resources, particularly those in centers of genetic diversity. These rights are vested in the international community as trustees for present and future generations."

India is the first country which has included farmers' rights in its protection of plant varieties. The Act provides that a farmer who has bred a new variety is entitled for registration and protection as a breeder of a new variety.

The concept of farmers' right is more elaborated in the Act by allowing the farmer to save, use, sow, re-sow, exchange, share or sell his farm produce including seeds of a variety protected under the Act. The only condition imposed is that the farmer shall not be entitled to sell branded seed of a variety protected under the Act.

According to the Act, the breeder has to disclose to the farmer the expected performance of the variety under given conditions and if the variety fails to give the expected performance when it is sold to him, he is entitled to compensation.

On receipt of a compensation claim from the farmer under Section 39(2) of the Act, the Authority is required to give notice to the registered breeder about the compensation claim.

On receipt of the notice from the Authority, the breeder has to file his notice of opposition within ***three months*** from the date of receipt of the notice. The Authority shall after giving an opportunity of being heard direct the breeder to pay such amount as compensation as it deems fit.

Benefit Sharing

The geographical significance of India has blessed it with a genetic reservoir. India has rich & varied vegetation which can be divided into

various floristic regions. India possesses about 45,000 different species of plants & about 5000 species are found exclusively in India.

Crops with better nutritional quality & increased resistance can be produced through biotechnology. The value & importance of miracle plants & important genetic resources of the tropical rainforest pharmacies is great.

The industrialized countries now commercially exploit the usage of wild plants for medicinal purposes. Though products of biotechnology may seem innovative, the biotechnologists often copy nature's method of design & natural selection.

The benefits that could be obtained from nature depended upon the proper maintenance & conservation of the diversity of life forms. The incentives provided by the biotechnology patents have led to the excessive exploitation of the genetic pool of the developing countries.

The Indian legislation takes care of the interests of the traditional community by providing various mechanisms like benefit sharing & gene fund. The present day plant breeding techniques could be achieved only because of the efforts of the third world in preserving & improving the genetic diversity.

The breeder of a variety has to disclose in the application information regarding the genetic material used. The contribution made by the farmer, village community, institution or organization in breeding has to be stated in the application for registration.

It is essential that the genetic material is lawfully acquired. In case of willful concealment of the information, the application will be rejected. On receipt of a copy of certificate of registration, the Authority shall publish the contents of the certificate & can also invite claims of benefit sharing to the variety registered. The Authority shall for the purpose of inviting claims for benefit sharing advertise details of the registration certificate.

On invitation of the claims any person or group of persons shall submit its claims to benefit sharing. The person making the application shall provide the following information:

1. The contribution made by the person or the group of person or firm or community of the non-governmental organization to the genetic development of the plant variety;
2. The capacity in which the person or group of persons or the NGOs is making the claim for benefit sharing;
3. In case of "essentially derived varieties", the terms and conditions in which authorization has been given;
4. The commercial viability of the actual market performance of the variety so registered.

On receipt of the claim the Authority send a copy of the claim to the breeder of the variety registered and the breeder has the opportunity to submit his opposition to the claim. In case the breeder has any opposition to the claim he has to submit the opposition within a period of ***three months***.

The Authority shall dispose of the claim after hearing the parties & can also order the amount of benefit sharing to be paid. The Authority while determining the amount of compensation to be paid shall take into consideration, the extent and nature of the use of the genetic material of the claimant to the development of the variety, the commercial utility & demand in the market.

Lack of an effective legislation to protect the interests of the community who have preserved the genetic diversity has paved way to the granting of protection to many plant varieties without sharing of benefits.

Benefit Sharing and Biological Diversity Act, 2002

The law relating to benefit sharing in cases of utilization of genetic resources is further clarified by the Biological Diversity Act, 2002 legislated in compliance with the requirements of CBD to which Indian is a signatory.

The Act ensures that there is no piracy of the biodiversity of the Country. Previous approval of the NBA should be obtained for obtaining any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio-survey & bio-utilization.

An application along with a fee of Rs. 10,000 shall be made for obtaining approval. Approval shall also be obtained for transferring the results of any research relating to biological resources occurring in, or obtained from, India. This provision is applicable to –

a) A person who is not a citizen of India,

b) A citizen of India, who is non-resident as defined in clause (30) of Section 2 of the Income Tax Act, 1961

c) A body corporate, association or organization-

i) not incorporated or registered in India; or

ii) incorporated or registered in India under any law for the time being in force which has any non-Indian participation in its share capital or management.

The Authority after being satisfied of the merits of the application grants the approval for access to biological resources & associated knowledge subject to such terms & conditions as it may deem fit to impose. The approval to access shall be in the form of a written agreement duly signed by the authorized officer of the Authority and the applicant.

The Act also explains about the mechanism adopted for the benefit sharing.

Compulsory Licence and Infringement

Compulsory License (Section 47 to 53)

Intellectual property right is granted to an inventor as a bargain for disclosing the invention. The ultimate beneficiary apart from the owner of the right is the public and hence it is essential that the variety should be available to the public.

There has always been a danger that the owner of the right will abuse the monopoly granted to him. Abuse of right can be by refusing to grant licenses, imposing unreasonable terms on the licensee or restrictive conditions on the use of the patented articles. The provision of compulsory licensing in the Act prevents this situations.

A compulsory license is an authorization given by an authority allowed by law to grant a license, without or against the consent of the title holder for the exploitation of a subject matter protected by a patent.

After the expiry of a period of ***three years*** from the date of issue of certificate of registration, any person interested may make an application to the Authority for obtaining a compulsory license. The application for compulsory license shall furnish the following particulars:

1. Specify particulars of variety denomination, generic and specific name of the variety or varieties concerned.

2. Contain the grounds for issue of compulsory license with supporting documents, and be supported by-

i) *Qualification, technical & financial capabilities of the person making such request with evidence,*

ii) *Particulars of the holder of the right to the variety,*

iii) *Written evidence that the person, making such request, has exhausted all measures for voluntary license.*

The Authority shall grant compulsory license after consultation with the CG & after giving an opportunity to the breeder of such variety to file an opposition within ***1 month*** from the receipt of the notice of opposition.

The Authority while determining the terms & conditions of the compulsory license shall ensure that reasonable compensation to the breeder of the variety is secured having regard to the nature of the variety, the expenditure incurred by such breeder in breeding the variety or for developing it.

The Authority shall also ensure that the compulsory licensee of such variety possesses the adequate means to provide to the farmers, the seeds or other propagating material of such variety at a reasonable market price.

An application for compulsory license shall be adjourned by the Authority for a period of 12 months on a written request by the breeder that due to any reasonable factors, the breeder is not able to produce seed or other propagating material.

The duration of the compulsory license shall be determined by the Authority, but shall not exceed the total remaining period of the protection of the variety.

The Authority may on its own motion or on an application from an aggrieved person, if it is satisfied that a compulsory license has violated any terms and conditions of the license or where it is not appropriate in the public interest after giving the licensee an opportunity to file an opposition and of being heard, make order to revoke such license.

Plant Varieties Protection Appellate Tribunal (Section 54 to 59)

The CG shall establish a Tribunal called the Plant Varieties Protection Appellate Tribunal to hear matters relating to appeal. The Tribunal shall consist of a ***Chairman and other Judicial Members and Technical Members*** as the CG may appoint.

The Judicial member shall be a person who has held the post for at least 10 years in the territory of India or who has been a member of the Indian Legal Service and has held a post in Grade-II of that service or any equivalent or higher post for at least three years. An advocate is also eligible for appointment as a judicial member if he has been advocate for at least twelve years.

Technical member shall be a person who is an eminent agricultural scientist in the field of plant breeding and genetics and possesses an experience of at least twenty years to deal with the plant variety or seed development equivalent to the Joint Secretary of the Government of India for at least three years and possess special knowledge in the field of plant breeding and genetics.

The Tribunal has the authority and shall have the right to hear the appeals from the order or decision of the Authority or Registrar:

1. Relating to registration of variety
2. Relating to registration as an agent or licensee of a variety, Regarding claim of benefit sharing,
3. Regarding claim of benefit sharing,
4. Regarding revocation of compulsory license or modification of compulsory license,

5. Regarding payment of compensation made under this Act or the Rules.

The Tribunal has to accord an opportunity of being heard before passing an order on the appeal. The Tribunal can also within 30 days from the date of the order, rectify a mistake apparent from the record by amending the order passed by it.

The time limit for deciding on the appeal by the Tribunal is fixed at ***one year***. But this is not a tight requirement and the Act gives flexibility to the Tribunal.

Proceedings before the Tribunal shall be deemed as a judicial proceeding within the meaning of Section 193 & 228 & for the purpose of Section 196 of the IPC & it shall also be deemed as a Civil Court for the purpose of Section 195 & Chapter XXVI of the Cr. P. C.

Interim order shall be made in any proceedings before the Tribunal only after copies of the appeal & all documents in support of the plea for the interim order is furnished to the party against whom the appeal is made and an opportunity is given to such party to be heard. The order of the Tribunal is executable as a decree of a Civil Court.

Infringement (Section 64 to 77)

Any violation of the rights of the owner of a variety constitutes infringement. A right is infringed by a person who is not a breeder of a variety where he sells, exports, imports or produces such variety without the permission of the breeder or his registered licensee.

Any person who uses any other variety giving such variety a denomination identical or deceptively similar to the denomination of a variety registered under the Act so as to cause a confusion or deception in the mind of the people in identifying the variety is also considered as infringing the variety. A variety denomination can serve the same functions as a trade mark.

Reducing the level of protection, by allowing selling of seeds using the commercial denomination registered by another person would create confusion and breeders would lose the possibility of recovering their investment in sustainable breeding programs.

Such sales can lead to confusion in the mind of the public that the variety that is sold is the registered variety and consequently can affect the reputation of the breeder of the registered variety.

Hence a consequence of an infringing sale is that the owner of the registered variety will have a lowering of the sales of its registered variety.

Where a person without the consent of the breeder of a variety applies such denomination or deceptively similar denomination to any variety or any package containing such variety or uses a package bearing a denomination which is identical with or deceptively similar to the denomination of such variety for the purpose of packing or filling any variety other than the variety registered under the Act, shall be considered as falsely applying the denomination.

The burden of proving that the assent of the breeder of the variety has been obtained is on the accused.

Penalty for applying false denomination or indicating false name of a country or place or false name or address of the breeder is imprisonment for a term which shall not be less than *3 months* & shall extend to *2 years* or with fine which shall not less than *fifty thousand rupees* and may extend to *five lakhs* rupees or with both.

The accused can escape penalty if he is able to prove that there was no intention to defraud. A person selling varieties to which false denomination is applied is also punishable under the Act with imprisonment for a term which shall not be less than *6 months* & may extend to *2 years* or with fine which shall not be less than *50 thousand rupees* & may be extend to *5 lakhs* or with both.

The defence available to such a person is that –

1. He had taken all reasonable precautions against committing an offence & that at the time of commission of the alleged offence he had no reason to suspect the genuineness of the denomination of such variety.
2. He had given all the information with respect to the person from whom he obtained such variety or
3. He had acted innocently.

Making a representation with respect to the denomination of a variety or its propagating material or essentially derived variety or its propagating material not being a variety registered under the Act to the effect that it is registered under the Act is also punishable.

The punishment may be imprisonment for a term which shall not be less than *6 months* but which may be extend to *3 years* or with fine which shall not be less than *1 lakh rupees* & extending to *5 lakhs rupees* or both.

The Act also makes provisions for penalty for subsequent offence. Suit for infringement shall be instituted in the District Court having jurisdiction to try the suit. The Court appoints independent Scientific Advisors to suggest, enquire & report on matters to help the Court to arrive at a decision.

A copy of the entry in the Register of any document sealed with seal of the Authority shall be admitted in evidence in all Courts & in all proceedings without further proof of the original.

The remarks of Dunn, J. in ***Franklin v. Giddins*** {(1978) Qd R 72}, illustrates clearly the consequences of stealing knowledge:

"I find myself quite unable to accept that a thief who steals a trade secret knowing it to be trade secret, with the intention of using it in commercial competition with the owner, to the detriment of the latter, & to uses it, is less unconscionable than a traitorous servant. The thief is unconscionable because he plans to use & does use his own wrong conduct to place himself in a better position than that of a person who deals consensually with the owner."

Remedies for Infringement

Damages and injunctive relief comprise the integrated totality of the remedies.

In a decision of the English Patent Court in ***Gerber Garment Technology v. Lectra System Limited*** ([1995] RPC 383), the issue of damages was addressed. The Court held that the measure of damage was the "Sum of money which will put the injured party in the same position as if he had not sustained the wrong." The Court stated that, where secondary losses are a foreseeable consequence of patent infringement, the secondary

losses can be recovered. The object of damages is to compensate the patentee, not to punish the infringer. The Court has laid down the legal principles regarding damages.

1. Damages are compensatory only.
2. The burden of proof lies on the plaintiff but damages are to be assessed liberally.
3. Where a patentee has licensed his patent, the damages are the lost royalty.
4. It is irrelevant that the defendant could have competed lawfully.
5. When the patentee has exploited his patent by manufacture & sale he can claim (a) lost profit on sales by the defendant that he would have made otherwise; (b) lost profit on his own sales to the extent that he was forced by infringement, to reduce his own price; & (c) a reasonable royalty on sales by the defendant which he would not have made.
6. Damages are not capable of precise estimation where the patentee exploits by his own manufacture & sale.

Another method of protecting the plaintiff is to grant to the plaintiff a share of profits. The concept of lost profit has been decided in a number of patent cases.

Lost profits damages may be measured based upon the causation factors set forth in ***Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*** Under the ***Panduit test***, the patentee must prove four factors to establish lost profits. (1) a demand for the products covered by the patent; (2) an absence of acceptable non-infringing substitutes to the patented product or process; (3) that the patentee possessed the manufacturing & marketing capabilities to exploit the demand; & (4) the amount of profit the patentee would have made had the infringement not occurred.

Injunctive relief shall be an *ex parte* injunction or an interlocutory relief for discovery of documents, preserving of infringing variety or document or other evidence which are related to the subject-matter of the

suit. An injunction is proper only to the extent that it is granted to prevent violation of any right secured by patent and may not be punitive.

It is the general rule that an injunction will issue when infringement has been found, absent a sound reason for denying it. The fact that infringer stopped infringing is generally not a reason to deny an injunction against future infringement unless there is persuasive evidence that further infringement will not take place. Discontinuation of making or selling infringed product is not a sufficient reason for denying injunction.

National Gene Fund

The PPVFR act makes provisions to establish a National Gene Fund through which the conservation of varieties developed can be done, recognized and rewarded. This fund is made of the money as fees collected from plant breeders who are required to pay for benefit sharing. This money is used to support and reward the farmers who are engaged in plant verities conservation.

Section - 45. Gene Fund.-

1. The Central Government shall constitute a Fund to be called the National Gene Fund and there shall be credited thereto-
   a. the benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under this Act, or propagating material of such variety or essentially derived variety, as the case may be;
   b. the annual fee payable to the Authority by way of royalty under sub-section (1) of section 35;
   c. the compensation deposited in the Gene Fund under sub-section (4) of section 41; (d) the contribution from any national and international organization and other sources;
2. The Gene Fund shall, in the prescribed manner, be applied for meeting-
   a. any amount to be paid by way of benefit sharing under sub-section (5) of section 26;
   b. the compensation payable under sub-section (3) of section 41;
   c. the expenditure for supporting the conservation and sustainable use of genetic resources including in-situ and ex-situ collections

and for strengthening the capability of the Panchayat in carrying out such conservation and sustainable use;

d. the expenditure of the schemes relating to benefit sharing framed under section 46.

Unit - IV

An Overview and Salient Features of Designs Law

Introduction

"A thing of beauty is a joy for ever", these golden words have a very great significance in today's materialistic world, where the appearance of an article counts more than its utility or quality. Many people blindly choose an article, which catches their eye by the beauty in its design. The concepts of globalization & liberalization have flooded the Indian markets with large variety of products.

The consumers are provided with numerous alternatives for any single product. This has made the Indian consumers more selective. Nowadays the producers have to not only proved their product's reliability but they also have to satisfy the aesthetic appetite of the consumers. The producers spend huge capital in developing innovative designs for catching the recognition of consumers by enhancing the appearance of their products.

There are professional designers who put great intellectual effort in creating new & attractive designs.

The rationale for design protection is clear from US Supreme court's decision in the case, ***Gorhan Mfg. Co. v. White,*** 81U.S. (14 WALL.)511(S.Ct., 1872) in which the court stipulated that the essential rationale for design Law are that the design right may enhance the design's "saleable value", "may enlarge the demand for it" and may be a "meritorious service to the public". Design protection will play an important role in the product market, increasing the competitiveness of the manufacturer or vendor of the product, and enhancing quality of societal life. Hence it is necessary to protect designs so as to reward the designer's creativity and to encourage future contributions. To this end, industrial designs are protected by legislations.

In 1911 the Design Act was passed by the then British Government in India, since then extensive amendments have been made in the Designs Act. In the meanwhile India has made tremendous progress in the field of science

and technology. There has been considerable increase in the registration of designs.

To provide more effective protection to registered designs and to promote design activity in order to promote design element in an article of production it has become necessary to make the legal system of providing protection to industrial designs more efficient. It is also intended to ensure that the law does not unnecessarily extend protection beyond what is necessary to create the required incentive for design activity while removing impediments to the free use of available designs.

To achieve these objectives and in order to repeal the Design Act, 1911 which has been extensively amended, the Designs Bill, was introduced in the Parliament.

Object and Reasons

Since the enactment of the Designs Act, 1911 considerable progress has been made in the field of science and technology. The legal system of the protection of industrial design requires to be made more efficient in order to ensure effective protection to registered designs. It is also required to promote design activity in order to promote the design element in an article of production.

The new Designs Act, 2000 is essentially aimed to balance these interests.

It is also intended to ensure that the law does not unnecessarily extend protection beyond what is necessary to create the required incentive for design activity while removing impediments to the free use of available designs.

Salient feature of The Design Act

The Designs Act, 2000 which came into effect from May 11, 2001 replacing the earlier Designs Act, 1911. The salient features of the new Design Law are:

1. A provision claiming priority from a Design application filed in any Convention country has been introduced. India is a member of WTO, Paris convention and has also signed Patent Co-operation Treaty. As a result members to these conventions can claim priority rights.

2. International classification based upon Locarno classification has been adopted wherein the classification is based on articles - the subject matter of design. Under the previous law a 'Design' was classified on the basis of the material of which the article was made.

3. Under new law, a Design registration can now be obtained for new or original features of shape, configuration pattern, ornamentation or composition of lines or colours as applied to an article, whether in 2 or 3 dimensions or both.

4. A concept of "absolute novelty" has been introduced whereby a 'novelty' would now be judged based on prior publication of an article not only in India but also in other countries. Under the previous law, the position was ambiguous.

5. A Design registration has been brought within the domain of the public records right from the date it is physically placed on the Register. Any member of public can take inspection of the records and obtain a certified copy of the entry. In the previous Act, there was a 2-year confidential period -post registration -which prohibited taking inspection/certified copy of any entry in the records.

6. A Design registration would be valid for 10 years (from the date of registration which is also the date of application) renewable for a further period of 5 years. Under the previous law the validation period was 5 years which was extendable for 2 terms of 5 years each.

7. A Design registration can be restored within a year from its last date of expiry. Under the previous law, no provision relating to restoration upon expiration of the Design registration was provided.

8. Cancellation of a Design registration under the new law is possible only before the Controller and there are a couple of additional grounds which have been recognized:-

(a) The subject matter of Design not registrable under the Act

(b) The subject matter does not qualify as a 'Design' under the Act.

Under the previous Act, the cancellation was provided for before the Controller within 12 months from registration on limited grounds and in the High Court within 12 months or thereafter.

9. Under the new Act, a District Court has been given power to transfer a case to the High Court - having jurisdiction - in the event the Defendant challenges the validity of Design registration.

10. As regards assignment of Design registration under the new law, it has been made mandatory to have the same registered with the Authorities within six months from the date of execution or within an extended time period of six months.

Registrable Designs and Procedure for Registration

Registrability of Design

1. Design must be applied to Articles

A Design is something which is applied to an article and not the article itself. A design must be incorporated in the article itself as in the case of a shape or configuration which is three-dimensional, *e.g.,* shape of a bottle or flower vase or the case of design which is two dimensional, *e.g.,* design on a bed sheet, wallpaper which serves the purpose of decoration.

An article to which the design is to be applied must be something which is to be delivered to the purchaser as a finished article.

2. Appeal to the Eye.

The design must be capable of being applied to an article in such a way that the article to which it is applied will appeal to and judged solely by the eye. The particular shape, configuration, pattern or ornamentation must have a visual appeal. Feature to be registered must "appeal to the eye" and be "judged by the eye. *In* ***Amp v. Utilux*****,** (1972), it was held that ,

(a) to have eye appeal, the features must be externally visible.

(b) The feature must appeal to the customer's eye.

(c) The eye appeal need be neither artistic nor aesthetic, provided that some appeal is created by distinctiveness of shape, pattern, or ornamentation calculated to influence the consumer's choice.

3. Novelty or Originality

A design can be registered only when it is new or original and not previously published in India. A design would be registrable if the pattern

though already known is applied to new article. For example, the shape of an apple if applied to school bag would be registrable.

It was held in ***Pilot Pen Co. v. Gujarat Ind. P. Ltd***, (AIR 1967 Mad 215) that registration could not be deemed to be effective unless the design, which sought to be protected, was new and original and not of a pre-existing common type.

In ***Rotela Auto Components (P) Ltd. and Anr. v. Jaspal Singh***, (2002 (24) PTC 449 [Del]) it was held that, the test for novelty and originality is dependent on determining the type of mental activity involved in conceiving the design in question.

4. Original and not Previously Published in India

A design can be registrable only when it is new or original & not previously published in India.

A design would be registrable if the pattern though already known is applied to a new article. E.g., the shape of teddy bear if applied to a school bag would be registrable.

A combination of previously known design can be registered if the combination produces a new visual appeal.

Colour may form a part of design but the colour by itself cannot constitute a subject-matter of design.

5. No prior Publication

A design can be registered only when it is not previously published in India. In the case of ***Wimco Ltd. v. Meena Match Industries,*** (AIR 1988 Del 587) the Court held that publication means the opposite of being kept secret. The disclosure even to one person is sufficient to constitute publication.

The design cannot be registered under Design Act if it is not significantly distinguishable from known designs or combination of known designs. To constitute publication a design must be available to the public and it has been ceased to be a secret. For e.g.:-the display of a design on a saree in a fashion show is a publication of that design.

Who can apply for Registration of a Design?

As per ***Section 5*** of Design Act, 2000, any person who claims to be the proprietor of any new or original design can apply for the registration of the design. A foreigner can also apply for the registration of the design.

However, the convention followed is that if a country does not offer the identical registration right to Indian citizen for their designs in their country, its citizen would not be eligible to apply for registration of design in India.

In *the Vredenburgs Registered Designs case, [(1935)* 52 RPC] it was held that if there are two persons each of whom has produced a similar design and communicated the fact of such authorship to the other, neither of them alone is the proprietor of a new or original design. There is joint authorship of the design.

Procedure of Registration of a Design

The procedure for registration of a design is comparatively simple when compared to procedure of a patent or a trade mark.

Briefly, the procedure consists of the following steps:

1. Submission of Application

2. Acceptance/objection/refusal

3. Removal of objections/appeal to CG

4. Decision of CG

5. Registration of Design

Submission of Application

The proprietor of the design shall submit the application for registration in the patent office. The application shall be in the prescribed form and shall be accompanied by the prescribed fees. According to ***Section 5(1)***, the controller may on application made by any person claiming to be the proprietor of any new or original design not previously published in any country and which is not contrary to public order and morality, register the design under the Act.

The application is to be accompanied by the prescribed fee and in prescribed Form and in prescribed manner. The application shall state the class in which the design is to be registered.

Documents to be filed with Application

The application under ***Section 5*** shall be accompanied by four copies of the representation of the design and the applicant shall state the class in which the design is to be registered. The applicant is also to file a brief statement of novelty with the application.

The Design Act, 2000, which he claims for his design lays down 31 classes plus miscellaneous class 99 of goods to which ornamental designs, etc., and which are capable of being registered under this Act generally apply.

Acceptance /Refusal

Before registration the Controller shall refer the application to an examiner appointed under this Act, to determine whether the design is capable of registration under this Act. The Controller shall consider the report of the examiner and if satisfied that the design complies with all requirements for registration under this Act shall register it.

The Controller may if he thinks fit refuse to register the design. The aggrieved by such refusal may appeal to the High Court. The Controller may refuse to register a design, the use of which would be contrary to public order or morality.

Objection/Removal of Objection/Appeal to CG.

If on consideration of the application any objections appear to the Controller, a statement of these objections shall be sent to the applicant or his agent. The applicant has to remove the objection within ***one month*** of communication of the objections to him failing which the application shall be deemed to have been withdrawn.

He may also apply to the Controller for being heard on the matter. When the Controller refuses the application after the submission, he may directly appeal to the Central Government whose decision is final.

Decision of Central Government

The decision of the Central Government on the registrability of the design is final.

Publication of particulars of Registered Design

On acceptance of design filed in respect of an application, the Controller shall direct the registration & publication of the particulars of the application & the representation of the article to which the design has been applied, in the Official Gazette. When publishing in the Gazette, the controller may select one or more views of the representation of the design, which in his opinion would depict the design, be

Register of Design

1. When the design is accepted, there shall be entered in the Register of design, in addition to the particulars required by the Act, the number of the design, the class in which it is registered, the date of filing the application for registration in this country, the reciprocity date, if any, claim for the registration, & such other matters as would effect the validity or proprietorship of design.
2. When such Register of Design is maintained wholly or partly on computer floppies or diskettes, such computer floppies or diskettes shall be maintained under superintendence & control of Controller & in case of any dispute or doubt with regard to information of designs, the information as contained in the back-up or master files shall be final.
3. Where the accepted design is one in respect of which a reciprocity date has been allowed, registration, the extension or the expiration of the copyright in the said design shall be reckoned from such reciprocity date.

On the completion the above procedure the controller shall grant a certificate of registration to the proprietor of the design.

Rights, Term and Piracy of Registered Design

Rights and Term of such Rights

The exclusive right conferred on a design is termed as 'copyright in design'. This should not be confused with exclusive right granted for literary & artistic work also termed a 'copyright' in the literary & artistic work. There

may be certain designs which can qualify for registration both under the Design Act and the Copyright Act.

The industrial & product design are covered by the Designs Act, 2000, if a design has been registered under this Act, it cannot be protected by the Copyright Act even though it may be an original artistic work.

If a design qualifies for registration under the Design Act but has not been so registered under the Designs Act, the exclusive right will subsist under the Copyright Act. If such a design is of an article which is commercially produced, the copyright over the design under the Copyright Act will cease to exist when the article to which the design has been applied has been reproduced more than fifty times by an industrial process by the owner of the copyright.

There is an overlapping area of the applicability of the Designs Act and the Copyright Act but they cannot be applied co - terminously for protection of the same subject-matter.

Rights Granted when a Design is registered

i) *The right to exclusive use of the design*

1) When a design is registered, the registered proprietor of the design shall, subject to the provisions of the Act of 2000, have the copyright in the design during ten years from the date of registration.

2) If, before the expiration of the said ten years application for the extension of the period of copyright is made to the Controller in the prescribed manner, the Controller shall, on payment of the prescribed fee, extend the period of copyright for a second period of five years from the expiration of the original period of ten years.

ii) *Right to protect the design from piracy*

Infringement of a copyright in a design is termed as Piracy of Design. Any person responsible for infringing the monopoly of the proprietor of a registered design is guilty of piracy and is liable to a fine of a sum not exceeding 25 thousand rupees.

The registered proprietor is also granted the right to bring a suit for recovery of damages or for injunction against the reputation of such piracy provided that the total sum recoverable in respect of any design shall not

exceed 50 thousand rupees. The above right is laid down in Section 22(2) of the Designs Act, 2000.

Term of the Copyright in Design

Section 11 lays down that the term of the copyright in design is 10 years for registration which may be extended to further for a second period of 5 years. Thus, the maximum period of copyright in designs is 15 years.

Piracy of Registered Design

Infringement of a copyright in design is termed as "Piracy of a registered Design". It is not lawful for any person during the existence of copyright to do the following acts without the consent or licence of the registered proprietor of the design. Section 22 of the Design Act, 2000, lays down that the following acts amounts to piracy –

1. To publish or to have it published or expose for sale any article of the class in question on which either the design or any fraudulent or obvious imitation has been applied.
2. To either apply or cause to apply the design that is registered to any class of goods covered by the registration, the design or any imitation of it.
3. To import for the purpose of sale any article belonging to the class in which the design has been registered and to which the design or a fraudulent or obvious imitation thereof has been applied.

In fact any unauthorized application of the registered design or a fraudulent or obvious imitation thereof to any article covered by the registration for trade purpose or the import of such articles for sale is a piracy or infringement of the copyright in the design.

Judicial Remedy

The judicial remedy for infringement of a registered design recommended in the Act is damages along with an injunction. Section 22(2) stipulates remedy in the form of payment of a certain sum of money by the person who pirates a registered design. A suit in the appropriate manner for seeking the relief in the form of an injunction is also recommended.

Jurisdiction of the Court

A suit under Section 22 is to be instituted in a District Court or a High Court upon the quantum of damages claimed. The provisions of this section do not exclude action for passing off & for rendition of accounts.

A suit for injunction restraining infringement of registered design and for rendition of accounts is, therefore, maintainable only when filed in the appropriate court.

Burden of Proof

The general principle of law is that the party making the charge, i.e., accusing another party of an act has to establish the occurrence of such an act. The burden of proof is thus on the plaintiff who brings an action to establish the fact of piracy of his design. The facts which a plaintiff has to establish to prove piracy of a design.

a) The copyright in the design exists on the date of piracy.

b) The design or a fraudulent or an obvious imitation thereof has been applied to the article or class of articles/goods for which his design is registered.

c) The design or its imitation has been applied without the license or writing consent of the registered proprietor.

d) The article to which design has been applied comes within the scope of description of goods covered by registration.

e) The application of the design by the pirator has been made for the purpose of sale of the article, i.e., to gain commercial benefit from the act of infringement.

f) The defendant has applied the design or caused the design to be applied or defendant has imported for the purpose of sale the article bearing in its imitation without the consent of the registered proprietor.

Defenses by the Defendant

In a suit for infringement, a defendant may present evidence and argue the following defences:-

a) The plaintiff has no title to sue. He may question whether the plaintiff is a registered proprietor of the design or his duly authorized agent or licensee.
b) The design is not entitled for protection.
c) The plaintiff's own conduct is tainted – Law expects the party approaching its doors to approach with clean hands.
d) Delay & Acquiescence – The institution of the suit within a reasonable time after the discovery of the infringement is expected of the plaintiff.
e) Expiry of period of registration – The Copyright on a design is limited by time, the defendant on proving the expiry of period of registration is entitled to use the design & the plaintiff is not entitled to any relief.

Powers and Duties of Controller

Powers and Duties of Controller

Chapter VII, Section 32 to 36 of the Designs Act, 2000 deals with powers and duties of Controller.

Powers of Controller in proceedings under Act (Section 32)

Subject to any rules in this behalf, the Controller in any proceedings before him under this Act shall have the powers of a civil court for the purpose of receiving evidence, administering oaths, enforcing the attendance of witnesses, compelling the discovery and production of documents, issuing commissions for the examining of witnesses and awarding costs and such award shall be executable in any court having jurisdiction as if it were a decree of that court.

Exercise of the discretionary power by Controller (Section – 33)

Where any discretionary power is by or under this Act given to the Controller, he shall not exercise that power adversely to the applicant for registration of a design without (if so required within the prescribed time by the applicant) giving the applicant an opportunity of being heard.

Power of Controller to take directions of the Central Government (Section – 34)

The Controller may, in any case of doubt or difficulty arising in the administration of any of the provisions of this Act, apply to the Central Government for directions in the matter.

Refusal to register a design in certain cases (Section – 35)

(1) The Controller may refuse to register a design of which the use would, in his opinion, be contrary to public order or morality.

(2) An appeal shall lie to the High Court from an order of the Controller under this section.

Appeals to the High Court (Section – 36)

(1) Where an appeal is declared by this Act to lie from the Controller to the High Court, the appeal shall be made within ***three months*** of the date of the order passed by the Controller.

(2) In calculating the said period of three months, the time (if any) occupied in granting a copy of the order appealed against shall be excluded.

(3) The High Court may, if it thinks fit, obtain the assistance of an expert in deciding such appeals, and the decision of the High Court shall be final.

(4) The High Court may make rules consistent with this Act as to the conduct and procedure of all proceedings under this Act before it.

What are the Difference between Copyright, Patent and Trademark?

Copyright, patent, and trademark are all different types of intellectual property (IP). Although the three types of IP are very different, people often confuse them.

A brief description of copyright, patents, and trademarks, including a brief discussion of how these forms of IP differ from copyright, is provided below.

What's Copyright?

A copyright is a collection of rights automatically vested to you once you have created an original work. To understand how these rights can be used or licensed, it is helpful to analogize them to a bundle of sticks, where each stick represents a separate right vested to you as the owner. These rights include the right to reproduce the work, to prepare derivative works,

to distribute copies, to perform the work publicly, and to display the work publicly.

As the copyright owner, you have the authority to keep each "stick," to transfer them individually to one or more people, or to transfer them collectively to one or more people. This can be accomplished through licensing, assigning, and other forms of transfers. The power of copyright allows you to choose the way your work is made available to the public.

What's Patent?

The primary goal of the patent law is to encourage innovation and commercialization of technological advances. Patent law incentivizes inventors to publicly disclose their inventions in exchange for certain exclusive rights. A patent protects inventions. These inventions can include new and useful processes, machines, manufactures, compositions of matter as well as improvements to these. Certain computer programs may fall within the subject matter protected by both patents and copyrights. In this respect the patent system compliments copyright protection by providing protection for functional aspects of the software, which is not protected by copyright. Unlike with copyright protection, to get patent protection one must first apply for and be granted a patent from the U.S. Patent and Trademark Office (USPTO). Unlike the copyright registration process, the patent application process is expensive, complex, difficult, and time consuming and generally should not be attempted without the assistance of an experienced patent attorney or agent.

What's Trademark?

According to the USPTO, "a trademark is a word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods of one party from those of others. A service mark is a word, phrase, symbol, and/or design that identifies and distinguishes the source of a service rather than goods. Examples include brand names, slogans, and logos. (The term "trademark" is often used in a general sense to refer to both trademarks and service marks.)" Similar to copyright, a person does not need not register a trademark or service mark to receive protection rights, but there are certain legal benefits to registering the mark with the USPTO.

There is rarely an overlap between trademark and copyright law but it can happen — for instance, when a graphic illustration is used as a logo the design may be protected both under copyright and trademark.

Distinction between Copyright, Patent & Trade Mark

	Copyright	**Patents**	**Trademark**
1. What's Protected?	Original works of authorship, such as books, articles, songs, photographs, sculptures, choreography, sound recordings, motion pictures, and other works	Inventions, such as processes, machines, manufactures, compositions of matter as well as improvements to these	Any word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods of one party from those of others
2.Requirements to be Protected	A work must be original, creative and fixed in a tangible medium	An invention must be new, useful and nonobvious	A mark must be distinctive (i.e., that is, it must be capable of identifying the source of a particular good)
3.Term of Protection	Author's life plus 70 more years.	20 years	For as long as the mark is used in commerce
4.Rights Granted	Right to control the reproduction, making of derivative works, distribution and public performance and display of the	Right to prevent others from making, selling using or importing the patented invention	Right to use the mark and to prevent others from using similar marks in a way that would cause likelihood-of-confusion about

	copyrighted works		the origin of the goods or services.
5.Provisional Application Required	No Provisional Application Requirement	A provisional application gets you 12 months' time to file a complete specification and apriority date claim.	Trademark registration does not include provisional application, but it requires a trademark search.
Symbolic Representation	No symbolic representation to show registration	No symbolic representation to show registration	Used When registration is in process: **TM** Used when Registration is Complete:®

Over the years a sharp rise is observed in awareness of intellectual property laws amongst the people. Almost every business touches IP rights and requires its protection as it safeguards the valuable assets of a company/business. From the company's brand name, any invention it has made, to the website it owns; Patent, trademark and copyright not only secure the rights, but they also prove as an incentive for better creative expression and are a major stimulus for inspiring people to invest into research and development of projects worldwide.

Intellectual property is a wealth-creating machine giving an individual/company a legitimate ownership with an image of a trustworthy organization. Every business house today relies on intellectual property rights, spending millions of dollars to secure their intellectual properties.

Comparing Design Patents to Copyrights and Trademarks

Most people understand that it's important to take steps to protect their creative design. The confusing part can be figuring out what type(s) of intellectual property protection are needed. Each type of protection covers certain subject matter and offers specific rights to its owner. Thus, it's

important to be clear from the start as to what protection patents, copyrights and trademarks actually give you, and what sorts of creations are eligible for each.

In general:

- A *design patent* protects any new, original and ornamental design for a useful article of manufacture.
- A *copyright* protects any original work of authorship that has been fixed in a tangible medium of expression.
- A *trademark* protects any words, names, symbols or devices used in commerce to identify and distinguish a particular source of goods or services from another source.

If you still can't decide what type of protection is right for your creation, it may be helpful to ask the following:

- Is your design industrial (meaning it's on a manufactured article or object) and if so, is it purely aesthetic (doesn't alter the way the object works)? If it is, then you can apply for a design patent. Note: if the new design actually improves the function of the object, then you may want to consider utility patent protection.
- Is your work a painting, drawing, photograph, sculpture or architectural design? Then you may be able to register a copyright. Other eligible works for copyright include literature, dramatic or audiovisual works, musical compositions or recordings and choreography.
- Is your design a logo or other representation of words or symbols that you use or will use to identify your brand or company in commerce (think of the stylized 'M' symbol of McDonald's, the cursive font of Kellogg's or the picture of the Michelin Man)? Then you can apply for a federal trademark.

For example, if you've created a new soda bottle that has an original shape, then you are likely looking for design patent protection. If the new shape has the effect of changing the way in which the bottle would be used, you may want to consider a utility patent. If, instead, you've captured a uniquely distorted view of a glass bottle through your camera lens, you may have a copyright that you can register on the photo. And finally, if you're using a logo that depicts the signature curves of your bottle design on all of

your company packaging, you may want to look into federal trademark protection for the use of that mark.

While patents, copyrights and trademarks all have force nationwide, they differ in application process, length of protection and patent cost. In addition, patents are granted and trademarks are registered by the USPTO, while copyrights are registered by the U.S. Copyright Office. All three forms involve different rules on public notification and enforcement. Also, only trademarks can be renewed.

The majority of designs fall squarely under one category of intellectual property - design patent, copyright or trademark. However, some designs may meet eligibility for more than one type. Keep in mind that each type involves a separate application process and requirements, so take care in choosing your path to protection.

Unit - V

International Treaties and Conventions on IPR

The issues rose about the effects of national and international IPRs regimes on major social, economic and political objectives of States do not simply relate to legal, technical questions. They also concern aspects such as justice and equity, the processes of rule-making and regulation in this area, how to improve the participation of a broad range of interests and so ensure the balance sought, as well as the capacity of different parties to effectively take part.

The increasingly global nature of the IPRs system has given even more urgency to these concerns.

The global architecture of the IPRs regime has become increasingly complex, and includes a diversity of multilateral agreements, international organizations, regional conventions and instruments, and bilateral arrangements. In brief, the international law on intellectual property, in its present form, consists of three types of agreement: multilateral treaties, regional treaties or instruments, and bilateral treaties.

Of these, the agreements that affect the greatest number of countries are the TRIPS Agreement and some of the multilateral treaties administered by WIPO. One of WIPO's main objectives is "to promote the protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with any other international organization".

Regional agreements (or for that matter bilateral agreements) are also extremely important.

First, their membership may be quite large, covering 20 or more countries.

Second, it is possible that novel provisions in such agreements could subsequently be globalised through their incorporation into new multilateral agreements.

Third, developing countries may be required to introduce provisions that go beyond what the TRIPS Agreement requires, such as extending patents to new kinds of subject matter and eliminating certain exceptions.

Fourth, the most-favoured-nation (MFN) treatment obligation obligates, in general, WTO Members to extend such "TRIPS-plus" provisions in regional agreements to all other WTO Members. Thus, regional standards might have a direct impact on the global IPRs architecture.

Fifth, regional agreements might stipulate that contracting Parties should accede to certain international conventions. The above points might also apply to bilateral agreements.

The GATT Negotiation Rounds and the Emergence of WTO

1. The Geneva Round, 1947

This round was part of the establishment of GATT, held between 10th April to 30th October 1947, 23 countries participated.

2. The Annecy Round, 1949

The primary purpose of calling this round was to extend GATT to those countries which could not be part of the Geneva session. Nine new Member joined bringing GATT Membership to 32.

3. The Torguay Round, 1950-51

European countries with low tariff levels felt the Torguay negotiations were disadvantageous to them. Of the 400 agreements, only 147 could be settled. The number of participant countries was 34.

4. The Geneva Round, 1955-56

In this round several countries withdrew from negotiations due to inadequate scope for tariff reductions. European countries went back disappointed. The number fell down to 32.

5. The Geneva Round (Geneva), 1960-61

38 countries were party to this fifth round of GATT. EEC entered negotiations as a trade block, U.S. Government got the authority under

Trade Agreement Extension Act, 1958, to draw maximum advantage and participate in multilateral trade.

6. The Kennedy Round, 1964-67

Kennedy Round was so called because it was proposed by Kennedy. 48 countries took part. Eleven industrialized countries decided upon giving a 50% reduction offer in industrial tariffs. Some 35 developing countries participated under special procedures. Four additional countries negotiated for accession to GATT.

7. The Tokyo Round, 1973-79

99 countries of different levels of development and economic systems including many non-GATT Members took part. It was the most comprehensive of all the earlier GATT sessions on multilateral trade. The developed countries played a prominent role.

8. The Uruguay Round, September, 1986 to December 1993

The worsening trade environment led to the need for a ministerial level conference to settle discriminatory trade practices being held within GATT. Trade ministers launched the GATT Round at Punta de Este, Uruguay, on 28th January, 1987. From April 12-15, 1994 Ministers met at Marrakesh, Morocco to ratify the results of the Uruguay Round. The World Trade Organization (WTO) came into existence on January 1, 1995.

TRIPS AGREEMENT

Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement between the member nations of World Trade Organization (WTO). TRIPS Agreement is aimed at harmonizing the Intellectual Property (IP) related laws and regulations worldwide.

The TRIPS Agreement accomplishes this motive by setting minimum standards for protection of various forms of IP. The nations that are signatory to the TRIPS Agreement have to abide by these minimum standards in their national laws related to IP.

The TRIPS Agreement generally sets out the minimum standards regarding the grant of rights to the owner of IP, enforcement requirements in the national laws, and settlement of disputes and remedies to those whose IP rights get infringed.

The coverage of the TRIPS Agreement encompasses the various areas of IP including patents, trademarks, copyrights, geographical indications, industrial designs, etc. The objective of the TRIPS Agreement is to ensure the protection and enforcement of Intellectual Property Rights (IPR) to contribute to the promotion of technological innovation, transfer and dissemination of technology, mutual advantage of producers and users of technological knowledge in a manner that is conducive to social and economic welfare, and balance of rights and obligations, worldwide.

Background and History

In 1944, for the first time an international agreement was reached upon to govern the international monitory policy. This was called the Bretton Woods Agreement. The Bretton Woods Agreement created two institutions to govern the international monitory policy: International Bank for Reconstruction and Development (IBRD, the World Bank) in 1945 and the International Monetary Fund (IMF) in 1946.

These were called the Bretton Woods Institutes. Subsequently, the General Agreement on Tariffs and Trades (GATT) was established in 1947 to harmonize the trade between various nations.

GATT was the only multilateral instrument governing international trade from1948 until the establishment of WTO in 1995. In all, eight rounds of negotiations were held under GATT. These rounds were held for refining the international trade and tariff rules.

The ***first five*** rounds exclusively concentrated on the tariffs. The ***sixth*** round included discussion on anti-dumping measures as well which included provisions for member nations to control the dumping of goods into their territory by other nations which can affect the member nation's economy.

Further, the ***seventh*** round discussed tariff and non-tariff measures.

The ***last GATT round*** was the ***Uruguay Round (1986-1994)***. The Uruguay Round, for the first time introduced discussions on trade related to agriculture, services and ***IPR***. After long discussions and complex negotiations, finally in 1994, WTO was established. WTO became effective from 1st January 1995.

Under the provisions of WTO, many new agreements, regulations, treaties and conventions were introduced to provide the framework for implementation, administration and operation of the multilateral trade agreements between member nations. All these agreements, treaties, conventions and regulations were based on two principles, namely:

a) Most Favored Nation treatment:

Equal treatment for nationals of all trading partners in the WTO;

b) National Treatment:

Treating one's own nationals and foreigners equally.

The TRIPS Agreement is an international agreement administered by WTO that sets down minimum standards for many forms of IP regulations. The Agreement, which came into effect on 1st January, 1995 till date the most comprehensive multilateral agreement on IP. The Agreement covers the following areas of IP:

- Copyrights and Related rights (i.e. the rights of performers, producers of sound recordings and broadcasting organizations)
- Trademarks (including service marks)
- Geographical Indications (including appellations of origin)
- Industrial Designs
- Patents (including the protection of new varieties of plants)
- Layout-designs of Integrated Circuits
- Undisclosed Information (including Trade Secrets and Test Data)

With respect to the above areas of IP, the Agreement governs the following issues:

1. How basic principles of the trading system and other international IP agreements should be applied?
2. How to give adequate protection to IPR?
3. How countries should enforce IPR adequately in their own territories?
4. How to settle disputes on IP between members of the WTO?
5. Special transitional arrangements during the period when the new system is being introduced.

The Agreement is the first agreement under WTO under which the member nations are required to establish relatively detailed norms within

their national legal systems, as well as to establish enforcement measures and procedures meeting minimum standards.

Salient Features of TRIPs

The three important features of the Agreement are:

1. Standards

2. Enforcement

3. Dispute Settlement

1. Standards

First, in respect of each of the areas of IP covered by the Agreement, each of the member nations is obliged to provide a minimum set of standards for protecting the respective IPR. Under each of the areas of IP covered by the Agreement, the main elements of protection are defined, namely the subject-matter to be protected, the rights to be conferred and permissible exceptions to those rights, and the minimum duration of protection.

Second, each member nation is obliged to provide domestic procedures and remedies with respect to protection of IPR. The Agreement lays down certain general principles applicable to all IPR enforcement procedures. The Agreement also lays down certain other provisions on civil and administrative procedures and remedies, special requirements related to border measures and criminal procedures, which specify, in a certain amount of detail, the procedures and remedies that must be available so that right holders can effectively enforce their rights.

Third, under the Agreement disputes between WTO member nations regarding the respect of the TRIPS obligations are subject to the WTO's dispute settlement procedures.

Structure of the TRIPS Agreement

The three important features of the Agreement, i.e. standards, enforcement and dispute settlement are covered in seven parts i.e. the Agreement consists of seven parts. ***Part I*** deals with the general provisions and basic principles. ***Part II*** describes the standards concerning the availability, scope and use of IPR with respect to different types of IP. ***Part III*** describes the IPR enforcement obligations of member nations, and ***Part***

IV addresses the provisions for acquiring and maintaining IPR. ***Part V*** is directed specifically to dispute settlement under the Agreement. ***Part VI*** concerns transitional arrangements, and the ***Part VII*** concerns various institutional arrangements.

2. Enforcement

The Agreement was not only aimed at providing minimum standards for protecting IPR but it was also aimed at providing the enforcement of the same. The Agreement provides minimum standards for the enforcement of IPR that allows right holders to protect their legitimate interests through civil court or administrative proceedings.

Part III of the Agreement on Enforcement of IPR sets out the obligations of member nations to establish administrative and judicial mechanisms through which IPR holders can seek effective protection of their interests.

Member nations are obligated to ensure that enforcement procedures are *"fair and equitable", and "not unnecessarily complicated or costly, or entail unreasonable time limits or unwarranted delays."*

The Agreement obligates member nations to make provision for the ordering of prompt and effective provisional measures to prevent entry of infringing goods into channels of commerce and preserve evidence against such infringing goods and their traders. This means that the IPR holder should be entitled to seek a prompt action against the infringement.

3. DISPUTE SETTLEMENT AND PREVENTION

Part V of the agreement deals with dispute settlement and prevention. Article 63 establishes the transparency requirements. Under these requirements there is an obligation on the part of member nations to publish or otherwise make available legal texts such as laws and judicial decisions.

The provisions related to dispute settlement and prevention are governed by the TRIPS council. Member nations are obligated to furnish applicable rules or decisions, or sufficient details about them, at the request of member nations who reasonably believe their rights may be affected.

TRIPS and Indian IPR

In 2005, in order to comply with the requirements of TRIPS, the Indian government introduced product patents on pharmaceuticals. For the previous three decades, such patents had been forbidden, allowing India to develop one of the most robust generic pharmaceutical industries in the world.

Pharmaceutical patents were first introduced to India by the British. But in Patent Act 1970 changed the course prohibiting product patents on medicines. At that time drug prices in India were very high The 1970 Act served as a big boost of growth in the domestic pharmaceutical industry. Although the law permitted process patents related to medicines, they were very limited in scope. The law thus created significant space for the entry of local pharmaceutical firms and they started producing active pharmaceutical ingredients (APIs) in the mid-1970s. Indian companies became skilled in reverse engineering and developing new processes for drug production. And gradually drug prices were amongst the lowest in the world. In 1995, India joined the WTO and the TRIPS Agreement. TRIPS altered the terrain of international IP law. TRIPS had more teeth than WIPO administered treaties as treaties administered through the World Intellectual Property Organization (WIPO) had no effective enforcement mechanism, but the WTO incorporated a new dispute settlement system, allowing for adjudication of TRIPS disputes and for trade sanctions against countries found to be in violation of the Agreement.

The Doha Ministerial Conference declaration on the TRIPS agreement and public health recognized the gravity of public health problems afflicting many less developed countries. The declaration stressed the need for the TRIPS agreement to be part of wider international action to address these problems. It acknowledged the concerns about its effects on prices. The Ministerial Conference agreed that the TRIPS agreement should not prevent members from taking measures to protect public health. WTO members were under obligation to implement TRIPS provision by 2000, 2005, or 2016, depending on their level of development.

India was given an extended period of time to make its patent regime complaint to TRIPS. Consequently India passed the Patents Amendment Act, 2005 which came into force on 1st January, 2005. Earlier India had allowed for the manufacture of generic versions of many drugs. Through this amendment it has now implemented a product patent regime and product patents in the pharmaceutical sector.

THE 2005 AMENDMENT

A number of changes were introduced by the 2005 amendment, few of the important definitions bought by this amendment are:

Section 2(ja)

"inventive step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.

Section 2(l)

"new invention" means any invention or technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification, i.e. the subject matter has not fallen in public domain or that it does not form part of the state of the art.

Section 2(j)

"capable of industrial application", in relation to an invention, means that the invention means a new product or process involving an inventive step and capable of industrial application.

Section 2(ta)

"pharmaceutical substance" means any new entity involving one or more inventive steps.

Section 3(d) has been amended to read:

"the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the

mere discovery of any new property or new use for a known substance or the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least employs one new reactant".

The use of the phrase "mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy" has been bought into the statute book to prevent what is known as 'ever greening'.

Allowance of ongoing generic production:
The amendment permit generic manufacturers to continue producing generic version of new drugs which are in the mailbox. However, this only applies where the generic producer has made a significant investment provided they were producing and marketing the generic version prior to 1st January, 2005.
But the generic companies are required to pay the patent holder a reasonable royalty.

Compulsory Licence Provisions

Indian Patent Act had been extensively amended in regard to the grant of compulsory licence to conform to the requirements of the TRIPS. Though TRIPS does not expressly use the word 'compulsory licence', it uses a similar terminology 'other use'. Section 31 of TRIPS state that:

Where the law of a Member allows for other use of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected:

(a) authorization of such use shall be considered on its individual merits;

(b) such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time. This requirement may be waived by a Member in the case of national emergency or other

circumstances of extreme urgency or in cases of public noncommercial use. In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable. In the case of public non-commercial use, where the government or contractor, without making a patent search, knows or has demonstrable grounds to know that a valid patent is or will be used by or for the government, the right holder shall be informed promptly;

(c) the scope and duration of such use shall be limited to the purpose for which it was authorized, and in the case of semi-conductor technology shall only be for public noncommercial use or to remedy a practice determined after judicial or administrative process to be anti-competitive;

(d) such use shall be non-exclusive;

(e) such use shall be non-assignable, except with that part of the enterprise or goodwill which enjoys such use;

(f) any such use shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use;

(g) authorization for such use shall be liable, subject to adequate protection of the legitimate interests of the persons so authorized, to be terminated if and when the circumstances which led to it cease to exist and are unlikely to recur. The competent authority shall have the authority to review, upon motivated request, the continued existence of these circumstances;

(h) the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization;

(i) the legal validity of any decision relating to the authorization of such use shall be subject to judicial review or other independent review by a distinct higher authority in that Member;

(j) any decision relating to the remuneration provided in respect of such use shall be subject to judicial review or other independent review by a distinct higher authority in that Member;

(k) Members are not obliged to apply the conditions set forth in subparagraphs (b) and (f) where such use is permitted to remedy a practice determined after judicial or administrative process to be anti-competitive. The need to correct anti-competitive practices may be taken into account in determining the amount of remuneration in such cases. Competent authorities shall have the authority to refuse termination of authorization if and when the conditions which led to such authorization are likely to recur;

(l) where such use is authorized to permit the exploitation of a patent ("the second patent") which cannot be exploited without infringing another patent ("the first patent"), the following additional conditions shall apply:

(i) the invention claimed in the second patent shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent;

(ii) the owner of the first patent shall be entitled to a cross-licence on reasonable terms to use the invention claimed in the second patent; and

(iii) the use authorized in respect of the first patent shall be non-assignable except with the assignment of the second patent.

Though most of the provisions in the Indian Patent Act seem to be TRIPS compliant, Section 84(1)(c) creates difficulty. TRIPS clearly stipulate that patents will not be differentiated on the ground that they are imported. Thus on a plain reading of Article 27.1, it is clear that the ground of compulsory licensing under section 84(1)(c) is in conflict with TRIPS.

Mail Box Applications

Pursuant to TRIPS obligation, India amended its Patent Act in 1999 and inserted section 11A to provide that applications claiming pharmaceutical inventions would be accepted and put away in mailbox which would be examined in 2005. There is a provision of issue of automatic

compulsory licence in case of grant of patent of those mail box application, provided the generic companies have made a significant investment and were producing and marketing the drug covered by the mailbox application prior to 2005.

Section 92-A

A new ground was introduced by the 2005 amendment to enable export to countries with inadequate manufacturing capabilities. Section 92-A 'Compulsory licence for export of patented pharmaceutical products in certain exceptional circumstances' has been introduced which provides that compulsory licence shall be available for manufacture and export of patented pharmaceutical product to any country having insufficient or no manufacturing capacity in the pharmaceutical sector for the concerned product to address public health problems, provided compulsory licence has been granted by such country or such country has, by notification or otherwise, allowed importation of the patented pharmaceutical products from India. 'pharmaceutical products' has been explained as any patented product, or product manufactured through a patented process, of the pharmaceutical sector needed to address public health problems and shall be inclusive of ingredients necessary for their manufacture and diagnostic kits required for their use.

As many countries today do not have manufacturing capacities, Indian generic companies can provide those countries in need with the medicinal requirements provided they have not 'opted out' of it.

In the case of Novartis AG VS Union of India (2007) 4 MLJ 1153, Madras High Court, India

The main argument of the writ petitioner was that section 3(d) of the Indian Patent Act was unconstitutional as it violated not only Article 14 of the Constitution of India but also on the ground that it was not in compliance to "TRIPS".

Unamended Section 3(d) read as follows: The mere discovery of any new property or new use of a known substance or of the mere use of a

known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Amendment to Section 3(d) under Ordinance 7/2004: The mere discovery of any new property or mere new use of a known substance or of the mere use of a known process; machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Section 3(d) as amended by the Patents (Amendment) Act, 2005 which came into effect from 01.01.2005 read as: The mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation: For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy.

Following issues were framed by the Hon'ble Madras High Court:

(a) Assuming that the amended section is in clear breach of Article 27 of "TRIPS" and thereby suffers the wise of irrationality and arbitrariness violating Article 14 of the Constitution of India, could the courts in India have jurisdiction to test the validity of the amended section in the back drop of such alleged violation of "TRIPS"? OR

Even if the amended section cannot be struck down by this Court for the reasons stated above, cannot this Court grant a declaratory relief that the amended section is not in compliance of Article 27 of "TRIPS"?.

(b) If it is held that courts in India have jurisdiction to go into the above referred to issue, then, is the amended section compatible or non-compatible to Article 27 of "TRIPS"?

(c) Dehors issues (a) and (b) referred to above, could the amended section be held to be violative of Article 14 of the Constitution of India on the ground of vagueness, arbitrariness and conferring un-canalised powers on the Statutory Authority?

On the issue of whether Indian courts have jurisdiction to decide the issue under consideration distinguishing the case of Equal Opportunities Commission and Anr. v. Secretary of State for Employment, it agreed with the respondents that "TRIPS" do not become Law in India on its own force without any domestic Law legislated by the Indian Government. It further observed that International Covenant, International Treaty, International Agreement and such documents are essentially in the nature of a contract. Agreeing with the respondents that the right forum to raise the issue was WTO Dispute Settlement Body (DSB), it held that when participating nations, having regard to the terms of the agreement and the complex problems that may arise out of the agreement between nation to nation, decide that every participating nation shall have a Common Dispute Settlement Mechanism, it has to be followed. Every International Agreement possesses the basic nature of an ordinary contract and courts should respect the choice of jurisdiction fixed under such ordinary contract. It thus held that the Court had no jurisdiction to decide the validity of the amended section, being in violation of Article 27 of "TRIPS", it also refused to delve into the question whether any individual was conferred with an enforceable right under "TRIPS" or not.

It also rejected the argument of the petitioner that there was excess discretionary power vested with the authorities which was violative of Article 14 of Indian Constitution.

INDIA – US & INDIA – EC WTO DISPUTE

DISPUTE DS 50 and DISPUTE DS79

India — Patent Protection for Pharmaceutical and Agricultural Chemical Products

DS50 was on a complaint by the United States and DS79 was on complaint by the European Community. Violations of the TRIPS Agreement Articles 27, 65 and 70 were claimed.

Issues were the following:

India's "mailbox rule" – under which patent applications for pharmaceutical and agricultural chemical products could be filed; and (ii) the mechanism for granting exclusive marketing rights to such products.

Patent protection for pharmaceutical and agricultural chemical products, as provided under TRIPS Art. 27.

Findings

TRIPS Art. 70.8: The Appellate Body upheld the Panel's finding that India's filing system based on "administrative practice" for patent applications for pharmaceutical and agricultural chemical products was inconsistent with Art. 70.8. The Appellate Body found that the system did not provide the "means" by which applications for patents for such inventions could be securely filed within the meaning of Art. 70.8(a), because, in theory, a patent application filed under the administrative instructions could be rejected by the court under the contradictory mandatory provisions of the existing Indian laws: the Patents Act of 1970.

TRIPS Art. 70.9: The Appellate Body agreed with the Panel that there was no mechanism in place in India for the grant of exclusive marketing rights for the products covered by Art. 70.8(a) and thus Art. 70.9 was violated.

India complied with the recommendations of the DSB within the implementation period by amending its Patent Act.

Hoffmann-La Roche LTD. and ANR v Cipla Limited FAO (OS) 188/2008, decided by Delhi High Court

Plaintiff were patent holders of the drug molecule, medically termed as a Human Epidermal Growth Factor Type-1/Epidermal Growth Factor Receptor (HER/EGFR) inhibitor, popularly known as Erlotinib. This drug is administered in the form of a tablet. The tablet formulation of Erlotinib is sold by the plaintiff under the trademark and name of Tarceva, which is registered in the name of the plaintiff. It is averred that the drug Erlotinib and its formulation Tarceva has been approved by the U.S. Food and Drug Administration in the year 2004 and thereafter by the European Union in the year 2005.

The first Plaintiff is actively engaged in the manufacture, marketing and sale of the innovative drug Tarceva in various countries including India and it introduced Tarceva in India sometime in April 2006.

The Defendant, CIPLA, is the second biggest pharmaceutical company in India. In December 2007 and January 2008, various news reports appeared in the print as well as the electronic media about the defendants plans to launch a generic version of Erlotinib in India and also for exporting it to various countries. The Plaintiffs claim their knowledge of the Defendants plans to infringe their rights in the patent, from such reports. They have filed the present action seeking permanent injunction and damages. It was averred by the Plaintiffs that Erlotinib was developed after long, sustained and substantial research, and after incurring enormous expenditure for the tests, mandatorily conducted to establish its efficacy and safety. It was submitted that this innovation was duly protected under the provisions of law and no person except those authorized to exercise the legal rights associated with the patented drug can be allowed or permitted to copy/simulate and/or recreate it in any manner or in any other name. They alleged that the Defendant was following an illegal course to offer a generic version of the patented drug; firstly, in an unlawful manner by infringing the legal rights of the plaintiffs, and secondly, in a manner that may pose a

serious hazard to the lives of the patients. They submitted that they would suffer serious and irretrievable prejudice in case the Defendant was not restrained as prayed for. They further claimed that the actions of the Defendant may cause a serious and grave hazard to the lives of the cancer patients.

Along with other defences, Cipla contended that the plaintiffs patent claim lack an inventive step. They alleged that the patent was liable to be revoked as Erlotinib, being a Quinazolin derivative, only sought to improve from the existing prior art. It would be obvious for a person skilled in the art that quinazolin compounds are known to inhibit growth and proliferation of mammalian cells and have been used in cancer treatment. Various quinazolin derivatives are available in the market for treatment of different types of cancer. The patented compound of the Plaintiffs was a quinazolin derivative used for the treatment of cancer therefore, a derivative of a known compound and hence not patentable under Section 3 (d) of the Act. It was next contended that the patent did not reveal any obvious inventive step. In support, the Defendant averred about existence of at least three European patents, which date back to 1993 that disclose quinazolin derivatives. One such patent discloses the exact chemical structure contained in the Plaintiffs patent except for one substitution, which was obvious to any person skilled in the art. Apart from this, the defendant alleged that the plaintiff has miserably failed in proving that there was any improved efficacy of the said drug and that no tables or comparative data were provided in support of such claim. Drawing from the summary of the invention in the patent specifications of the plaintiff, the Defendant submitted that the Plaintiffs had admitted that the Erlotinib was a quinazolin derivate.

It was alleged that in the absence of proven enhancement in efficacy in terms of Section 3(d) no patent can even be considered, let alone granted. The defendant alleged that Erlotinib was just a derivative from Gefitinib of Astra Zeneca for which patent was refused in India, on the ground that the said product was already in prior use and was in the public domain. Under such circumstances, the Defendant submitted, the patent office ought not to

have granted a patent for Erlotinib. It alleged that the Plaintiffs attempt to protect Erlotinib (which was nothing but a derivative of Gefitinib), established that the plaintiff was indulging in ever greening. Ever greening, it was submitted is contrary to public policy, against the statutory language employed in Section 3(d) of the Act and in the context of the pharmaceutical industry against national interests. The defendant placed reliance in this regard on the ruling of the Madras High Court in Novartis v. Union of India, 2007 (4) MLJ 1153, where the Court extensively relied on legislative debates in this regard.

The learned single judge after noticing the Novartis judgment observed that even if non-obviousness of an invention in the pharmaceutical or chemical industry were established, the applicant should also prove that if the invention claimed is the derivative of a known substance, it does not fall within the excepted category, in the Explanation to Section 3(d) as it comprehend a discovery of significant enhancement in known efficacy of such known substance.

On the issue of interlocutory injunctions it held that: (i) In patent infringement actions, the courts should follow the approach indicated in American Cyanamid, by applying all factors; (ii) The courts should follow a rule of caution, and not always presume that patents are valid, especially if the defendant challenges it; (iii) The standard applicable for a defendant challenging the patent is whether it is a genuine one, as opposed to a vexatious defense. Only in the case of the former will the court hold that the defendant has an arguable case.

After going through the facts, it came to the conclusion that plaintiff was not entitled to claim an ad interim injunction. In the judgment the learned judge did observe that though India entered into the TRIPS regime, and amended her laws to fulfill her international obligations, yet the court has to proceed and apply the laws of this country, which oblige it to weigh all relevant factors.

In this background the Court cannot be unmindful of the right of the general public to access lifesaving drugs which are available and for which such access would be denied if the injunction were granted. The degree of harm in such eventuality is absolute; the chances of improvement of life expectancy; even chances of recovery in some cases would be snuffed out altogether, if injunction were granted. Such injuries to third parties are un-compensatable.

Roche's appeal before Division Bench of the High Court was also unsuccessful.

Till now the effects of the TRIPS compliance of the developed countries have been primarily theoretical. The developing countries need to use the TRIPS flexibilities to tackle any difficult situation. India has significantly changed the Patent Act to bring it in conformity with the TRIPS agreement, but a lurking fear remains that such overhaul of the patents Act may make the prices of drugs outside the reach of the general public. But it has to be kept in mind that there are various provisions already engrafted in the Patents Act like the detailed provisions of compulsory licencing which can check misuse of patents. It is also to be noticed that Indian courts till now have not felt bound by the TRIPS in particular cases and have held that domestic laws will take precedence over TRIPS in case of any conflict.

Background of Berne convention

The Berne Convention was first adopted on September 9, 1886, in Berne, Switzerland, and was later revised at several conferences: Paris, 1896; Berlin, 1908; Berne, 1914; Rome, 1928; Brussels, 1948; Stockholm, 1967; and Paris, 1971. The agreement grew out of a perceived need in the late nineteenth century to protect authored works from international piracy, or unauthorized copying. A growing demand for new printed materials during this era was motivating many publishers to reprint unauthorized versions of foreign works. Authors whose works were pirated had little recourse against those publishers because copyright laws were typically

enacted on a national basis. Such laws gave copyright protection only to authors who were nationals of the country in which the laws were enacted.

A few countries negotiated bilateral treaties—two-party contracts termed reciprocal agreements—that protected the nationals of both countries, but such arrangements were rare. In the mid nineteenth century, a nongovernment organization, the Association *Littéraire et Artistique* International, was formed in Paris and led the movement for international copyright protection. This organization created the draft of what eventually became the Berne Convention. Among the first countries adhering to the Berne Convention were France, Germany, and the United Kingdom.

The Berne Convention established several principles of international copyright that have remained through all of the treaty's versions. First, rather than operating on a system of reciprocity (under which a country protects foreign authors only to the extent that its own authors are protected in return), the convention works on the principle of national treatment (under which a country extends the same protection to foreigners that it accords to its own authors). Second, rather than trying to impose the same standards on all nations, the convention solved the problem of national differences in copyright protection by establishing minimum standards of protection that all signatories must meet. Thus, member countries may treat the copyrighted work of their own nationals in any way they choose, but they must treat works from nationals of other treaty members according to minimum treaty standards. Third, the convention provides for automatic protection of copyrighted works as soon as they are created, without any required formalities, such as notice or registration.

Salient features of the Berne Convention for the Protection of Literary and Artistic Works (1886)

The Berne Convention deals with the protection of works and the rights of their authors. It is based on three basic principles and contains a series of provisions determining the minimum protection to be granted, as well as special provisions available to developing countries that want to make use of them.

(1) The three basic principles are the following:

(a) Works originating in one of the Contracting States (that is, works the author of which is a national of such a State or works first published in such a State) must be given the same protection in each of the other Contracting States as the latter grants to the works of its own nationals (principle of "national treatment").

(b) Protection must not be conditional upon compliance with any formality (principle of "automatic" protection.

(c) Protection is independent of the existence of protection in the country of origin of the work (principle of "independence" of protection). If, however, a Contracting State provides for a longer term of protection than the minimum prescribed by the Convention and the work ceases to be protected in the country of origin, protection may be denied once protection in the country of origin ceases.

(2) The minimum standards of protection relate to the works and rights to be protected, and to the duration of protection:

(a) As to works, protection must include "every production in the literary, scientific and artistic domain, whatever the mode or form of its expression" (Article 2(1) of the Convention).

(b) Subject to certain allowed reservations, limitations or exceptions, the following are among the rights that must be recognized as exclusive rights of authorization:

1. the right to translate,

2. the right to make adaptations and arrangements of the work,

3. the right to perform in public dramatic, dramatico-musical and musical works,

4. the right to recite literary works in public,

5. the right to communicate to the public the performance of such works,

6. the right to broadcast (with the possibility that a Contracting State may provide for a mere right to equitable remuneration instead of a right of authorization),

7. the right to make reproductions in any manner or form (with the possibility that a Contracting State may permit, in certain special cases, reproduction without authorization, provided that the

reproduction does not conflict with the normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author; and the possibility that a Contracting State may provide, in the case of sound recordings of musical works, for a right to equitable remuneration),

8. the right to use the work as a basis for an audiovisual work, and the right to reproduce, distribute, perform in public or communicate to the public that audiovisual work.

The Convention also provides for "moral rights", that is, the right to claim authorship of the work and the right to object to any mutilation, deformation or other modification of, or other derogatory action in relation to, the work that would be prejudicial to the author's honor or reputation.

(c) As to the duration of protection, the general rule is that protection must be granted until the expiration of the 50th year after the author's death. There are, however, exceptions to this general rule. In the case of anonymous or pseudonymous works, the term of protection expires 50 years after the work has been lawfully made available to the public, except if the pseudonym leaves no doubt as to the author's identity or if the author discloses his or her identity during that period; in the latter case, the general rule applies. In the case of audiovisual (cinematographic) works, the minimum term of protection is 50 years after the making available of the work to the public ("release") or – failing such an event – from the creation of the work. In the case of works of applied art and photographic works, the minimum term is 25 years from the creation of the work.

(3) The Berne Convention allows certain limitations and exceptions on economic rights, that is, cases in which protected works may be used without the authorization of the owner of the copyright, and without payment of compensation. These limitations are commonly referred to as "free uses" of protected works, and are set forth in Articles 9(2) (reproduction in certain special cases), 10 (quotations and use of works by way of illustration for teaching purposes), 10bis (reproduction of newspaper or similar articles and use of works for the purpose of reporting current events) and 11bis(3) (ephemeral recordings for broadcasting purposes).

(4) The Appendix to the Paris Act of the Convention also permits developing countries to implement non-voluntary licenses for translation and reproduction of works in certain cases, in connection with educational activities. In these cases, the described use is allowed without the authorization of the right holder, subject to the payment of remuneration to be fixed by the law.

The Berne Union has an Assembly and an Executive Committee. Every country that is a member of the Union and has adhered to at least the administrative and final provisions of the Stockholm Act is a member of the Assembly. The members of the Executive Committee are elected from among the members of the Union, except for Switzerland, which is a member ex officio.

The establishment of the biennial program and budget of the WIPO Secretariat – as far as the Berne Union is concerned – is the task of its Assembly.

The Berne Convention, concluded in 1886, was revised at Paris in 1896 and at Berlin in 1908, completed at Berne in 1914, revised at Rome in 1928, at Brussels in 1948, at Stockholm in 1967 and at Paris in 1971, and was amended in 1979.

The Convention is open to all States. Instruments of ratification or accession must be deposited with the Director General of WIPO.

Convention of Biological Diversity

Biodiversity means the variability among living organisms from all sources and the ecosystem of which they are part. About 13 million species are found and 1.75 million species identified. Biological resources are the mainstay of our economical development.

Several international conventions and treaties related to biodiversity are under enforcement. Convention on Biological Diversity (CBD), 1992 is the most important international convention related to biodiversity, which brought new era in the field of biodiversity.

The convention recognized for the first time in international law that the conservation of biological diversity is “a common concern of humankind” and is an
integral part of the development process. The agreement covers all ecosystems, species, and genetic resources.

The convention reminds decision-makers that natural resources are not infinite and sets out a philosophy of sustainable use. While past conservation efforts were aimed at protecting particular species and habitats, the Convention recognizes that ecosystems, species and genes must be used for the benefit of humans. However, this should be done in a way and at a rate that does not lead to the long term decline of biological diversity.

The convention also offers decision-makers guidance based on the precautionary principle that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.

The Convention acknowledges that substantial investments are required to conserve biological diversity. It argues, however, that conservation will bring us significant environmental, economic and social benefits in return.

Objectives of Convention on Biological Diversity

The objectives of the Convention on Biological Diversity are expressed in its Article 1:

- the conservation of biological diversity;
- the sustainable use of its components; and
- the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate
    a. access to genetic resources,
    b. transfer of relevant technologies,
    c. funding.

The Convention is thus the first agreement to address all aspects of biological diversity: species, ecosystems and genetic resources. It is indeed the first time that genetic diversity is specifically covered in a binding global treaty.

The Convention also recognizes - for the first time - that the

conservation of biological diversity is "a common concern of humankind" and an integral part of the development process. In other words, the Convention recognizes that all humanity has an interest ensuring the conservation of biological diversity, including poor nations, women and indigenous people, and that it needs to be addressed by concerted international action.

Some of the many issues dealt with under the convention include:

• Measures and incentives for the conservation and sustainable use of biological diversity.

• Regulated access to genetic resources and traditional knowledge, including Prior Informed Consent of the party providing resources.

• Sharing, in a fair and equitable way, the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources (governments and/or local communities that provided the traditional knowledge or biodiversity resources utilized).

• Technical and scientific cooperation.

• Access to and transfer of technology, including biotechnology, to the governments and/or local communities that provided traditional knowledge and/or biodiversity resources.

• Coordination of a global directory of taxonomic expertise (Global Taxonomy Initiative).

• Impact assessment.

• Education and public awareness.

• Provision of financial resources.

• National reporting on efforts to implement treaty commitments.

STATUS OF CBD

16 countries signed CBD on June 5, 1992 and other 141countries signed CBD in Brazil up to June 14, 1992. It came into force on December 29, 1993 as internationally binding document.

Parties

192 countries and the European Union are parties to the convention. All UN member states—with the exception of the United States, Andorra,

and South Sudan—have ratified the treaty. Non-UN member states that have ratified are the Cook Islands and Niue. The Holy See and the states with limited recognition are non-parties. The US has signed but not ratified the treaty, and is unlikely to now that they have passed into law the Farmer Assurance Provision of 2013.

Salient Features of convention on Biological Diversity

1. CBD recognizes that Conservation of Biological Diversity is a common concern of humankind.

Earlier, biodiversity was considered heritage of humankind. But CBD recognizes that States have sovereign right over their biological resources. CBD puts the responsibility of conservation and sustainable use of biological resources on the states. (Art. 3 of CBD)

Thus, states have sovereign right to exploit their biological diversity as per their policies. Previously biodiversity was considered heritage of humankind. State is responsible to control their resources without damaging the environment of other states.

2. CBD has recognized that certain human activities have reduced biodiversity. The reason being the lack of information and knowledge about biodiversity and need to develop scientific, technical and institutional capabilities.

3. Therefore, CBD stresses upon the need to establish the mechanism for fair and equitable sharing of benefits arise from biodiversity and their related traditional knowledge, especially the need of full participation of women at all levels in policy making and implementation for biodiversity conservation.

4. CBD seeks to establish strong cooperation among states, regions, intergovernmental organizations and non-governmental sectors, special consideration to developing countries (more for the LDCs) to provide additional financial resources and relevant technologies.

Accordingly, each contracting country has to cooperate other countries for the conservation and sustainable use of biodiversity. The

cooperation can be bilateral or multilateral. If necessary, any party can ask help from competent international organizations for arranging cooperation.

5. CBD is committed to conserve and sustainable use of biological diversity for the benefit of present and future generations. (Art. 6 of the CBD)

(a) Develop national strategies plans or programmes for the conservation and susta1nable use of biological diversity or adapt for this purpose existing strategies plans or programmes which shall reflect, *inter alia, the* measures set out in this Convention relevant to the Contracting Party concerned; and

(b) Integrate as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or crosssectoral plans, programmes and policies."

6. CBD envisages identification and monitoring system for effective conservation of biodiversity, under Article 7, and for *in situ conservation under Article 8* and for *ex situ conservation under Article 9.*

(a) Identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I;

(b) Monitor, through sampling and other techniques, the components of biological diversity identified pursuant to sub-paragraph (a) above paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use;

(c) Identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques; and

(d) Maintain and organize, by any mechanism, identification and monitoring activities pursuant to sub-paragraphs (a), (b) and (c) above."

Salient Features of Indian Biological Diversity Act, 2002

The first attempt to bring the biodiversity into the legal framework was made by way of the biodiversity bill 2000 which was passed by the Lok Sabha on 2nd December, 2002 and by Rajya Sabha on December, 2002.

Objectives of the act:

1. To conserve the Biological Diversity.

2. Sustainable use of the components of biodiversity.

3. Fair and equitable sharing of benefits arising out of the use of the B.D

A national biodiversity authority has been established by the Biodiversity Act, 2002 to regulate act implementing rules 2004 has been operationalized since coming in to force.

Act:

Regulating access well as pushing the officially sponsored, documentation of biological resources and traditional practices through people's diversity registers at the local and data bases at the national levels, respectively. It further probes the extent to which the principles of conservation have realized.

Biodiversity in the layman's word comprises of various life forms within the biosphere. It contains life forms from the simple single-celled microbes to highly complex organisms. Biodiversity is the basis of the ecosystem and is important for its functioning. We depend on biodiversity for our basic needs like food, shelter, medicines etc.

Biodiversity is extremely complex, dynamic and varied. It includes innumerable plants, animals, microbes, atmosphere (mixture of various gases), geosphere (solid part of the earth) and hydrosphere (the liquid portion on Earth).

Biodiversity can broadly be divided at three levels i.e. genetic diversity, species diversity and ecosystem diversity. Biodiversity management is required at all these levels because by changing biodiversity, we strongly affect human well-being and the well-being of every other living creature.

Existence of Biodiversity in India

According to the Millennium Ecosystem Assessment, the total number of species on Earth ranges from five to 30 million, and only 1.7–2 million

species has been formally identified. India is one of the 12-mega diverse countries of the world. With only 2.5% of the world land area, India has 7.8% of global recorded species. India has 4 out of 34 global biodiversity hotspots in the Eastern Himalayas, in the Indo-Burma region. It further contains 45,968 species of plants 91,364 species of animals and over 5,650 microbial species.

India contains a great wealth of biological diversity in its forests, its wetlands and its marine areas. This richness is shown in absolute numbers of species and the proportion they represent of the world total.

Need for Biodiversity

It is a well-recognized fact that the biodiversity forms an integral part of life for all individuals. It is widely estimated that more than 70,000 plant species are used in traditional and modern medicines. Furthermore, food and energy are obtained from the biosphere we live in. A loss of biodiversity would not only cause loss of raw materials but would also have ramifications for global food security and nutrition. Biodiversity loss would not only have a negative implication on the lives of the human beings but also on the lives of other species in the ecosystem; leading to the imbalance in the ecosystem and making it difficult for all the organisms to thrive in their natural environment.

Threats to Biodiversity

The threats to biodiversity include man-made destruction of the ecosystem and the natural causes which causes damage to the biodiversity. The following are the major reasons for biodiversity loss:

- Habitat loss and degradation: One of the major threats to the biodiversity is the habitat loss caused due to human development in the sensitive biological areas. Habitat loss affects 86% of all threatened birds, 86% of the threatened mammal's assessed, and 88% of the threatened amphibians.
- Overexploitation of natural resources
- Pollution can be considered to be another factor
- Climate change affecting changes in the biodiversity

Reasons for enactment of the Biodiversity Act

Biodiversity Act, 2002 came into existence much later than the other existing laws on environment such as the Indian Forest Act, 1927 , Wildlife Protection Act, 1972 , Environment Protection Act, 1986 etc. Though all these legislations laid impetus on the conservation of the environment, yet none of them properly addressed all the dimensions of the ecological and biodiversity preservation.

Furthermore, India also became a signatory to various other ecological as well environmental laws, such as the,

- Ramsar Conservation on Wetlands, 1971
- Convention for the Protection of World Cultural and Natural Heritage, 1972
- Convention on International Trade of Endangered Species of Wildlife Fauna and Flora, 1973
- Convention on the Conservation of European Wildlife and Natural Habitat, 1979
- World Conservation Strategy, 1980
- the United Nations Convention on Biological Diversity, 1992

All these conventions were to cater to the needs of the protection to the wildlife and the environment. However, the United Nations Convention on Biological Diversity for the first time made a comprehensive plan for the protection of biodiversity. Post 1990s, there was a change in the economic structure from closed economy to open economy. Thus, there were no laws to protect bio-piracy by the developed nation on the Indian soil. Hence, a strong legislation was required to curtail the overexploitation and piracy of the indigenous resources.

During the period of 2000-2002, a civil society group was commissioned for preparing India's National Biodiversity Strategy and Action Plan. However, this plan was not accepted by the government. Therefore, the government decided to release its own draft on National Biodiversity Plan which was made by the technocrats. The Act of 2002, based on this plan was passed by the Lok Sabha on 2nd December, 2002 and Rajya Sabha on 11th December, 2002.The objectives of the Act were :

1. Conservation of Biological diversity

2. Sustainable use of its components
3. Fair and equitable sharing of the benefits arising out of utilization of genetic resources.

Apart from these main objectives the Act has also given force to some of the terms of CBD by the following provisions: (Section -8 & Section-22)

1. To set up National Biodiversity Authority (NBA), State Biodiversity Board(SBB) and Biodiversity Management Committees(BMC's).
2. To respect and protect knowledge of local communities traditional knowledge related to biodiversity.
3. To conserve and develop areas of importance from the standpoint of biological diversity by declaring them biological diversity heritage sites.

The Biological Diversity Act of 2002 and the Biological Diversity Rules, 2004 are implemented by National Biodiversity Authority (NBA) at the national level, State Biological Board (SBB) at state level and Biodiversity Management Committees (BMC's) at local levels. Some of the major functions of these authorities are:

- To regulate activities of, approve and advice the Government of India on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits.
- To grant approval under Sections 3,4 and 6 of Biodiversity Act,2002
- To notify areas of biodiversity importance as biodiversity heritage sites under this act and perform other functions as may be necessary to carry out the provisions of the Act.
- To take measures to protect biodiversity of the country as well as to oppose the grant of intellectual property rights to any country outside or any biological resources obtained from India.

The NBA deals with the requests for access to the biological resources as well as transfer of information of traditional knowledge to foreign nationals, institutions and companies. Through this way piracy of Intellectual Property Rights in and around India is prevented, it also saves the indigenous people from exploitation.

The recent developments relating to NBA implementation include the establishment of designated National Repository (DNR) under Section 39 as an important aspect of infrastructure for biodiversity conservation. This DNR provides service providers for preserved specimen consisting all faun, herbarium (dried plant material for research), living cells, genomes of organisms and information relating to hereditary and function of biological system.

Lacunae in the Act

The formulation of the BD Act, 2002 nearly took a decade after the ratification of the Convention on Biological Diversity. Thus, it clearly demonstrates that the government officials, NGO's and academicians formulated the provisions after through research and consideration. Eventually with the enactment of the Biodiversity Rules under BD Act in 2004, there was an establishment of Biodiversity Management Committee which gave powers to the local and indigenous communities to voice out there opinion conservation, use and equitable sharing.

However, certain lacunas are still apparent in the Act. A major flaw is that this act does not give sufficient consideration to conservation; rather it lays more emphasis on preventing profit-sharing from the commercial use of the biological resources. It is true that the foundation of this act was laid to prevent bio-piracy by the developed nations. However, one cannot forget another major aim of this act i.e. to protect the biodiversity.

The Constitutional Viewpoint

Article 14 – Whether or not the classification meets the objectives of the Act

The Indian Constitution guarantees a set of Fundamental Rights to its citizens under Part III of the Constitution. Some of these fundamental rights are guaranteed to citizens and non-citizens as well. Article 21 and Article 14 are two of the fundamental rights guaranteed even to non-citizens. It is necessary to examine how Article 14 is violated by the Biodiversity Act, 2002. The act distinguishes citizens of India and other persons on the basis of citizenship and residential status. For any legislation to be intra vires Article 14 it has to pass two tests

- The intelligible differentia test
- The rational nexus with the objective of the act test

The intelligible differentia states that a classification in itself does not make the Act/action ultra-vires. An act becomes ultra-vires when the classification is not based on intelligible differentia. In the given act, the classification is based on both citizenship and residential status. Now after the classification test is passed the legislation should pass the test- that the classification must have a rational nexus with the objective of the act. The objective of this act are-conservation of biological diversity, sustainable use of resources and fair and equitable sharing of benefits arising out of utilization of genetic resources. The objectives that the act seeks to achieve and the classification of persons and other persons do not have a rational nexus with the objectives of this act i.e. to conserve of biological diversity.

Secondly, these provisions deter foreign joint ventures as well as collaboration with foreign scientists because of strict prohibition on even minor equity holdings in a company. It would be impractical for a company holding thousands of shares to follow this procedure when only a minor portion of shares are held by other persons or corporations not based in India. There should be restrictions when, the non-Indian shareholders are in a position to influence the decisions and management of the company in question, not otherwise.

Finally, the act assumes that resident citizens of India and corporations of India are never a threat to biodiversity. The main objective of the act is conservation of biodiversity and the legislators should bear in mind that even the Indian citizen residents and Indian corporations can be exploitative.

Thus, the act has to grant approvals for access or IPRs keeping in mind the following considerations:

- Whether the said access comprehensively gives greater rights leading to the development of the holders of the traditional knowledge.
- Whether the said access is detrimental to biodiversity.

Spirit of Federal Structure

The CBD prescribes for protection and conservation of biodiversity and establishment of institutions at the national and state level. State biodiversity authorities formed under the act do not have complete autonomy and their powers are merely restricted to that of an advisory body abiding by the guidelines issued by the Central Government. State governments should be granted more autonomy in a bottom up approach to solve problems related to biodiversity.

Concerned state governments should also be consulted to notify threatened species and biodiversity heritage sites along with BMCs.

Role of local communities

An analysis of the provisions reveals that local concerned communities do not have any real power in the decision making process. Regulation of access is done by NBA and SBB and not the local communities. The NBA may consult the communities to work out benefit sharing mechanisms after the decision to allow access is made. The communities have no say in deciding whether or not the access should be allowed in the first place. They are not well informed as to their rights and have very less knowledge of the system of IPRs or commercial use of the traditional knowledge, and this highly centralized approach is not be of great benefit.

It is important to note that an ordinary citizen cannot directly approach the court. An aggrieved benefit-claimer is required to give prior notice of his/her intention to make a complaint. Else he has to file a complaint to the NBA, which will then take necessary action. The absence of *locus standi* to all citizens is of grave concern. Since local communities are aware of the manner in which bio resources from their village are being used and would notice any unwanted outside influence over resource extraction or external parties interested in resource extraction, their vigilance would help in preventing bio piracy, as would the other civil society organizations and individuals. Having to go through government institutions would only delay their ability to get any remedy.

Prior Informed Consent

Prior informed consent is defined as a process by which owner or holder of knowledge or resources must agree to the collection or use of these before an activity takes place. The applicant who wants access must provide all pertinent information so that the community may make an informed decision.

Evolution of principles of Prior informed Consent:

Indigenous peoples' right to free, prior and informed consent (FPIC) has been recognized by a number of intergovernmental organizations, international bodies, conventions and international human rights law in varying degrees and increasingly in the laws of State. Development projects and operations, legal and administrative regimes have had and continue to have a devastating impact on indigenous people, undermining their ability to sustain themselves physically and culturally.

The United Development Programme (UNDP) presented a report of the Inter-Agency Support Group on Indigenous Issues on FPIC at the Permanent Forum in May 2004 (E/C.19/2004/11). Some UN agencies have to some extent, implemented FPIC on an ad-hoc basis in line with their general guidelines or legal instruments and principles to enhance their partnership with Indigenous peoples (IPs). However, it states that there is no internationally agreed definition or understanding of the principle or mechanism for implementation.

Prior Informed Consent and Bio Diversity

The Convention on Biological Diversity 1992 in its article 8(J) calls on contracting states,

"*To respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities.....and promote their wider application with the approval and involvement of the holders of such knowledge, innovation and practices".*

The Cartagena Protocol on Bio-Safety (2000) to the Convention on Biological Diversity also recognizes FPIC applies in the trans boundary movement, transit, handling and use of all living organisms. The Fifth Conference of Parties (COP) to the CBD Decision V/16 expresses a firm

commitment to the implementation of PIC in its general principles: "*Access to traditional knowledge, innovation and practices of indigenous and local communities should be subject to prior informed consent or prior informed approval from the holders of such knowledge, innovations and practices.*

Importance of Prior Informed Consent

Prior Informed consent is important primarily for two reasons:

1. That the local communities or traditional knowledge holders can assess the commercial value of the traditional knowledge or product for which access or a patent is sought to make an informed decision for granting an access.
2. That the local communities and the corresponding countries make an informed decision regarding the safety of the resource or other GMOs (Genetically modified Organisms).

Prior Informed Consent in the Biodiversity Act

There are number of issues relating to the provisions of 'consultation' with local communities. Firstly the term consultation does not mean consent and is therefore much weaker that the requirement of "consent of local body". The term is often ambiguously used to mean only talking to a few villagers, or to a head of a village, or corporate in an urban setting. Genuine consultation must involve the entire relevant community or settlement in languages and modes that they are comfortable with. Making people fully aware of the pros and cons of their granting consent is an important precondition for their truly excising the option to say "yes" or "no". Unfortunately the Act and Central Rules leave the interpretation of the word wide open and therefore do not facilitate complete participation of local communities.

Access Benefit Sharing (Section -21)

Access Benefit Sharing can be described as the process when bio-resources or people's knowledge are accessed, the user/ accessor must compensate the provider community either in financial terms or acknowledge the source. However once access is allowed, then the challenges for regulatory mechanisms are to identify and claim a share of benefits and to ensure just and equitable sharing. Article 16 of the

Convention on Biological Diversity states the ways in which the Access and Transfer of Technology should take place.

The Act centralizes all the property rights either in the hand of state through sovereign appropriation or in the hands of private inventors through monopoly of intellectual property rights. It does not however provide a framework for the rights of all other holders of biological resources and related information. The consequence is that resources and knowledge are not allocated through intellectual property rights, the rest is freely available.

The Nagoya Protocol on access benefit sharing in Tokyo in 2001 is an agreement which aims at sharing the benefits arising from utilisation in a fair and equitable way, thereby contributing in the conservation and sustainable use of biodiversity. Genetic resources ranging from plants, animals, micro-organisms are used for various reasons from research to products etc. However, at times the traditional knowledge so associated with the genetic resources is obtained from the indigenous and local communities, providing valuable information to researchers.

Scenario in India

India is trying to develop and implement laws and policies on access benefit sharing. However, there have been several challenges which are emerging during the process:

1. There is no clear distinction made between 'genetic resources' and 'biological resources' in the legislation. Hence, the collection, sale, or purchase of a single biological specimen constitutes access to genetic resources. This seems contrary to entire motive of the act. Hence, easy exploitation of the natural resources.
2. The law does not specifically address the question of ownership over genetic resources since tracking genetic resources and ensuring legal compliance by the users of genetic resources is difficult. Furthermore these genetic resources are accessed by different bio prospectors (collectors, researchers, and others) and various other international companies for different purposes. The ABS law does not differentiate between these uses.

3. Furthermore in India, only a few bio prospecting proposals have been submitted and approved. Details of negotiation procedures are not yet available, and, hence, the effectiveness of the Act in practice has yet to be seen. This poses more challenges for the implementation of the given biodiversity law.

Recommendations

Having raised the above issues, solutions can be proposed by using a two-proged approach-

- Recommendations on the lines of successful Biodiversity laws in some of the best biodiversity hotspots in the worlds
- General recommendations regarding implementation to achieve the objective of the Biodiversity Act in its true spirit.

Successful Bio Diversity Laws in other nations

Costa Rica is a country with 0.1% of world's land and is home to 5%of world's biodiversity. The biodiversity laws of Costa Rica enacted in 1997 are considered to be the best in the world, in terms of fulfilling the true objectives of CBD for sustainable use of biodiversity. The law establishes an administrative body within the Ministry of Environment, Energy and Telecommunications (MEET) to oversee both the National System of Conservation Areas (SINAC) and National Biodiversity Administration Committee (CONAGEBIO). Duties of SINAC and CONAGEBIO include the administration of national wild protected areas, ensuring environmental safety, conservation and the sustainable use of the ecosystems and species, regulating access to genetic resources, intellectual property rights, education and public awareness and research and transfer of technology, environmental impact assessment, incentives and administrative procedures and sanctions.

CONAGEBIO is a national independent commission which oversees and formulates policies on access to genetic and biochemical elements and protection of associated knowledge, as well as coordinating these policies with the relevant institutions. It also formulates and coordinates the policy for access to elements of biodiversity and associated knowledge, ensuring a suitable transfer of science and technology and the distribution of benefits.

Incentives Approach

The biodiversity law of Costa Rica includes the promotion of incentives in the objectives

"- To promote the adoption of incentives and the reward of environmental services for conservation, the sustainable use and the components of biodiversity."

Chapter VII of the law deals with incentives, ranging from financial and technical assistance to helping in the conservation of biodiversity to encouraging efforts and research. Incentives are also given for community participation and investments for over all development.

Biosafety Approach

The law includes the issue of biosafety in the objectives by specifying-

To ensure environmental safety to all citizens as a guarantee of social, economic and cultural sustainability.

Article 46 of the law deals with the issue of biosafety by not only mentioning details of obtaining permission relating to use of GMO's, but also a regular three month report by the user to the concerned authority, to maintain utmost standards of environmental safety. The precautionary principle, to avoid the defence of scientific uncertainty has been explicitly put in place in Article 11 of the Act.

Educational and Public Awareness Approach

The law stipulates that one of its objectives is

To promote education and public awareness about the conservation and use of biodiversity.

Chapter VII emphasizes on creating public awareness and education. Such laws are very essential in a country like India, because traditional knowledge holders are generally tribal communities, who are cut away from the rest of the world, and education would help them to appreciate the commercial value of their product or traditional knowledge.

Prior Informed Consent Approach

The law in Costa Rica lays great emphasis on Prior Informed Consent (PIC). The PIC of communities involved is made mandatory. An agreement of this prior informed consent has to be attached before access is sought and

the same has to be ratified by the technical officer before granting the accesses. The right of local communities and indigenous people to oppose any access to their resources and associated knowledge, be it for cultural, spiritual, social, economic or other motives, is recognized. Furthermore to prevent any threat of biodiversity, there is a necessity for duplication and deposit of samples etc. collected with the concerned authority.

Multi Sectoral Approach

Conservation of biodiversity involves multiple stake holders and a multi-sectoral approach is necessary for its conservation in all spheres of ecosystem. The law requires each ministry to monitor biodiversity, be aware of environmental impact of activities within the sphere of responsibility and work together cooperatively.

Explicit incorporation of these approaches in the Indian law can help in successfully dealing with the loopholes in the Biodiversity Act.

Other General Recommendations

1. The Biodiversity Act and Rules do not mention about the linkages between the BMC and the other local bodies and institutions which seem relevant to the Village Forest Communities, Ecodevelopment Committees, Van Suraksha Samitis , Joint Forest Management Committees, Pani Panchayats etc. The lack of linkages can be a reason of conflict. Even before the enactment, there was a plethora of local committees, working for different purposes. Therefore a special committee should be setup just for the purpose of integration of all these different committees. A classic example can be the Madhya Pradesh Rules Section 23(2) which states that “It is possible for the Biological State Rules to specify the linkages to establish integration and better functioning of various bodies.”
2. Another major flaw that has been already discussed is that there has been no mention about genetic resources, though genetic resources form an integral part of the biodiversity. However, since the law does not specifically deal with the ownership of the genetic resources, these resources can be exploited by various bio-prospectors and other international companies for different purposes. Further, the exclusion

of the human genetic material from scope of the act may lead to the problem of 'cloning crises. Therefore, the term 'human genetic material' should be included under the broad definition of the biological resources.

3. The Act does not mention any form of distinction between the people who use the biological resources for their individual purposes and those who use it sustainability purposes. This could play a major role in the biodiversity conservation process, since relaxation of the rules for the people helping in the sustainable and valuable use of these indigenous resources can motivate people to perform research and use it for the welfare of the mankind.

International Agreements on Protection of Plant Varieties

Protection of Plant Varieties

Plant varieties protection in form of plant breeders' rights has been in existence in industrialized countries for a long time. From the 1920s a number of European Countries have recognized various kinds of plant breeders' rights. From the 1930s, plant varieties were admitted to patent protection in the United States and Germany and subsequently many developed countries.

At the international level, the ***Convention of the International Union for Protection of New Varieties of Plants (UPOV),*** first adopted in 1961 and has been subsequently revised in 1972, 1978 and 1991, has recognized the need for protecting varieties of plants to safeguard the interest of breeders.

The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs Agreement), one of the results of the Uruguay Round, states that WTO members "… shall provide for the protection of plant varieties either by patents or by effective *sui generis* system or by any combination thereof.

Moreover, it affects access to propagating material (seeds) by local or rural communities where most population meet their basic needs largely from traditional farming. Farming communities have a well established

practice of saving exchanging and replanting seeds which may be restricted under plant breeders' rights. Accordingly, the recognition and the grant of an intellectual property right to the breeder of new plant variety is not welcomed in a large number of developing countries.

The TRIPs Agreement leaves to each country's discretion whether to protect new plant varieties by means of patent or by effective *sui generis* system or by any combination thereof. TRIPS contain no further standard as to what constitutes an effective *sui generis* system, nor does it mention UPOV.

Thus, developing countries are not obliged to provide for the protection of plant varieties under patents or to comply with UPOV provisions; instead, they may prefer to develop their own *sui generis* system of protection. The developing countries are rich in biodiversity; much of the germplasm of the world comes from such countries. Farmers in developing countries usually posses traditional knowledge and use traditional techniques to manage and develop new crop types and biodiversity conservation.

The UPOV Convention

Overview

The ***International Convention for the protection of New Varieties of Plants (UPOV)*** is the only international treaty focusing on plant variety protection. The Convention was first adopted in Paris in 1961 and entered into force in 1968.

It established the International Union for the Protection of New Varieties of Plants which has the mandate to enforce the Convention. Its main goal is to encourage the development of new varieties of plants, for the benefit of society through the grant of protection, which serves as an incentive to those who engage in commercial plant breeding.

On 24 April 1999, the 1991 Act entered into force in accordance with Article 37(1), which states that " This Convention shall enter into force one month after five States have deposited their instruments of ratification".

The provision of Article 37(3) ensured that the 1978 Act of the Convention is closed to further accession. By virtue of the TRIPs Agreement,

member States of the World Trade Organization (WTO) are obliged to provide for the protection of plant varieties. To bring the TRIPs patent provisions into line with UPOV Convention on the protection of plant varieties, Article 27.3(b) permits Members to provide " for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof ". As most developing countries are yet to adopt some form of plant variety protection.

Conditions and Scope

The conditions for granting a breeders right are set out in Article 6 of UPOV 1978 and Article 5 of UPOV Convention 1991. These are novelty, distinctness, uniformity and stability. Both the 1978 and 1991 Act specify the minimum scope of protection that States must grant once the variety satisfy the criteria for protection. The rights granted exclusively enable the breeder to exploit his new variety. It should be noted that the 1978 Act permits member Countries of the UPOV Convention to grant or offer protection to new plant varieties by means of an independent system (*sui generis*) provided for in the Convention or of a patent.

In respect of coverage, the 1978 Act requires member States to protect a minimum of five genera or species on accession to the Convention, and thereafter to protect additional genera or species within a period of eight years, leading to a minimum of 24 genera or species. However, the 1991 Act grants a five-year period to existing member States after becoming bound by the new text, and ten years to new member States, in which to provide protection to all plant genera and species.

Under Article 5(1) of the 1978 Act prior permission of the breeder is required for the production for commercial marketing, the offering for sale, and the marketing of the reproductive or vegetative propagating material of the protected variety.

Thus, farmers are impliedly free to save and re-sow propagating material from the previous year's harvest, as the permission of the breeder is only required for the production for "commercial marketing", the so-called "farmer's privilege". Breeder's permission is not also required, either for utilization of the protected variety for the purpose of breeding additional

new varieties or for the marketing of such varieties, the so-called “breeder’s privilege”, which is expressly recognized.

Under the 1991 Act, in respect of the propagating material of a protected variety, any production or reproduction (multiplication), conditioning for the purpose of propagation, offering for sale, selling or other marketing, exporting, importing, stocking for any of these purposes mentioned shall require the authorization of the breeder.

Duration

The evolution of breeders rights, as exclusive rights, clearly shows that it is a form of intellectual property right. Thus similar to IPRs, breeders rights are granted for a limited period of time, at the expiration of which it falls into the public domain. It has certain features in common with patents for industrial inventions, as both form of protection grants their holders a form of exclusive right to serve as an incentive to stimulate innovative activity.

Under UPOV Convention 1978, the minimum period of protection is fifteen years, computed from the date of issue of the title of protection, and less than eighteen years for vines, forest trees, fruit trees and ornamental trees.

The duration of protection of breeder’s right under the 1991 Act for plant varieties was extended to not less than twenty years from the date of the grant of the breedesr’s right, and for trees and vines the duration should not be less than twenty-five years.

International Treaty on Plant Genetic Resources (ITPGR)

International Treaty on Plant Genetic Resources (ITPGR)

The objectives of this Treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.

These objectives will be attained by closely linking this Treaty to the Food and Agriculture Organization of the United Nations and to the Convention on Biological Diversity. ***Article - 1***

Use of terms

For the purpose of this Treaty, the following terms shall have the meanings hereunder assigned to them. These definitions are not intended to cover trade in commodities:

"*In situ conservation*" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated plant species, in the surroundings where they have developed their distinctive properties.

"*Ex situ conservation" means the conservation of plant genetic resources for food and agriculture* outside their natural habitat.

"Genetic material" means any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity.

"Centre of origin" means a geographical area where a plant species, either domesticated or wild, first developed its distinctive properties.

"Centre of crop diversity" means a geographic area containing a high level of genetic diversity for crop species in in situ conditions.

Article – 2

General Obligations

Each Contracting Party shall ensure the conformity of its laws, regulations and procedures with its obligations as provided in this Treaty.

Article – 4

Conservation, Exploration, Collection, Characterization, Evaluation and Documentation of Plant Genetic Resources for Food and Agriculture

Each Contracting Party shall, subject to national legislation, and in cooperation with other Contracting Parties where appropriate, promote an integrated approach to the exploration, conservation and sustainable use of

plant genetic resources for food and agriculture and shall in particular, as appropriate:

The Contracting Parties shall, as appropriate, take steps to minimize or, if possible, eliminate threats to plant genetic resources for food and agriculture. ***Article – 5***

Sustainable Use of Plant Genetic Resources

The Contracting Parties shall develop and maintain appropriate policy and legal measures that promote the sustainable use of plant genetic resources for food and agriculture. ***Article – 6***

National Commitments and International Cooperation

Each Contracting Party shall, as appropriate, integrate into its agriculture and rural development policies and programmes, activities referred to in Articles 5 and 6, and cooperate with other Contracting Parties, directly or through FAO and other relevant international organizations, in the conservation and sustainable use of plant genetic resources for food and agriculture. ***Article – 7***

Technical Assistance

The Contracting Parties agree to promote the provision of technical assistance to Contracting Parties, especially those that are developing countries or countries with economies in transition, either bilaterally or through the appropriate international organizations, with the objective of facilitating the implementation of this Treaty. ***Article – 8***

Farmers' Rights

The Contracting Parties recognize the enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in the centres of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.

The Contracting Parties agree that the responsibility for realizing Farmers' Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. In accordance with their needs and priorities, each Contracting Party should, as appropriate, and subject to

its national legislation, take measures to protect and promote Farmers' Rights. ***Article – 9***

Multilateral System of Access and Benefit-sharing

In their relationships with other States, the Contracting Parties recognize the sovereign rights of States over their own plant genetic resources for food and agriculture, including that the authority to determine access to those resources rests with national governments and is subject to national legislation. ***Article – 10***

Coverage of the Multilateral System

In furtherance of the objectives of conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of benefits arising out of their use, as stated in Article 1, the Multilateral System shall cover the plant genetic resources for food and agriculture listed in Annex I, established according to criteria of food security and interdependence. ***Article – 11***

Facilitated access to plant genetic resources for food and agriculture within the Multilateral System

The Contracting Parties agree that facilitated access to plant genetic resources for food and agriculture under the Multilateral System, as defined in Article 11, shall be in accordance with the provisions of this Treaty. ***Article – 12***

Benefit-sharing in the Multilateral System

The Contracting Parties recognize that facilitated access to plant genetic resources for food and agriculture which are included in the Multilateral System constitutes itself a major benefit of the Multilateral System and agree that benefits accruing therefrom shall be shared fairly and equitably in accordance with the provisions of this Article. ***Article – 13***

Global Plan of Action

Recognizing that the rolling Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture is important to this Treaty, Contracting Parties should promote its effective

implementation, including through national actions and, as appropriate, international cooperation to provide a coherent framework, inter alia, for capacity-building, technology transfer and exchange of information, taking into account the provisions of Article 13.

Article – 14

Ex Situ Collections of Plant Genetic Resources for Food and Agriculture held by the International Agricultural Research Centers of the Consultative Group on International Agricultural Research and other International Institutions

The Contracting Parties recognize the importance to this Treaty of the *ex situ collections* of plant genetic resources for food and agriculture held in trust by the International Agricultural Research Centers (IARCs) of the Consultative Group on International Agricultural Research (CGIAR). The Contracting Parties call upon the IARCs to sign agreements with the Governing Body with regard to such *ex situ collections, in* accordance with the terms and conditions. ***Article – 15***

International Plant Genetic Resources Networks

Existing cooperation in international plant genetic resources for food and agriculture networks will be encouraged or developed on the basis of existing arrangements and consistent with the terms of this Treaty, so as to achieve as complete coverage as possible of plant genetic resources for food and agriculture. ***Article – 16***

The Global Information System on Plant Genetic Resources for Food and Agriculture

The Contracting Parties shall cooperate to develop and strengthen a global information system to facilitate the exchange of information, based on existing information systems, on scientific, technical and environmental matters related to plant genetic resources for food and agriculture, with the expectation that such exchange of information will contribute to the sharing of benefits by making information on plant genetic resources for food and agriculture available to all Contracting Parties.

In developing the Global Information System, cooperation will be sought with the Clearing House Mechanism of the Convention on Biological Diversity. ***Article – 17***

Financial Resources

The Contracting Parties undertake to implement a funding strategy for the implementation of this Treaty in accordance with the provisions of this Article. ***Article – 18***

Governing Body

A Governing Body for this Treaty is hereby established, composed of all Contracting Parties. ***Article – 19***

Secretary

The Secretary of the Governing Body shall be appointed by the Director-General of FAO, with the approval of the Governing Body. The Secretary shall be assisted by such staff as may be required. ***Article – 20***

Compliance

The Governing Body shall, at its first meeting, consider and approve cooperative and effective procedures and operational mechanisms to promote compliance with the provisions of this Treaty and to address issues of non-compliance. These procedures and mechanisms shall include monitoring, and offering advice or assistance, including legal advice or legal assistance, when needed, in particular to developing countries and countries with economies in transition. ***Article – 21***

Settlement of Disputes

In the event of a dispute between Contracting Parties concerning the interpretation or application of this Treaty, the parties concerned shall seek solutions by negotiation. ***Article – 22***

Amendments of the Treaty

Amendments to this Treaty may be proposed by any Contracting Party. ***Article – 23***

Annexes

The annexes to this Treaty shall form an integral part of this Treaty and a reference to this Treaty shall constitute at the same time a reference to any annexes thereto. ***Article – 24***

Signature

This Treaty shall be open for signature at the FAO from 3 November 2001 to 4 November 2002 by all Members of FAO and any States that are not Members of FAO but are Members of the United Nations, or any of its specialized agencies or of the International Atomic Energy Agency. ***Article – 25***

Ratification, Acceptance or Approval

This Treaty shall be subject to ratification, acceptance or approval by the Members and non- Members of FAO referred to in Article 25. Instruments of ratification, acceptance, or approval shall be deposited with the Depositary. ***Article – 26***

Accession

This Treaty shall be open for accession by all Members of FAO and any States that are not Members of FAO but are Members of the United Nations, or any of its specialized agencies or of the International Atomic Energy Agency from the date on which the Treaty is closed for signature. Instruments of accession shall be deposited with the Depositary. ***Article – 27***

Entry into force

Subject to the provisions of Article 29.2, this Treaty shall enter into force on the ninetieth day after the deposit of the fortieth instrument of ratification, acceptance, approval or accession, provided that at least twenty instruments of ratification, acceptance, approval or accession have been deposited by Members of FAO. ***Article – 28***

Member Organizations of FAO

When a Member Organization of FAO deposits an instrument of ratification, acceptance, approval or accession for this Treaty, the Member Organization shall, in accordance with the provisions of Article II.7 of the FAO Constitution, notify any change regarding its distribution of competence to its declaration of competence submitted under Article II.5 of the FAO Constitution as may be necessary in light of its acceptance of this Treaty. ***Article – 29***

Reservations

No reservations may be made to this Treaty. ***Article – 30***

Non-Parties

The Contracting Parties shall encourage any Member of FAO or other State, not a Contracting Party to this Treaty, to accept this Treaty. ***Article – 31***

Withdrawals

Any Contracting Party may at any time after two years from the date on which this Treaty has entered into force for it, notify the Depositary in writing of its withdrawal from this Treaty. The Depositary shall at once inform all Contracting Parties. ***Article – 32***

Termination

This Treaty shall be automatically terminated if and when, as the result of withdrawals, the number of Contracting Parties drops below forty, unless the remaining Contracting Parties unanimously decide otherwise. ***Article – 33***

Depositary

The Director-General of FAO shall be the Depositary of this Treaty. ***Article – 34***

Authentic Texts

The Arabic, Chinese, English, French, Russian and Spanish texts of this Treaty are equally authentic. ***Article – 35***

WTO and Doha Round of Trade Negotiation

The WTO Doha Round of multilateral trade negotiations, begun in November 2001, has entered its 11th year. The negotiations have been characterized by persistent differences among the United States, the European Union, and developing countries on major issues, such as agriculture, industrial tariffs and non-tariff barriers, services, and trade remedies.

The World Trade Organization (WTO) is the principal international organization governing world trade. It has 162 member countries, representing over 95% of world trade flows. It was established in 1995 as a successor institution to the General Agreement on Tariffs and Trade (GATT). The GATT was a post-World War II institution intended to promote nondiscrimination in trade among countries, with the view that open trade was crucial for economic stability and peace.

From November 9 to November 14, 2001, trade ministers from member countries met in Doha, Qatar, for the fourth WTO Ministerial Conference. At that meeting, they agreed to undertake a new round of multilateral trade negotiations.

Before the Doha Ministerial, negotiations had already been underway on trade in agriculture and trade in services. These ongoing negotiations had been required under the last round of multilateral trade negotiations (the Uruguay Round, 1986-1994). However, some countries, including the United States, wanted to expand the agriculture and services talks to allow tradeoffs and thus achieve greater trade liberalization.

In addition, countries increasingly have been seeking bilateral or regional trade agreements. As of November 1, 2011, 505 regional trade agreements have been notified to the WTO, 313 of which are currently in force. There is disagreement on whether these more limited trade agreements help or hurt the multilateral system. Some experts say that regional agreements are easier to negotiate, allow a greater degree of liberalization, and thus are effective in opening markets.

Others, however, argue that the regional agreements violate the general nondiscrimination principle of the WTO (which allows some exceptions), deny benefits to many poor countries that are often not party to the arrangements, and distract resources away from the WTO negotiations.

Especially worth noting is how the role of developing countries changed at the Doha Ministerial. Since the beginning of the GATT, the major decision-makers were almost exclusively developed countries. At the preceding Ministerial Conference (Seattle, 1999), developing countries became more forceful in demanding that their interests be addressed.

Some developing countries insisted that they would not support another round of multilateral negotiations unless they realized some concessions up-front and the agenda included their interests. Because of the greater influence of developing countries in setting the plan of action at Doha, the new round became known as the Doha Development Agenda.

At the Doha meeting, trade ministers agreed that the 5th Ministerial, to be held in 2003, would "take stock of progress, provide any necessary political guidance, and take decisions as necessary," and that negotiations would be concluded not later than January 1, 2005.

With the exception of actions on the Dispute Settlement Understanding, trade ministers agreed that the outcome of the negotiations would be a single undertaking, which means that nothing is finally agreed until everything is agreed. Thus, countries agreed they would reach a single, comprehensive agreement containing a balance of concessions at the end of the negotiations.

The Doha Agenda

Doha Round talks are overseen by the Trade Negotiations Committee (TNC), whose chair is Director-General Pascal Lamy. The negotiations are being held in five working groups and in other, existing bodies in the WTO. Selected topics under negotiation are discussed below in five groups: market access, development issues, WTO rules, trade facilitation, and other issues.

Market Access – Agriculture

The Uruguay Round Agreement on Agriculture called for continued negotiations toward "the long-term objective of substantial progressive reductions in support and protection." By early 2001, WTO members had achieved some preliminary work in those sectoral negotiations, and later that year, agriculture was wrapped into the broader Doha agenda.

Agriculture has become the linchpin in the Doha Development Agenda. U.S. goals in the new round were elimination of agricultural export subsidies, easing of tariffs and quotas, and reductions in trade-distorting domestic support. The Doha Ministerial Declaration included language on all of these three pillars of agricultural support. It stated that the members committed to "comprehensive negotiations aimed at substantial

improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade distorting support."

The July 2004 Framework Agreement provided a basis for which to continue the agriculture talks. On domestic support, subsidies are to be reduced by means of a "tiered" or "banded" approach applied to achieve "harmonization" in the levels of support.

While there was no breakthrough at the December 2005 Hong Kong Ministerial, members agreed to eliminate export subsidies, and "export measures with equivalent effect" by 2013, a date favored by the European Union (EU).

Talks to reach modalities proved unsuccessful at the July 23, 2006, meeting of the G-6 countries in Geneva and the negotiations were suspended thereafter.

In July 2007, WTO Agriculture committee chairman Crawford Falconer submitted a draft modality paper to address the divergent negotiating positions of the parties. As a result of committee-based negotiations in Geneva, revisions to this draft were made in February, May and July 2008, the latter of which became the basis for negotiations at the WTO summit in July 21-29, 2008.

The special safeguard mechanism (SSM) has been revised in the December 2008 draft. Disagreements over the particulars of the SSM, a proposal to allow developing countries to raise duties beyond bound levels in instances of import surges or price depressions, contributed to the failure of the July 2008 summit.

Services

Along with agriculture, services were a part of the "built-in agenda" of the Uruguay Round. The General Agreement on Trade In Services (GATS), which was concluded in that Round, directs Members to "enter into successive rounds of negotiations, beginning not later than five years from the date of entry into force of the WTO Agreement [January 1, 1995] ... [to achieve] a progressively higher level of liberalization."

One area of controversy is so-called “Mode IV” services. Mode IV relates to the temporary movement of business persons to another country in order to perform a service on-site. Developing countries want easier movement of their nationals under Mode IV. They claim that the services negotiations have centered on the establishment of businesses in other countries, which has been a focus of developed countries, while there has been no negotiation on Mode IV, which would help them.

Non-Agricultural Market Access (NAMA)

In the Doha Declaration, trade ministers agreed to negotiations to reduce or eliminate tariffs on industrial or primary products, with a focus on “tariff peaks, high tariffs, and tariff escalation.” Tariff peaks are considered to be tariff rates of above 15% and often protect sensitive products from competition.

The NAMA talks have been increasingly linked to the agricultural talks, with some movement on one becoming increasingly linked to progress in the other. Developing countries have been unwilling to commit on NAMA without agreement on agriculture, but now some developed countries are tying further agriculture progress to NAMA. This linkage has come be known as the “exchange rate” between the two negotiations.

Development Issues

Three development issues are most noteworthy. One pertains to compulsory licensing of medicines and patent protection. A second deals with a review of provisions giving special and differential treatment to developing countries. A third addresses problems that developing countries were having in implementing current trade obligations.

Access to Patented Medicines

A major topic at the Doha Ministerial regarded the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The issue involves the balance of interests between the pharmaceutical companies in developed countries that held patents on medicines and the public health needs in developing countries. Before the Doha meeting, the United States claimed that the current language in TRIPS was flexible enough to address health emergencies, but other countries insisted on new language.

Section 6 of the Doha document *Declaration on the TRIPS Agreement and Public Health (TRIPS* Declaration), recognized that "WTO Members with insufficient or no manufacturing capabilities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement."

Special and Differential (S&D) Treatment

In the Doha Ministerial Declaration, the trade ministers reaffirmed special and differential (S&D) treatment for developing countries and agreed that all S&D treatment provisions "be reviewed with a view to strengthening them and making them more precise, effective and operational." In the Declaration, the trade ministers endorsed the work program on S&D treatment presented in another Doha document, *Decision on Implementation-Related Issues and Concerns* (Implementation Decision).

That document called on the WTO Committee on Trade and Development to identify the S&D treatment provisions that are already mandatory and those that are non-binding, and to consider the implications of "converting [S&D] treatment measures into mandatory provisions to identify those that Members consider should be made mandatory, and to report to the General Council with clear recommendations for a decision by July 2002."

Implementation Issues

Developing countries claim that they have had problems with the implementation of the agreements reached in the earlier Uruguay Round because of limited capacity or lack of technical assistance. They also claim that they have not realized certain benefits that they expected from the Round, such as increased access for their textiles and apparel in developed-country markets. They seek a clarification of language relating to their interests in existing agreements.

Trade Facilitation

The first WTO Ministerial Conference, which was held in Singapore in 1996, established permanent working groups on four issues: transparency in government procurement, trade facilitation, trade and investment, and trade and competition. These became known as the Singapore issues.

Trade facilitation aims to improve the efficiency of international trade by harmonizing and streamlining customs procedures such as duplicative documentation requirements, customs processing delays, and nontransparent or unequally enforced importation rules and requirements. The talks have thus far revolved around the scope and obligations of the new disciplines.

WTO Rules

Rules Negotiations

The Doha Round negotiations included an objective of "clarifying and improving disciplines" under the WTO Agreements on Antidumping (AD) and on Subsidies and Countervailing Measures (ASCM). The United States sought to keep negotiations on trade remedies outside of the Doha Round, but found many WTO partners insistent on including them for discussion.

The Doha Ministerial Declaration also called for clarifying and improving disciplines on fisheries subsidies, and both the Ministerial Declaration and the Implementation Decision have special provisions on trade remedies and developing countries.

Dispute Settlement

At the end of the Uruguay Round, trade ministers called for a full review of WTO dispute settlement rules and procedures within four years after entry into force of the agreement establishing the WTO. That deadline, January 1, 1999, passed without a review being completed.

At Doha, trade ministers continued to call for a review of dispute rules. The Ministerial Declaration directed that negotiations be held on improvements and clarifications of the Dispute Settlement Understanding (DSU). They stated that the negotiations should be based on work done so far and on any additional proposals. Members are examining nearly all of the 27 Articles in the DSU. In early April 2003, the chair of the working group circulated a framework document that included over 50 proposals.

Environment

The Ministerial Declaration included several provisions on trade and environment. Among the provisions, the trade ministers agreed to the following: (1) negotiations on the relationship between existing WTO rules

and trade obligations in multilateral environmental agreements (MEAs); (2) procedures for the exchange of information between MEA Secretariats and WTO committees, and the criteria for granting observer status; and (3) the reduction or elimination of trade barriers to environmental goods and services.

The second phase would be the creation of a plurilateral Environmental Goods and Services Agreement (EGSA) that would liberalize 153 additional environmental-related goods and services among developed and advanced developing countries. However, this proposal has been criticized by several developing countries.

The International Treaty on Plant Genetic Resources for Food and Agriculture

The International Treaty on Plant Genetic Resources for Food and Agriculture, referred to as the Plant Treaty, was approved on 3 November 2001 by Members of the Food and Agriculture Organization (FAO), headquartered in Rome, Italy. The FAO is an agency of the United Nations, headquartered in New York City, New York. The Plant Treaty established international standards for the conservation and exchange of plant genetic material between participating countries. Plant genetic material is a term for plant germplasm, the physical material used by plants to reproduce themselves, and the term connotes seeds, vegetative propagations, and DNA. Plant genetic resources are the collective genetic diversity of plant species in the laboratory, farm, and field. They are described as resources because of their value for food and agricultural purposes.

The Treaty aims at:

1. recognizing the enormous contribution of farmers to the diversity of crops that feed the world;
2. establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials;
3. ensuring that recipients share benefits they derive from the use of these genetic materials with the countries where they have been originated.

Main Provisions:

Multilateral system

The Treaty's truly innovative solution to access and benefit sharing, the Multilateral System, puts 64 of our most important crops – crops that together account for 80 percent of the food we derive from plants – into an easily accessible global pool of genetic resources that is freely available to potential users in the Treaty's ratifying nations for some uses.

Access and benefit sharing

The Treaty facilitates access to the genetic materials of the 64 crops in the Multilateral System for research, breeding and training for food and agriculture. Those who access the materials must be from the Treaty's ratifying nations and they must agree to use the materials totally for research, breeding and training for food and agriculture. The Treaty prevents the recipients of genetic resources from claiming intellectual property rights over those resources in the form in which they received them, and ensures that access to genetic resources already protected by international property rights is consistent with international and national laws.

Those who access genetic materials through the Multilateral System agree to share any benefits from their use through four benefit-sharing mechanisms established by the Treaty.

Farmers' rights

The Treaty recognizes the enormous contribution farmers have made to the ongoing development of the world's wealth of plant genetic resources. It calls for protecting the traditional knowledge of these farmers, increasing their participation in national decision-making processes and ensuring that they share in the benefits from the use of these resources

Sustainable use

Most of the world's food comes from four main crops – rice, wheat, maize and potatoes. However, local crops, not among the main four, are a major food source for hundreds of millions of people and have potential to provide nutrition to countless others. The Treaty helps maximize the use and breeding of all crops and promotes development and maintenance of diverse farming systems.

History: Evolution of the Treaty

The conservation and sustainable use of plant genetic resources for food and agriculture are key to ensuring that the world will produce enough food to feed its growing population in the future. In 1983, the Commission on Genetic Resources for Food and Agriculture was established, and the voluntary International Undertaking on Plant Genetic Resources was adopted.

Another major step was taken in 1996 with the adoption of the Global Plan of Action at the Leipzig International Technical Conference on Plant Genetic Resources. All this work culminated in 2001 with the historic adoption of the legally binding International Treaty on Plant Genetic Resources for Food and Agriculture. The Treaty entered into force on 29 June 2004.

The Plant Treaty established standards for fair and equitable access to plant genetic materials and benefits sharing between contracting parties. For access to plant genetic materials, the Plant Treaty established that seed banks and other international seed collections must provide facilitated access to the banks when a contracting party requests access. However, this provision does not apply to private organizations such as seed companies and pharmaceutical companies. The Plant Treaty covers the open exchange of materials that are exclusively for food use. According to the treaty, parties that commercialize and profit from products of plant genetic materials should share their profits by giving a percentage of the profits to a common fund that provides financial and technical support for farmers and local communities, especially in developing nations.

The FAO's International Undertaking on Plant Genetic Resources (1983) preceded the Plant Treaty. A voluntary agreement between FAO member states, the International Undertaking established a Commission on Plant Genetic Resources to oversee international collection and storage of plant genetic material. It aimed to protect the legal rights of plant breeders and didn't address farmers' rights. Scholars note that the International Undertaking did not have much impact on national policies because of its lack of legal force, and that it was ultimately ineffective. The International Undertaking aimed to improve international access to plant genetic

materials, but it didn’t foster a consensus about ensuring both plant breeders and farmers' rights. Later revisions to the International Undertaking in 1989 and 1991 attempted to address these concerns; however, the 1992 Convention for Biological Diversity overshadowed the International Undertaking. The International Undertaking still provided a framework for international oversight of plant genetic resources, on which the FAO began its negotiations for a new treaty. The International Undertaking formally existed until the Plant Treaty in 2001.

The Convention on Biological Diversity (CBD), signed by 193 countries in 1992 and enacted in 1993, was the first legally binding international treaty to address the international exchange of plant and animal genetic resources. The CBD established a framework for the conservation and sustainable use of biodiversity. It also created a system of access and benefit sharing for the global trade of plant and animal genetic resources. While the Plant Treaty is independent of the CBD, the Plant Treaty reflects the CBD's principles of conservation, sustainable use of biodiversity, access to resources, and benefit sharing.

The CBD didn't address several issues of plant genetic resources for food and agriculture. First, the CBD gave special rights to the country of origin of the genetic material. In the case of agricultural crops, there is often no single country of origin as a result of thousands of years of breeding between plants. The CBD complicated the legal status of global seedbanks by asserting that the laws of individual nations governed the ownership of plant genetic resources. After years of debate, the world’s largest and most diverse collection of plant genetic resources, held by the eleven Consultative Group for International Agriculture Research (CGIAR) Centers, was brought under FAO policy, which prohibited nations from claiming ownership of plant genetic resources, and which established CGIAR Centers as trustees of the collections. Additionally, the CBD did not address development and management of improved plant genetic material, or germplasm that is augmented through plant breeding, biotechnology, and other scientific techniques. Some consider improved plant genetic material as man-made biodiversity, as opposed to raw plant genetic material. After the CBD was

passed, in 1993 the FAO set out to harmonize the International Undertaking with the gaps left by the CBD. An intermediate step was the creation of the Global Plan of Action for Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture in 1996, which was voluntarily adopted by 150 countries, and later contributed to language of the Plant Treaty.

Based on the precedents set by the FAO's International Undertaking and the Convention on Biological Diversity, the Plant Treaty established standards for the international exchange of plant genetic materials for food and agricultural uses. Unlike the CBD, which mandates exchange agreements between individual countries, the Plant Treaty is multilateral, meaning that agreements are multinational, where one decision applies to all participating countries equally. This multilateral agreement reconciles the global nature of plant genetic resources that the CBD lacked. For example, under the CBD, if the US wanted to develop a new drug based on a plant from Brazil, the US would first negotiate an agreement with Brazil for sharing benefits based on the sales of the final product. Under the Plant Treaty, if the US wanted to obtain plant genetic material from a seed bank in Brazil for an agricultural purpose, it would enter into an international agreement for use of that material, rather than a contract with Brazil. The multilateral agreement also addresses the difference between raw and improved plant genetic material, including domesticated crops that were difficult to cover under the CBD.

Negotiations on the Plant Treaty took place over seven years, beginning in 1993 as mandated at an FAO conference. While the main negotiators at the conference were the 192 member states of the FAO, the private sector, such as seed companies, also participated. Activist groups and non-governmental organizations were also involved, and some commentators note that the FAO was partial to the activist perspective. These negotiations included not just formal disagreements over the Plant Treaty, but long-standing conflicts over the intellectual property rights of plant genetic resources that began in the late 1970s. The Plant Treaty overcomes at least twenty-two years of disagreement between different organizations, countries, activists, and interest groups. As an agency within

the United Nations, FAO had long pushed for the creation of an international network centralized within the FAO.

Chaired by scientist and FAO councilmember Monkombu Sambasivan Swaminathan, many of the negotiations over the Plant Treaty occurred between 1997 and 2001. An informal meeting of experts in Montreux, Switzerland, in 1999 between the chairman and his supporters influenced the final negotiations. Forty delegations participated in the FAO negotiations, while the US was conspicuously absent. Observers note that developed countries, such as those within the European Union, dominated the negotiations, and that most of the conflicts were between developed and developing nations, especially over intellectual property rights. Representatives from developing nations, such as India, argued that the Treaty negotiations could result in exploitation of plant genetic resources by developed nations. Consequently, in an attempt to accommodate all parties, some of the Plant Treaty's language is ambiguous about intellectual property rights.

Once ratified by forty member countries, the required number for enacting treaties, the Plant Treaty went into effect on 29 June 2004. As of 2012, 126 countries have signed and ratified the treaty, meaning that they are Contracting Parties of the Plant Treaty. To enforce the Treaty, The Governing Body was created in 2004. The Secretary and Governing Body of the Plant Treaty are located within the FAO, headquartered in Rome, Italy. The FAO's Governing Body of the Plant Treaty has met about every two years. These meetings have addressed implementation of and compliance with the Plant Treaty, relationships with other international organizations, and the status of funds acquired through benefit sharing.

Some scholars have criticized what they claim is a somewhat limited list of crops actually covered by the Plant Treaty. Known as Annex I crops, thirty-five varieties of crops and crop families are included in the Plant Treaty. This list does not cover some agriculturally important crops, for example, soybeans, as China engaged in political conflicts with the US at the time of treaty negotiation and refused to include soybeans on the list. Many other countries withheld specific crops from the Annex as a bargaining tool,

because the Plant Treaty negotiations required consensus among the member nations for every plant. Later negotiations have specified protocols for the exchange of non-Annex I crops from international seed banks.

The Plant Treaty created and enforced the Standard Material Transfer Agreement (SMTA), a mandatory, legally binding agreement between parties exchanging plant genetic materials, for example, when a plant breeder wants to access a specific seed variety that is stored at a seed bank. The initial treaty did not specify the SMTA, but left this specification to later meetings of the Plant Treaty's Governing Body. The first meeting of the Governing Body in Madrid, Spain, in 12 through 16 June 2006 established this SMTA. This legal agreement uses a mandatory template to outline standards of equal access for both the providers and recipients of plant genetic material. The SMTA does not address other aspects of intellectual property rights, such as whether exchanged plant genetic materials can be patented. Intellectual property rights vary from country to country, although the World Trade Organization's Trade-Related Aspects of Intellectual Property Rights in 1994 established a system of international property rights for plant varieties. Despite some resistance from private seed companies that disagree with the SMTA, thousands of plant genetic material transactions have occurred using the SMTA, and only a small handful of private parties have refused to abide by the SMTA.

The 2006 meeting of the Plant Treaty’s Governing Body also formed an official relationship with the Global Crop Diversity Trust. The Global Crop Diversity Trust, headquartered in Bonn, Germany, contributes to the funding strategy of the Plant Treaty. Cary Fowler, who helped negotiate the Plant Treaty for the Consultative Group for International Agricultural Research (CGIAR), is the Special Advisor and former Executive Director of the Global Crop Diversity Trust. The Global Crop Diversity Trust helps administrate the Svalbarg Global Seed Vault, located in Norway. The Svalbard Global Seed Vault, opened in 2008, is a long-term storage facility for plant germplasm, and has gained international recognition.

By 2013, some have described some of the impacts of the Plant Treaty on the international exchange of plant genetic resources. First, by

establishing an international standard, the Plant Treaty clarified much of the legal uncertainty that may have caused a decreased exchange of plant genetic materials in the 1990s. Between 1992 and 2002, the exchange of materials had declined as some countries withheld their genetic resources from international exchange. Since the Treaty's ratification in 1993, the number of global exchanges of plant genetic material has increased.

Furthermore, the Plant Treaty established the SMTA that facilitates the transfer of plant genetic resources from the CGIAR's seed banks, especially for crop research and development. Some scholars have said that the Plant Treaty's multilateral system is more effective for supporting access and exchange of genetic materials than the Convention on Biological Diversity. Others claim that benefits are still limited, as private corporations may take advantage of these resources. At the national level, there are still barriers to implementing the Plant Treaty. Some countries lack infrastructure or political impetus to set national policies around plant genetic resources.

INTELLECTUAL PROPERTY RIGHTS – II

MODEL PROBLEMS WITH ANSWERS

PROBLEM NO. 1

A tennis racquet manufacturing company-design a racquet but before it is registered, a tennis magazine **publishes an advertisement of similarly designed racquet although under a different brand name. Who can claim copyright?**

Answer

The Copyright can be claimed for the tennis racquet, only by the person who has published an advertisement of similarly designed racquet in a tennis magazine.

This is as per Sec. 4 (b) of the Designs Act, 2000 which prohibits registration of certain designs.-

Sec. 4 (b) reads - A design which has been disclosed to the public anywhere in India or in any other country by publication in tangible form or by use or in any other way prior to the filing date, or where applicable, the priority date of the application for registration; or

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PROBLEM NO. 2

'A' the author and producer of a play "Hum Hindustani", narrated the idea of filming the play to 'B'. 'B' **made a picture 'New Delhi' based on the said play.**

i. ***Is the film "New Delhi" is an infringement of the play "Hum Hindustani"?***
ii. ***Whether 'A' can bring an action for infringement. Decide.***

Answer

The film "New Delhi" is an infringement of the play "Hum Hindustani". So, 'A' can bring an action for infringement against 'B'.

Black's Law Dictionary defines copyright as follows: 'Copyright' is the property right in an original work of authorship (such as a literary, musical, artistic, photographic or film work) fixed in any tangible medium of expression, giving the holder the exclusive right to reproduce, adapt, distribute, perform and display such works.

The term 'Author' is defined under Section 2(d)(i) of the Act. 'Author' means in relation to – Literary or dramatic work – author of the work

Thus the 'Author' is the person who actually writes, compiles, composes or draws the work although the idea of the work may have been suggested by another. There is no copyright in ideas. The originator of an idea is not the owner of the copyright. The copyright belongs to the person who gives concrete form to the idea. Copyright subsists not in ideas but in the tangible form in which it is expressed.

In the above problem, 'A' the author and producer of a play "Hum Hindustani", only narrated the idea of filming the play to 'B'. Narration of idea is not in tangible form and hence he cannot be termed as 'author' and so he cannot claim copyright.

However, behind the story by 'A', there is a play "Hum Hindustani" which is tangible form and as performer of the play, he gets copyright. Such copyright of 'A' cannot be infringed by 'B' and so 'A' can bring an action for infringement against 'B'.

PROBLEM NO. 3

***A public library gets a copy of a book authored by a foreign author published abroad. Due to high price of* the book, the library gets 6 copies of the books made. Is the library guilty of infringement?**

Answer

The public library getting a copy of a book authored by a foreign

author published abroad and due to its high price, the library getting 6 copies of the books made is an act of infringement copyright and hence the library is guilty of infringement.

This is as per Sec. 52 (1) (o) of the Copyright Act, 1957,

Sec. 52 (1) (o) reads – 'The making of not more than three copies of a book (including a pamphlet, sheet of music, map, chart or plant) by or under the direction of the person in charge of a public library for the use of the library, if such book is not available for sale in India.

The public library is legally authorized to make three copies of any book not available for sale in India, but in the above problem, the book is available for sale in India and it such case, the public library is not legally authorized to make even a single copy, though it is of high price.

Problem No. 4

***A paper setter picks up an extract from "Suitable Boy" a popular Novel authored by Vikram Seth and asks* questions based on the extract in the English literature question paper set by him. Whether Vikram Seth can bring an action against the paper setter for infringement? Decide.**

Answer

Vikram Seth cannot bring an action against the paper setter for infringement, because the act of A, the paper setter, picking up an extract from "Suitable Boy" a popular Novel authored by Vikram Seth and asking questions based on the extract in the English literature question paper set by him, does not constitute an infringement of copyright as per Sec. 52 (1) (f) of the Copyright Act, 1957.

Sec. 52 (1) (f) reads -

The following act shall not constitute an infringement of copyright namely – The reproduction

of a literary, dramatic, musical or artistic work-

(i) by a teacher or a pupil in the course of instruction, or

(ii) as part of the questions to be answered in an examination, or

(iii) in answers to such questions.

In the above problem, as the picking up an extract and asking questions from the novel authored by Vikram Seth is only part of the questions to be answered in an examination, it is not infringement of copy right and hence not actionable by Vikram Seth.

PROBLEM NO. 5

In a textile designing fir-one person created certain design, while another filled that design with **colour. Can the two claim copyright over the design individually?**

Answer

The two persons – one person who created certain design and another who filled that design with colour can claim joint copyright over the design and not individually.

Both the persons can claim copyright over the design, as it is not a prohibited design under Sec. 4 of the Designs Act, 2000.-

Both the creation of a design and colouring the design are covered under the definition 'design' [Sec. 20(d)] of the Act.

Sec. 2 (d) reads - "design" means only the features of **shape**, configuration, pattern, ornament or composition of lines or **colours** applied to any article whether in two dimensional or three dimensional or in both forms, by any industrial process or means, whether manual mechanical or chemical, separate or combined, which in the finished article appeal to and are judged solely by the eye.

Sec. 8 (1) and (5) of the Designs Act, 2000 speaks about the power of Controller to make orders regarding joint claimants of design right.-

If the Controller is satisfied on a claim made in the prescribed manner at any time before a design has been registered that the claimant would, if the design were then registered, be entitled to an undivided share

of the design or of interest, then the Controller may direct that the application shall proceed in the names of the claimants and the applicant or the other joint applicants, accordingly, as the case may require.

If any dispute arises between joint applicants for registration of a design the Controller may, after giving to all parties concerned an opportunity to be heard, give required directions.

PROBLEM NO. 6

***The pieces of sculpture outside the National Museum are photographed by an amateur photographer and* the same are sent for photograph contest. Can the National Museum bring an action for infringement? Give reasons.**

Answer

The National Museum cannot bring an action for infringement of Copyright for the amateur photographer taking photographs of pieces of sculpture outside the National Museum and sending the same for photograph contest.

This is as per Sec. 52 (1) (m) of the Copyright Act, 1957, which reads – The following act shall not constitute an infringement of copyright namely-

- 'The making or publishing of a painting, drawing, engraving or photograph of a sculpture, or other artistic work if such work is permanently situate in a public place or any premises to which the public has access'.

In the above problem, the amateur photographer can very well take photograph of a sculpture outside the National Museum which is permanently situate in a public place and since it is National Museum to which the public has access and it is not infringement of copyright.

PROBLEM NO. 7

***A photographer claims copy right in his photograph of a girl carrying a pitcher pleading that his skill and* labour is involved in choosing the exact moment and the setting up of the photograph. Will his claim for a copy right succeed?**

Answer

Yes. The photographer's claim for a copy right shall succeed, as per Sec. 13 (1) (a) of the Copyright Act, 1957.

Sec. 13 (1) (a) reads - copyright shall subsist throughout India in the following classes of works, that is to say,—

(a) original literary, dramatic,

musical and artistic works. Sec. 2 (c)

(i) of the Act defines - "artistic work".

Artistic work means —

(i) a painting, a sculpture, a drawing (including a diagram, map, chart or plan), an engraving or a photograph, whether or not any such work possesses artistic quality;

In the above problem, since the photographer claims copy right in his photograph of a girl involving his skill and labour in choosing the exact moment and the setting up of the photograph, it is an artistic work covered under Sec. 13 (1) (a) of the Copyright Act, 1957 and hence he can claim copyright.

PROBLEM NO. 8

***A multi-national company designs a shoe in some country in Europe. But the shoe with the similar design is* already sold in India. Does the manufacturer have to apply for registration in India too. Will he get it?**

Answer

Yes. The manufacturer has to apply for registration in India, because

the shoe with the similar design is already sold in India.

This is as per Sec. 4 (b) and (c) of the Designs Act, 2000. Sec. 4 (b) prohibits registration of a design which has been disclosed to the public anywhere in India or in any other country by publication in tangible form or by use or in any other way prior to the filing date, or where applicable, the priority date of the application for registration; or

Sec. 4 (c) prohibits registration of a design which not significantly distinguishable from is known designs or combination of known designs.

PROBLEM NO. 9

A biology teacher in a college collects the articles written by researchers on cloning and circulates the same **amongst his students. Is he guilty of infringement?**

Answer

The biology teacher in a college collecting the articles written by researchers on cloning and circulating the same amongst his students is not guilty of infringement as per Sec. 52 of the Copyright Act, 1957.

As per Sec. 52, the following acts do not constitute infringement of copyright:

Sec. 52 (a) (i) reads - A fair dealing with a **literary**, dramatic, musical or artistic work not being a computer programme for the purpose of private use including research.

In the above problem, since the biology teacher circulates articles written by researchers on cloning only for private research use of his students, it is not an act of infringement of copyright.

PROBLEM NO. 10

***A book is published in America by a publisher there. An Indian visitor to that country gets a copy of the* book, makes further copies and floods the Indian market with such copies of the said book. Is this amounts infringement of copyright? Decide.**

Answer

Yes. The Indian visitor to America getting a copy of a book published in America by a publisher there and making further copies and flooding the Indian market with such copies of the said book, has committed an act of infringement of copyright as u/s. 51 (b) (iv) of the Copyrights Act, 1957.

Sec. 51 (b) (iv) reads –

Copyright in a work shall be deemed to be infringed –

When any person Imports into India, any infringing copies of the work.

Explanation – The reproduction of a **literary**, dramatic, musical or artistic work in the form of a cinematograph film shall be deemed to be an "infringing copy".

PROBLEM NO. 11

***An architect creates a certain design for multi-storied building. Can the contractor who constructs the* building claim copyright in designs?**

Answer:

No. The contractor who constructs the building cannot claim copyright in designs. Sec 2(5) of the Designs Act, 2000 defines Design.

'Design' means only the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article whether in two dimensional or three dimensional or in both forms, by any industrial process or means, whether manual mechanical or chemical, separate or combined, which in the finished article appeal to and are judged solely by the eye; but **does not include any mode or principle of**

construction or anything which is in substance a mere mechanical device, and does not include any trade mark or property mark or any artistic work.

In the given problem, since 'construction' is not covered within the meaning of design, he cannot claim copyright.

PROBLEM NO. 12

A and B produced a similar design and communicated the fact of such design to the other. Who can claim **authorship of the design?**

Answer:

Both can claim authorship of the design.

Sec. 8(1) of the Designs Act, 2000, If the Controller is satisfied on a claim made before a design has been registered by virtue of any assignment or agreement in writing made by the applicant or one of the applicants for registration of the design or by operation of law, the claimant would, if the design were then registered, be entitled thereto or to the interest of the applicant therein, or to an undivided share of the design or of that interest, the Controller may direct that the application shall proceed in the name of the claimant or in the names of the claimants and the applicant or the other joint applicant or applicants, accordingly.

In the above problem, A and B produced a similar design and communicated the fact of such design to the other. Hence as per Sec. 8(1) of the Designs Act, 2000, both can claim joint authorship of the design.

As per Sec. 8(5) of the Act, if any dispute arises between joint applicants for registration of a design, the Controller may, upon application made to him and after giving to all parties concerned an opportunity to be heard, give suitable directions for enabling the application to proceed in the name of one or more of the parties alone or for regulating the manner in which it should be proceeded with, or for both those purposes.

PROBLEM NO. 13

'A' journalist highlighted flesh trade flourishing in some parts of the country in his article and published it **in the newspaper. A producer made a stage play and movie based on the articles published by the journalist. Can the journalist bring action against the producer for infringement?**

Answer:

No. The journalist cannot bring any action against the producer for infringement. Newspaper is accessible to everyone. There is no copy right for articles published in newspapers. This is as per Sec. 52(1)(m) of the Copyright Act.

Sec. 2(ff) defines "communication to the public". It means making any work available for being seen or heard or otherwise enjoyed by the public directly or by any means of display or diffusion other than by issuing copies of such work regardless of whether any member of the public actually sees, hears or otherwise enjoys the work so made available.

Sec. 13 (3) explains the meaning of publication. "Publication" means making a work available to the public by issue of copies or by communicating the work to the public.

Sec. 52 (1) reads - The following act shall not constitute an infringement of copyright namely-

Sec. 52 (1) (m) the reproduction in a newspaper, magazine or other periodical of an article on current economic, political, social or religious topics, unless the author of such article has expressly reserved to himself the right of such reproduction.

The publication in a newspaper, magazine or other periodical of a report of a lecture delivered in public

In the above problem, 'A', the journalist highlighted flesh trade flourishing in some parts of the country in his article and published it in the newspaper.

Thus it is a publication u/s Sec. 13 (3). Asper Sec. 52(1)(m), since the

journalist has not expressly reserved to himself the right of such reproduction, there is no copyright in the article published in the new paper.

Further as per Sec. 52(1)(n), the publication in a newspaper, magazine or other periodical of a report of a lecture delivered in public, if copied in any manner, is not infringement of copyright. So, any person can copy the contents of the article.

In the given problem, the producer has made a 'stage play and movie' based on the articles published by the said journalist, which is not an infringement of copyright. So the journalist cannot bring action against the producer for infringement.

PROBLEM NO. 14

Three people take photograph of the 'Taj Mahal' from three different comeras. Is each of them entitled to a **separate copyright for his photograph? Give reasons.**

Answer:

Section 52 speaks about the acts which do not constitute infringements of copy right.

As per Sec. 52(1)(s) of the Indian copy right Act,1957, the making or publishing of a painting, drawing, engraving or photograph of an architectural work of art is not an act of infringement.

Sec. 52(1)(t) of the Act further reads - The making or publishing of a painting, drawing, engraving or photograph of a sculpture, or other artistic work falling under sub clause (iii) of clause (c) of Section 2, if such work is permanently situate in a public place or any premises to which the public has access.

Sec 2(c)(iii) reads- Artistic work means any other work of artistic craftsmanship;

In the given problem, three people take the photograph of the Taj Mahal from three different cameras. None of them is entitled to any

separate copyright for his photograph, because Taj Mahal being an architectural work of art for which no copy right is available and copying such photograph is not infringement as under Sec 52(1)(s) and Sec. 52(1)(t) of the Act.

PROBLEM NO. 15

A foreign citizen undertakes bio-diversity related activities in Western Ghats without the approval of **National Bio-Diversity Authority. Decide. Give reasons.**

Answer:

As per Sec. 3 of the Biological Diversity Act, 2002, speaks about persons who cannot undertake Biodiversity related activities without the approval of National Biodiversity Authority.

1. No person referred to in sub-section 3(2) shall, without previous approval of the National Biodiversity Authority, obtain any biological resource occurring in India or knowledge associated thereto for research or for commercial utilisation or for bio-survey and bio-utilisation.

2. The persons who shall be required to take the approval of the National Biodiversity Authority under sub- section (1) are the following, namely:-

a. a person who is not a citizen of India;

b. a citizen of India, who is a non-resident as defined in clause (30) of section 2 of the Income-tax Act, 1961 (43 of 1961);

c. a body corporate, association or organization-

i. not incorporated or registered in India; or

ii. incorporated or registered in India under any law for the time being in force which has any non-Indian participation in its share capital or management.

In the given problem, a foreign citizen undertakes bio-diversity related activities in Western Ghats without the approval of National Bio-Diversity Authority.

This is violative of Sec 3(2)(a) of the Act and hence he should not

undertake bio-diversity related activities in Western Ghats without the approval of the National Bio-Diversity Authority.