Proceedings of the Training Programme on

IPRs and Related WTO Issues

11-15 January, 2010, Jaipur, India

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1. Executive Summary

1. CUTS CITEE[1] organised a training programme on "Intellectual Property Rights (IPR) and Related WTO Issues" from 11-15 January, 2010 in Jaipur in order to build the capacity of scientists and technologists working with various ministries/departments/councils/ institutes/ research labs of Government of India. The Department of Science and Technology, Government of India supported this training programme to fill the vacuum that exists in terms of absence of adequate institutional base in India to offer training/education on issues related with intellectual property rights and trade under the aegis of Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement and the related domestic legislation.

2. In the age of globalisation and increasing harmonisation of rules and practices for multilateral trade, investment and intellectual property rights, participants in economic activities need to stay abreast of developments in many areas including the rules of World Trade Organisations (WTO). This applies equally to scientists and technologists working in various capacities in the Government of India. Therefore, this training programme has the aim of facilitating an overview of the basic principles of multilateral trading system enshrined in the WTO and an understanding of the trade rules that apply to IPRs under its TRIPS Agreement. Such training programme will hopefully prepare the scientists and technologists to better exploit the opportunities that arise from the use of IPRs.

3. The said training programme was well attended by scientists and technologists from various ministries/departments/councils/institutes/research labs of Government of India and the State Government of Rajasthan. Participants handle work related to patents, copyrights and related WTO issues in their official work. The training programme brought experts/resource persons together to explore and deliberate various aspects of IPR and related WTO issues. Over the period of five days the participants sharpened their skills on various aspects of IPR and related WTO issues through lectures, real life experiences of resource persons, simulation exercises, group discussions, etc.

"This training programme has been enriching in gaining knowledge on practical aspects of IPRs. "Wish to rewrite the patents, given a chance".

Dr. Amitha Rani, Scientist, National Aerospace Laboratories (NAL), Bangalore

"This training programme has offered us an opportunity to interact (share knowledge and experience) with a group of heterogeneous participants and resource persons from various organisations and institution".

R. K Gupta, Scientist 'G', Central Electronics Engineering Research Institute (CEERI), Pilani

The training programme is very useful, for scientists and technologist of the government departments, public sector enterprises, especially as it provided interaction among participants from varied background and also with the resource persons.

Dr S Ganeshan, Principal Scientist, Indian Institute of Horticultural Research, Bangalore

"The programme provided me understanding on IPRs, its importance and management aspect of IPRs. Participants from varied background helped in very good and informative discussions"

Madhu Sharma, Institute of Agri-Business Management, S. K. Rajasthan Agriculture University, Bikaner

[1] CUTS Centre for International Trade, Economics & Environment (CITEE) was established in 1996 with an aim to be a high-level global standard institution for research and advocacy on multilateral trade and sustainable development issues. Consumer Unity & Trust Society (CUTS), the parent body, was established 25 years back as a consumer rights organisation and has been engaged actively in research and advocacy on policy issues. For more details about CUTS International and CITEE please visit our websites www.cuts-international.org and www.cuts-citee.org

4. Based on the feedback received from the participants and resource persons, the programme was successful in terms of

- quality of participation;
- resource persons;
- resource materials; and
- administrative and logistical arrangements.

5. Participants acknowledged that the learning they derived from the training programme proved to be extremely valuable. All participants overwhelmingly found it very useful and looked forward to attend similar training programmes in the future.

Scope

The programme covered following crucial areas of IPR and related WTO issues:

- Overview of WTO
- Overview of TRIPS Agreement
- IPRs, Energy and Climate Change
- Patents in the TRIPS Agreement and the Indian law: An Overview
- Trademarks and Copyright laws in India
- Geographical Indications in India
- Patents Drafting and Patent Filing
- Relationship of IPRs with biotechnology, traditional knowledge and access and benefit sharing
- Intellectual Property Management
- IPRs, Agriculture and Agriculture Economics

Participants

Participants were mainly scientists and technologists working with various ministries/ departments/councils/institutes/research labs of Government of India such as Indian Institute of Horticultural Research, TIFAC, Department of Science and Technology (DST), International cooperation Section, AYUSH, Engineers India Limited etc. The list of participants is attached as *Annexure 1*.

Resource Persons

Resource persons were comprised of eminent experts, practitioners and academicians in the field of IPR and related WTO issues and patent writing, namely,

(i) Dr. Prabuddha Ganguli, CEO, VISION-IPR
(ii) Mr T C James , Director, National Intellectual Property Organisation
(iii) Dr Vinay Kumar, Former Advisor and Head, Technology Management Division DSIR and visiting faculty at IIT Delhi
(iv) Mr Sanjeev Kumar Tiwari, Advocate, K & S Partners
(v) Mr. Atul Kaushik, Adviser (Projects), CUTS International
(vi) Dr Siddhartha Mitra, Director (Research) & Head CUTS Centre for International Trade Economics and Environment (CITEE)
(vii) Ms. Archana Jatkar, Assistant Policy Analyst, CUTS International

Opening Session I

Atul Kaushik, Adviser (Projects), CUTS International

1. Atul Kaushik inaugurated the training programme with a warm welcome to all the participants and presented a brief background of the training programme and CUTS International. He mentioned that CUTS International ventured into the field of international trade during the peak of Uruguay Round in 1991 and since then has contributed distinctively as an NGO. He mentioned that CUTS has done intensive work in the field of international trade and works very closely with the Department of Commerce, Government of India, on various WTO, regional and bilateral issues. He stressed that the training programme will be beneficial to all the participants and will help them to acquire knowledge and understanding in IPRs and related WTO issues.

2. He underlined the importance of Intellectual Property Rights (IPRs) in the day to day life of scientists and technologist from various government establishments. He mentioned that the agenda for the present training programme is quite comprehensive and seeks to impart in-depth knowledge and understanding on various aspects of IPR and related WTO issues. He opined that some of the IPRs, if not all, are of critical importance for inclusive development and growth. This is particularly true with respect to patents, more so in their application to specific sectors such as pharmaceuticals and agriculture, because of possible impact on healthcare and livelihood of millions and billions of people of India. He informed that certain new areas, such as the relationship of IPRs with climate change has also been added to the agenda to capture the new topics in the curriculum of this training programme.

3. He hoped that the implementation of Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement proves beneficial to India. Although there are challenges facing us, yet it also offers great opportunity for promoting our growth and development. Hence capacity building and manpower development in this area, both for domestic and international engagement is essential.

4. During the inaugural session participants were requested to express their expectations from the training programme. These are summarised below:

- intellectual property rights and their implications on India;
- various kinds of IPRs; laws relating to patents, copyrights, trademark etc;
- the international and national legislation regarding intellectual property protection;
- various tools and techniques of patent drafting;
- drafting a patent application; pre- patent search etc.
- Effective intellectual property licensing
- Intellectual property management
- Technology innovation and how to leverage on IPRs

Session II

Overview of the WTO – Atul Kaushik

Atul Kaushik in this session presented an overview of the World Trade Organisation (WTO) in order to facilitate a basic understanding of the trading system. He mentioned that the WTO is the only international organisation dealing with the global rules of trade between nations. WTO ensures that trade flows as smoothly, predictably and freely as possible. He discussed the genesis of the WTO, which included the formation of General Agreement of Trade and

Tariffs in 1947 as an effort to eliminate discriminatory treatment in international commerce. He also mentioned the reasons for the failure of International Trade Organisation and briefly explained the functioning of the GATT system. **Kaushik** elucidated the history of the Agreement and its run up to the formation of the WTO. He also elaborated on the first four rounds of the GATT concentrated solely on tariff reduction and the major shortcomings of the GATT system. He further informed the participants regarding the institutional structure and purpose of the WTO and its current membership (153 members).

Kaushik then explained the basic principles of WTO, which include most favoured nation, national treatment, freer trade, promoting fair competition and predictability through binding. He mentioned that the WTO is not just about liberalising trade but it seeks to protect consumers, raise standards of living, ensure full employment, ensure large and steadily growing real incomes and demand, to expand the production of and trade in goods and services, to ensure prevention of spread of diseases and protect the environment. He then described the structure of the WTO and the nine rounds of negotiations undertaken in the WTO. He specifically described the Dispute Settlement Mechanism (DSM) in the WTO. He called DSM as the unique contribution of WTO to the stability of global economy and termed it as the central pillar of the multilateral trading system. He opined that the dispute mechanism of the WTO makes the trading system more secure and predictable and then explained the major aspects of the DSM, which are as follows:

- Consultations
- Panel process
- Appellate process
- Implementation and surveillance process

He emphasised that DSM provides an equal opportunity to all member countries, be it a big developed country like United States or a small country like Antigua, for the redressal of its complaint in the WTO.

Kaushik discussed the Special and Differential Treatment (S&DT) within the WTO. He said that S&DT deals with compensating for structural inequalities between developing and developed countries in terms of share of world trade, access to financing, access to technology and infrastructure weaknesses. He mentioned that there are many S&DT provisions for developing countries and LDCs in various WTO Agreements, ministerial decisions and declarations, decisions of general council and other bodies. While concluding the session he mentioned that there are number of ways of looking at the WTO, which includes: an organisation for liberalising trade, a forum to negotiate trade agreements and a place to settle trade disputes.

Session III

Overview of Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement - Archana Jatkar, Assistant Policy Analyst, CUTS CITEE

During this session **Archana Jatkar** discussed the basic principles of TRIPS, types of Intellectual Property Rights (mentioned in the TRIPS Agreement), overview of the TRIPS Agreement, institutional arrangements, public policy implications and provisions relating to developing countries. She briefly described history of intellectual property rights to the participants and then discussed the linkages between the intellectual property rights and trade and thereby the inclusion of TRIPS Agreement in the WTO. She further explained the objectives of the TRIPS Agreement, which are summarised as follows:

- to reduce distortions and impediments to international trade and take into account the need to promote adequate protection of IPRs;
- to ensure that measures and procedures to enforce IPRs do not themselves become barriers to legitimate trade;
- to reduce tensions by reaching strengthened commitment to resolve disputes on trade-related IP issues through multilateral procedures; and
- to establish a mutually supportive relationship between the WTO and World Intellectual Property Organisation (WIPO).

Jatkar described the basic principles of TRIPS Agreement viz. the most favoured nation (MFN), national treatment (NT), and importance of technical innovation and transfer of technology. She mentioned Paris, Berne, Rome and Washington Conventions of WIPO, which are included in the TRIPS Agreement. She elaborated on the relationship of provisions contained in these treaties and the TRIPS Agreement. She went on to explain all types of intellectual properties and the provision related thereto, in the TRIPS Agreement. Her discussion also covered the concept of exhaustion of intellectual property rights, and the main features of standards, enforcement and dispute settlement contained in the TRIPS Agreement.

Jatkar discussed the institutional arrangements provided under both the TRIPS Agreement and the dispute settlement body covered by the WTO. She informed the participants of the Doha Round of negotiations including the negotiations that are underway in the special sessions of council for TRIPS. This was followed by the public policy implications of the TRIPS Agreement which involved information on benefits and costs of higher IP standards for developing countries, protection of traditional knowledge and culture, biological diversity, health, food and investment and transfer of technology. She further discussed the transitional arrangements contained in the TRIPS Agreement for the developing and least developed countries (LDCs). It also included the obligation on developed countries to provide incentives for transfer of technology to LDCs and technical assistance, financial support to developing countries in preparing laws and regulations on protection and enforcements of IPRs. While concluding the session she remarked that the TRIPS Agreement is highly innovative agreement and remains the most comprehensive international agreement on intellectual property till date.

Session IV

IPRs, Energy and Climate Change -Dr. Siddhartha Mitra, Director (Research) and Head, CUTS Centre for International Trade, Economics and Environment

Siddhartha Mitra in his opening remarks in the session mentioned that the rising demand for technology transfer from developed to developing nations for climate change mitigation involves the applicability of Intellectual Property Rights (IPRs). The fourth technical session in this training programme was thus focused on evaluation of the potential impact of IPRs on energy and climate change related issues.

Before the presentation, a video clipping developed by CUTS International, to demystify climate change, was played for the scientists attending the training program. The presentation which followed disseminated information about the properties of the climate change phenomenon and its implications for technology dissemination and IPR regime. On one hand, it is important to protect IPRs and associated high price for innovative technologies to encourage research and innovation in technologies, while on the other hand, developing

countries are advocating the necessity to provide these new technologies at a lower price to help them mitigate effects of climate change.

The presentation also looked into specific sections of IPR regime relevant to the issue under discussion such as national and most favoured-nation treatment; eexceptions to rights conferred other use without authorisation of the right holder etc. A slot analysis of TRIPS vis-à-vis climate change adaptation and mitigation carried out and presented by **Mitra** highlighted the gaps in the agreement due to inbuilt ambiguity and differences in interpretation. Given these things, there is an opportunity to modify the agreement to strike a balance between the incentives to the researchers and dissemination for climate change mitigation in the world.

The session culminated with an in-depth discussion about the legal issues involved in technology transfer. Both Dr. Mitra and Mr. Atul Kaushik who was the chair for the session answered the queries with their respective expertise in the fields of economics and law.

Session V & VI

Patents in the TRIPs Agreement and the Indian law, Trademarks and copyright and Geographical indications in India -Prabuddha Ganguli, Chief Executive Officer, Vision IPR, January 12, 2010

In his introductory remarks, **Prabuddha Ganguli** thanked CUTS for inviting him as a speaker and appreciated the initiative of the Department of Science and Technology and CUTS. He mentioned that such initiatives can be immensely useful for the young scientists, especially in terms of understanding the basics of IPRs and its implications on promotion of research and innovations. His session on Patents in the TRIPS Agreement and the Indian law was preceded by an open and brief self introduction by the participants. The whole session was more interactive in nature, and was not an isolated presentation. In the interactive discussion, clarifications of queries raised by the participants were answered, as and when they arose. He explained that the subject of TRIPS (IPRs) is very vast and complex, and, therefore, should be grasped with open-mindedness. His session was oriented in a way to effectively disseminate the overview of IPRs in India and also its implications on research and innovation.

At the beginning of the session he stated that patents had a wide range of implications and there are varied views on the subject matter and mentioned that this subject cannot be learnt by being dogmatic. He described the concept of patents by raising the following key questions such as:

- what is the context of discussion;
- what is a concept of IPRs;
- why IPRs has been termed as Intellectual Property Rights and not as Intelligent Property Rights, etc.

The basic concept of IPRs can be understood by segregating the three concepts and then understanding each in a focused way, he said.

- The letter ‘I’ (meaning intellectual) in IPR denote anything (product/concept) created by the mind

- The letter 'P' (meaning property) in IPR denote a property arising out of the creations of the mind, which being an asset has an ownership, and most importantly a saleable value
- The letter 'R' (meaning right) in IPR is the right of the person, the creator of the product or concept to own that.

If we combine the above three connotations together we arrive at Intellectual Property Rights (IPRs). It can thus be defined as the right of a person to own, hold and sale his/her intellectual creations for a stipulated period at a price. The IPR, in the modern period is very important, as it facilitates inventions and innovations. This is an incentive which makes the creator to create further.

During the discussion he reiterated the purpose of TRIPS Agreement to set minimum standards or a benchmark. He mentioned that the idea of benchmark is to generate some minimum standards and hence introduced the purpose of TRIPS Agreement. He emphasised on the minimum standard laid down in the TRIPS Agreement and illustrated why member countries had to agree for these minimum standards. IPRs take many forms such patents, copy rights, trade marks, etc. The distinctions between these terms were explained by Ganguli in a simple way.

Ganguli further discussed the definition of patent by explaining and quoting examples and concepts of creation of human kind. He then emphasised on the importance of the words novelty, inventiveness and utility and discussed on the patentability criteria and exceptions by analysing Article 27 of the TRIPS Agreement. He analysed Article 27.3 of TRIPS Agreement and explained that exceptions contained therein are subject to review. He also discussed at length Article 31(f) i.e. compulsory licenses were to be granted predominantly for the domestic market, and its relevant conditions. He mentioned that the flexibility in the clause was unintentional however; the word 'predominantly' was interpreted by some of the developing countries to be detrimental.

Ganguli then discussed the development of Patent Law in India. He elaborated on the earlier legislations of Act VI (1856), Act XV (1859), Patterns and Designs Protection Act, 1872, Act of Patent (1911) and the Tekchand Commission Recommendation and Justice Iyengar Commission, which recommended the enactment of Indian Patent Act, 1970. He then discussed the Indian Patent Act, 1970. He also described the major amendments, which were made in the 1970's Act to incorporate the spirit of the TRIPS Agreement. He discussed the major amendments in Section 2, which provides definition of terms inventive step, new invention and pharmaceutical substance. He also mentioned the section wise amendments in Section 3 and 4 of the Indian Patent Act. This phase wise amendment was carried out and the legislation is now known as *'Indian Patent Act, 2005'* While discussing the implications of patents in general and the related legislation, **Ganguli** said that the intellectual property is closely linked with the societal issues and hence influences wide range of aspects of life.
In his deliberation he explained how Article 27 is inculcated in spirit in the Indian Patents (Amendment) Act, 2005 by comparing it with relevant provisions therein. He further interpreted section 3(d) of the Indian Patents (Amendment) Act, 2005 vis-à-vis Article 27.3 of the TRIPS Agreement, as an example.

He also mentioned the provisions relating to copyrights, trademarks, geographical indications, contained in the TRIPS Agreement. He analysed the provisions relating to each of these intellectual property in the TRIPS Agreement. While concluding the session **Ganguli**

compared the provisions in TRIPS vis-à-vis the Indian Copyrights Act, and other legislations like Trademark Act in India.

The session provided participants a clear idea about the essentials of patent required under the law and helped them in enhancing their understanding on the patents as such.
In his conclusion, Ganguli mentioned that to effectively exploit the benefits of globalisation, it is very important for scientists and the policy makers to understand the Indian Patents (Amendment) Act 2005 vis-à-vis TRIPS.

Session VII

Anatomy of Licensing Agreements - Prabuddha Ganguli, Chief Executive Officer, Vision IPR

The session was included in schedule of this training programme at the behest of participants in the inaugural session. This was done in order to meet the demand of majority of participants. **Prabuddha Ganguli** graciously accepted to do this session and deliberated on various aspects of licensing agreements. The presentation covered range of issues related to licensing agreement especially dealing with IPR such as from definition to the objective of licensing agreement, scope of the licensing, key issues of licensing, structure of licensing, commercial considerations of licensing, secrecy of confidential information, scope of rights of licensor, and the terms of license.

Licensing Agreement refers to a contract which provides someone the legal right to use a patent or trademark. This includes all the obligations of the receiver and the knowledge transferor during and after the term of the agreement. Clauses in the agreement are clearly spelt so that the receiver is aware of (i) what and how he can use and/or disclose delivered knowledge during and after the term of the agreement, (ii) what happens to the trade secrets and confidentiality clauses if the knowledge transferred becomes public domain knowledge in due course, (iii) what happens if the IP that is being licensed is invalidated during and after the term of the agreement. He discussed the scope and key issues in a licensing agreement
He elaborated on the three primary objectives of the licensing agreement, which are (i) putting the licensee in possession of the technology needed to manufacture the licensed products, (ii) deriving an economic return from this activity, and (iii) sharing of return with the licensor.

Overall the session was highly practical in approach and enhanced knowledge and provided good understanding on licensing agreements to the participants. All the participants found the session extremely relevant to their job and raised several questions which were satisfactorily answered by Ganguli.

Session VIII

Protection of Plant Varieties and Farmers' Rights Act 2001- Prabuddha Ganguli, Chief Executive Officer, Vision IPR

The session was again included in the schedule of this training programme at the request of the majority of participants. **Prabuddha Ganguli** in this session emphasised that the implications of Protection of Plant Varieties and Farmers' Rights Act 2001, governed by the Protection of Plant Varieties and Farmers' Rights Rules, 2003, need to be understood in the light of TRIPS Agreement and not in isolation. The Act is applicable to whole of India and provides ways and means to protect the interests of Indian farmers against TRIPS.

Major objectives of the Act include (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, and. (iv) to ensure availability of high quality seeds and planting materials of improved varieties to farmers.

Ganguli explained the essential ingredients for applicability of relevant provisions such as NDUS, which include (i) Novelty, (ii) Distinctness, (iii) Uniformity, and (iv) Stability. These are unambiguous denominations, while filing for plant protections. Ganguli explained Novelty as a variety that was not placed for sale (i) for a period of 12 months on the date of application, (ii) 4 years in the case of annual crop varieties and (iii) 6 years for trees and wines first registered outside India on the date of registration in India. Other terms along with farmers rights were also explained to the participants in a very lucid manner.

Ganguli also explained various aspects of the Act including how to apply for registration, steps to be followed while making application for protection, and also on varieties which might be denied registration. Ganguli also deliberated on (i) retention of registration - annual/ periodical royalty fee(s), (ii) assignee (iii) licensing and licensee(s) (iv) compulsory licensing, and (v) obligatory maintenance of varietal seed/ propagules during the term of registration. There are various other concerns that need to be shared and these include (i) when to file, (ii) intra-organisational cooperation, (iii) patent search/varietal name search, etc, and (iv) Maintenance of pedigree records and other data yet maintaining confidentiality of research at all stages – project formulation, management, review. At the end of the session, various questions were raised by the participants and answered by Ganguli. From the proceedings it was evident that the participants had really enjoyed the session.

Session IX

Patent Drafting and Patent Filing - Sanjeev K. Tiwari, Partner, K& S Partners

In this session, **Sanjeev K. Tiwari** explained the conceptual and practical aspects of drafting and filing patents which included drafting descriptions, claims and procedural requirements. He mentioned that both novelty of the idea and commercial exploitation are required and crystallising the inventive concept is the most crucial element of the process. He pointed out that patent applications broadly have two parts- the description of the invention and a set of claims to distinguish the invention from existing prior art. Specifically, patent applications include the following parts: (1) Title (2) Field of invention (3) Background of invention (4) Prior Art (5) Objects of invention (6) Detailed description of invention (7) Drawings and (8) Claims.

Tiwari outlined and explained the ten steps involved in patent drafting as (1) Spotting the invention (2) Generalising the invention (3) Drawing one or more figures showing the invention (4) Arranging the figures of the drawing in a sequence (5) Deciding on the terminology to describe the invention (6) Drafting the claims (7) Drafting the detailed description (reference numerals) (8) Inserting the reference numerals in the claims (9) Writing the introductory part of the description (10) Writing the abstract using the reference numerals. Details pertaining to each of these steps were discussed in detail with relevant examples.

He also gave several examples to highlight some common mistakes in the patent drafting process such as failing to draft the application for the actual evaluator, claiming invention from only one point of view, use of inappropriate words/ statements in the specification which can limit the scope of claim, use of inconsistent terminology in the specification and claiming less than the actual discovery content.

Lastly, he pointed out several inventions that are not patentable in India while discussing provisions of the Indian Patent Law and highlighted major distinguishing features of patent drafting practices in the Indian Patent Office, United States Patent and Trademark Office (USPTO), Japan Patent Office (JPO) and European Patent Office (EPO).

Session X

Simulation Exercise: Drafting a patent application - Sanjeev K. Tiwari, Partner, K& S Partners

Sanjeev K. Tiwari conducted a simulation exercise of drafting a patent application for an invention. Tiwari explained that participants were to formulate claims to justify the invention and emphasized three major criteria/components for crystallizing their invention: (i) novelty of invention (ii) non-obviousness of invention to the person skilled in the art (iii) capability of industry application.

Participants were divided into three groups and each group was assigned the task of drafting a patent application for one of the three inventions. The first invention was a multi-functional hot air blower, which could be doubled as a cloth iron and hair dryer. The second was a writing device with an attachable eraser base while the third invention was a rotatable toothbrush with special bristles with multi-purpose use.

Tiwari analysed and highlighted the shortcomings of the claims formulated by the participants pointing out the need for at least one self contained statement known as the 'independent claim' followed by several supplementary 'dependent claims'. He also pointed out some common mistakes such as use of inappropriate words in the specification, limiting the claim and also claiming less than the actual discovery. This exercise contributed towards exposing participants to the practicalities of drafting claims in a patent application.

Sessions XI and XII

Educational Tour to acclaimed GI – CUTS International

These two sessions consisted of an educational tour to a local industry, namely, Neerja International, Jaipur. It is a unit where blue potteries are manufactured. The famed blue pottery of Jaipur has got the Geographical Indications (GI) status. The participants were taken to the premises as well as were introduced to the concerned team of artisans and the entire supply chain relevant to the blue pottery. Only specific pottery produced by artisans in Jaipur and has the same unique age-old qualities and the reputation will be known as Blue Pottery and will have the GI status.

A demonstration of making of blue pottery along with description of the unique features of the clay, colour etc was described to the participants. The participants were also narrated the history, importance and uniqueness of the blue pottery and how the traditional art of blue

pottery secured its GI. The participants also took a tour of the entire premises, understanding the making of blue pottery. The tour enabled the participants to understand the nuances of GI as an IPR as well as facilitated the practical understanding of obtaining a GI. It is estimated that with the GI registration under its belt, the Blue pottery can hope to increase its visibility and sale in the international market as well. Thus, it was a useful exercise and the efforts of the organizers were well appreciated by the participants.

Sessions XIII and XIV

IPRs, Biotechnology, Traditional Knowledge and Access & Benefit Sharing and Group discussion on "Patent Protection and Agriculture Sector" - T.C. James, Director, National Intellectual Property Organisation

T.C. James' highly interactive sessions began with discussing concepts and facts, where he went over the definition of IPRs (according to the WIPO Convention) and mentioned IPRs are incentives for innovation. He explained the definition of biotechnology and its applications in healthcare (creating more than 200 new therapies and vaccines), agriculture (increasing yields, decreasing pesticide use etc.), non-food uses of crops and other biological products, and environmental protection (in terms of biotech products used to clean up hazardous waste). He elaborated on the meaning of Traditional Knowledge according to United Nations Education, Scientific and Cultural Organisation (UNESCO) and mentioned that biotechnology may get clues from this type of knowledge on developing new medicines, therapies etc. and that this would reduce wastage of time and money and the chance of failure. He also discussed biodiversity according to the Convention on Biodiversity (CBD) and comprehensively discussed its importance. Biotechnology accesses biological resources for research and results of biotechnology research may result in new intellectual property. Commercialisation of IPRs may affect biodiversity and there was tension between the need to preserve biodiversity and to promote biotechnology.

T.C. James mentioned about how in developing countries, 80% of the population depend on traditional medicines derived from bio-resources and how final and universally acceptable solutions for the protection and promotion of bio-resources have not yet emerged. He further mentioned that India is one of 17 mega diverse countries of the world, with 16 agro-climatic zones, 45,000 different plant species and 15,000 medicinal plants. He elaborated on some alarming facts relating to patents and traditional knowledge such as the fact that unauthorised use of traditional knowledge relating to bio-resources or misappropriation in the area of medicinal plants may be to the extent of more than seven thousand patents, granted for non-patentable traditional knowledge innovation (in three patent offices alone). Some of the major patents on traditional knowledge in India were cases such as the Turmeric Case, Neem Case and Basmati Case. He elucidated on the following main reasons for protecting bio-resources, namely:

- *equity considerations* (for fair compensation to traditional knowledge holder when its use has commercial gain),
- *conservation concerns*, *preservation of traditional practices and culture* (for raising the profile of the knowledge and its holder by efforts by those within and outside communities),
- *prevention of appropriation* (for checking "biopiracy"), and for
- *promotion of the uses* of the traditional knowledge using bio-resources.

T.C. James then described the issues relating to protection and promotion of bio-resources. These issues were those of *access* (the right to determine access rest with national legislation for facilitating the sustainable use of genetic resources, promoting their access and common use), *benefit sharing* (equitable sharing of the results of R&D and the benefits of commercialisation), *prior informed consent* (access to genetic resources should be on the basis of prior informed consent and mutually agreed terms) and *disclosure of source of origin of genetic resources* (where non disclosure or wrongful disclosure should be a ground for opposition/revocation of patent).

There are a number of international conventions that recognise the need to preserve biodiversity. T.C. James described the first one as being the CBD, 1992 and discussed various relevant Articles it contains i.e. Article 8(j) on Traditional Knowledge, Article 15 on Access to genetic resources and benefit sharing, Article 16 on Technology Transfer and Article 19 on Access and Benefit Sharing from biotechnology derived from genetic resources. The second one is the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), 1994 and its scope on protecting knowledge relating to biodiversity. Articles 8, 27(3) and 22 are relevant in this convention. The third convention is Food and Agricultural Organisation (FAO) International Treaty on Plant Genetic Resources for Food and Agriculture (FAO ITPGRFA), which recognises the contribution of farmers and indigenous peoples to the conservation and development of Plant Genetic Resources (PGR) and promotes equitable benefit sharing.

T.C. James then went on to describe how some of the Indian laws promote protection of traditional knowledge and genetic resources. He described various provisions in the Indian Patents Act, 1970 and Amendment Act, 2005; Biological Diversity Act, 2002; and Plant Variety and Farmers Rights Protection Act, 2001. Some initiatives that have been taken in India with respect to protection of traditional knowledge have been highlighted:

- Establishment of Traditional Knowledge Digital Library (TKDL) consisting of 240,000 formulations
- Development of Traditional Knowledge Resource Classification (TKRC) in about 5,000 sub groups in the Intellectual Property Committee (IPC)
- Inclusion of two Indian journals relating to traditional knowledge in the Patent Corporation Treaty (PCT) minimum documentation for search
- New Delhi Declaration November 2003 for promoting protection traditional knowledge, traditional cultural expressions and genetic resources in SAARC countries
- Cochin Declaration April 2006 for traditional knowledge protection in Asia and Pacific countries

T.C. James further discussed the steps required to move towards a fair and equitable system. At the international level, he opined the need for mandatory disclosure of source of origin of genetic resources in patent applications and the need for fair and equitable access benefit sharing agreements. At the national level, he suggested effective implementation of the provisions of the law, the setting up of state and local biodiversity authorities, mechanism for prompt disposal of applications, sensitisation and education of stakeholders, development of databases and development of guidelines for researchers and scientists. He concluded his presentation by giving some tips to the participants such as it would be beneficial to study Indian Traditional Knowledge, identify possible research areas, identify bio-resources required areas where these are available, file IPRs as per agreements and commercialise IPRs with adequate return for the owners/preservers of traditional knowledge/genetic resources.

Floor/Group Discussion

The floor discussion was a lively and very interactive with many issues being discussed. Some of the main issues discussed were:

- Issues relating to applying for access to bio-resources i.e. how the procedures are different if an individual wants this access or whether a public sector organisation wants the access
- Sanitary and Phyto-Sanitary Certificate is required by a country importing or bringing in bio-resources. Some participants asked whether this was required when the bio-resources were being brought in for research purposes
- There was a lively debate on why genetically modified foods are contentious while other genetically modified goods used in the form of medicines are not
- The predicted food shortage problem in India was discussed with participants saying that organic farming would not be the solution and this is where biotechnology could help
- The floor discussion concluded with T.C. James stating that genetically modified agro products should be allowed onto the market because if they were not, we would not be able to identify alternatives. However, he added that this should be managed and regulated properly so that if the negative effects of a product exceed the positive, appropriate measures can be taken. He mentioned that if this happened, there could be another product out on the market that could replace the existing one – a trend that could be seen in the case of pharmaceutical products.

Session XV

Intellectual Property Management - Vinay Kumar, Former Advisor & Head, Technology Management Division, DSIR and Visiting Faculty at IIT Delhi

The session focused on issues confronting management of technology and innovation in the current environment of globalisation. **Vinay Kumar** started the session by stressing the importance of optimal management of technology in case of intellectual property management along with its development, keeping in view the economic viability. He suggested that technology management is an integral part of IPR management. Major subjects in IPR and technology management are; (i) developing technology strategy (ii) technology life cycles, (iii) technology acquisition, (iv) technology transfer and contracting, (v) technology pricing, (vi) technology pricing, (vii) R&D Management, (viii) innovation and creativity. Technology forecasting, managing IPRs and technology financing are also important in this context. He explained these topics and their importance using examples.

Kumar pointed out that the major issues involved in technology acquisition are, identifying sources of technology, evaluation of technology and its supplier, examining the status of intellectual property rights, consideration of price and forming appropriate strategies for negotiations. He mentioned that these evaluations must also consider the longevity of the technology and longevity depends on external factors like product development by competitors etc. It is a common practice in the recent times for technology oriented companies to avail the services of 'technology gatekeepers', who monitor the recent developments in the market and forecast and predict emerging threats that may affect the longevity of a particular technology in use.

Pricing is one of the most important factors in technology management and estimating price is a complex issue. This is owing to the fact that technology is not a physical entity and technology licensing is not a one time transaction, but a long term relationship. In addition pricing is difficult because of many components of technology package, difficulty in assessing key features of the technology and unknown future changes in technology preferences.

R&D management was the next topic explained by **Kumar**. Stressing on the fact that time and cost of R&D are important he said that R&D is getting more interdisciplinary and it is important to have cohesiveness and proper coordination between the research team members having diverse skills. The crucial requirements for this area of technology management include systematic, disciplined and accountable approach towards assessing the threats and opportunities arising from the impact of all exogenous factors. He dealt with the following management aspects one by one;

- developing corporate strategy on IPR,
- formulating research proposals,
- identifying potential zones,
- mapping prior knowledge,
- monitoring competitors areas of operation,
- cross licensing of patents,
- technology forecasting,
- identifying opportunities and threats,
- identifying possible collaborators, business mergers and strategic alliances.

Although it was an interactive session, however, in the concluding part of the session, **Vinay Kumar** opened the floor for discussions and the participants shared their views on technology management and experiences of their respective institutions. Some of the participants raised questions on the nuances of sublicensing of technology and the pricing issues there in. Kumar answered the questions using real world examples and stressed on the bottom-line that there are many subjective areas in technology management and the broad topics discussed in the session can only serve as guiding signs.

Session XVI

A Case Study - Vinay Kumar, Former Advisor & Head, Technology Management Division, DSIR and Visiting Faculty at IIT Delhi

In this session **Vinay Kumar** further elaborated on the formal technology management concepts introduced to the participants in session 15 through examples and cases. He started the session by discussing the case involving Polaroid and Kodak. In 1948, a camera was developed by Polaroid which would develop a picture immediately after it was taken. Kodak had an agreement to produce colour films for Polaroid camera till 1969 and decided to produce cameras working around Polaroid patents in 1976, against which Polaroid filed a suit and won. The interesting point here is that Kodak ended up paying a lot more than what is normally applicable to infringement because of strategic planning by Polaroid in delaying the filing of suit. This case and its merits were discussed in detail.

Kumar circulated a second case study on the Osborne Computer Company. This company decided to package all the PC components together to form the first truly portable personal computer. Though the company initially made profits, it went bankrupt soon because of

several reasons relating to poor technology management. The first of its strategic defect was that product design failed to cater to market demands. The company was late in recognising the shortfall in its product design and rectifying it. Secondly, the company made a fatal mistake in identifying the right time for upgrading its technology. Recognising that its competitors are taking advantage of its product design, the company announced that it would introduce new technology that would meet consumers' demand. Many potential customers decided not to buy from the current stock, knowing that a better model was about to be launched.

The participants had to analyse this case and discuss the real reasons behind the closure of Osborne Computers. It was found that in this case several aspects of technology management was neglected together. Firstly, lack of demand forecasting was evident in the design stage itself. Secondly, the company's lack of R&D and financial planning was identified. Finally, monitoring of competitive technologies and disregard for proper timing and management of the technology's life cycle contributed to its failure. These points were discussed and Kumar stressed on the need for developing an action plan for the management of any technology by taking into account the steps and stages explained in Session 15.

Before concluding the session **Kumar** circulated two more cases for further discussion. These two cases were lodged under the WTO on Canada's Patent Act; (i) Panel Report on Canada Patent Protection of Pharmaceutical Products case and (ii) Appellate Body Report on Canada term of Patent Protection case. Kumar gave a preliminary introduction to these cases and asked the participants to review these cases and write down the relevant technology management related aspects in the light of the WTO reports on these cases.

Session XVII

IPRs, Agriculture and Agriculture Economics- Dr Siddhartha Mitra, Director (Research) & Head CUTS Centre for International Trade Economics and Environment (CITEE)

The session was focussed on *IPRs, Agriculture and Agriculture Economics*. Dr. Siddhartha Mitra, Director (Research) & Head - CUTS Centre for International Trade Economics and Environment (CITEE), who is a specialist in the field of agricultural economy, made a presentation to provide an understanding of the importance of IPRs in agriculture and the types of IPRs available in this field. He began his intervention by stating that changes in climate have a significant impact on agricultural products and productivity. Under such conditions, the scope and importance of agricultural biotechnology have increased. To encourage innovation in this field, it is essential to protect innovator's rights, thus making Intellectual Property Rights (IPRs) vitally important in the field of agriculture.
In his presentation Mitra elaborated on following questions:

- Why are IPRs important in agriculture?
- Types of IPRs in agriculture
- IPRs in agriculture and TRIPS
- IPRs in agriculture and *Convention on Biological Diversity*
- Reflections: Unsolved Problems and Way Forward

He also discussed IPRs in agricultural field as provided by TRIPS Agreement and Convention on Biological Diversity. Dr. Mitra shared his views on the unsolved problems related to this issue and his vision of the way forward. He concluded by stating that there is a need to evolve means of effective and low cost transfer and large scale adoption of evolving

cropping technologies so as to tackle the problem of food scarcity in developing countries and at the same time provide incentives for private innovation. He also suggested preventing appropriation and commercial exploitation by private firms and multinational corporations of traditional knowledge possessed by communities through patents.

The presentation was followed with a discussion on Genetic Use Restriction Technology (GURTS), more commonly known as Terminator Technology and a possible innovation of hybrid varieties which may provide a breakthrough by increasing the yields in subsequent sowing. Members of the scientific community attending this event benefited from this session and discussed certain cost and benefit related aspects of agricultural innovations at length with the resource persons.

Session XVIII

Group discussion on "Possible reforms in the TRIPs Agreement pertaining to patents"- Atul Kaushik, Advisor (Project), CUTS International

During this session two case studies were distributed to the participants. The first case study was regarding the appellate body report in reference to the term of protection provided under Canada's Patent Act. Another case study was based on the patent protection of pharmaceuticals products under Canada's Patent Act. The participants were divided in two groups and they were asked to discuss issues such as:

- Do the WTO disputes indicate the need for further clarifications of the patents section of TRIPS agreement?
- Whether it will be more advantageous to clarify ambiguous TRIPS provisions or to let domestic courts interpret national patent laws that are set up in purported conformity with the TRIPS Agreement, or the provisions of the TRIPS Agreement be amended/clarified to remove the ambiguities?

Each of the groups discussed the cases with their respective group members on the lines of above-mentioned questions. This discussion highlighted gaps in the TRIPS agreement and country specific patent laws, which leave room for ambiguity and misinterpretation. Such gaps also provide for flexibilities for domestic governments while implementing these laws. Outcome of the discussion was that certain articles, like article 7 and 8, need essential clarification to provide uniform application in international and domestic domains. Finally, **Kaushik** explained the case to the participants. He also provided an insight into the decisions reached by the appellate body and the panel of the respective disputes in the given case study.

Session XIX

Evaluation and Closing Remarks – Atul Kaushik and Archana Jatkar

In the closing session, a stocktaking exercise for the entire programme was done. The significance of IPRs and their implications for research activities in India were revisited briefly and the floor was unanimous in upholding the usefulness and importance of conducting similar training programmes more frequently for generating awareness amongst research community.

Archana Jatkar took feedback forms, which were distributed earlier, from the participants, who appreciated the opportunity provided by the programme in terms of a clear

understanding of various issues involved in IPRs. The programme served as a platform for the scientists to get exposed to complex IPR issues and understand these issues deeply by sharing and discussing with resource persons as well as among themselves. They commended the rich experience and expertise of resource persons, the quality of resource material and overall administration of the training programme.

Participants were requested to provide the feedback on the training programme. They were of the opinion that the training programme provided them with better understanding and exposure to IPR and related WTO issues. They appreciated and acknowledged the rich experience and expertise of resource persons, quality of resource material and overall administration of the training programme. Most of the participants expressed their interest to attend similar training programmes of longer duration in the future.

At the end of the training programme **Atul Kaushik** thanked all the participants and resource persons for their valued participation and contribution to the success of the training programme. He thanked the Department of Science and Technology for supporting CUTS to conduct this training programme and assured that the future programmes will take into account the suggestions. He also thanked his colleagues for their hard and diligent work.