



Workshop 3

**Capacity building to enhance the development,
adoption and use of clean and environmentally
sound technologies in developing countries**

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Capacity building to enhance the development, adoption and use of clean and environmentally sound technologies in developing countries

- The International IP System – background facts
- Full public disclosure and access to technology information
- The role and activities of WIPO



THE INTERNATIONAL IP SYSTEM – BACKGROUND

Main type of IP we are discussing in this context is patents

- Purpose of the patent system
- No global protection
- Disclosure function of the patent system
- At time of patent filing, or even grant, still not commercially proven technology – many fall by the wayside
- Range of factors influence technology transfer and diffusion
- Absence of a patent may or may not promote technology transfer
 - range of other factors
 - studies indicate that an effective IPR system may be a pre-requisite for companies to enter into technology transfer agreements

THE INTERNATIONAL IP SYSTEM – BACKGROUND

- Challenge for policy makers

to seek an optimal balance that respects the private interests of those investing resources in the development of new technologies, thereby providing the necessary incentives for such investment

and

that promotes broader public interest in gaining effective, proven technologies disseminated for public welfare

- Complex ‘balance’

- pre-grant issues (what kind of technologies should patent offices grant patents for, and what claimed inventions should be denied protection)

- post-grant issues (what forms of licensing and other access to technology should be encouraged; what steps should be taken to monitor and to regulate, as necessary, the actual use of patent rights in the marketplace, and what forms of intervention are required, if any)

ACCESS TO TECHNOLOGY INFORMATION

- Essential function of patent system is full public disclosure of technological information
 - patent information systems yield growing body of technological knowledge

- WIPO PATENTSCOPE search service provides access to 28 million patent documents
 - information about new technologies often first disclosed as international patent
 - tracking new technological developments in a field of particular interest
 - e.g. tracking new developments in fuel cells or hydrogen technologies
 - monitoring activities of particular actors, such as firms, inventors or institutes
 - e.g. maintaining a watch on an oil company's research activities in alternative energy technologies
 - negotiating partnerships with developers of complementary technologies
 - e.g. matching alternative power generation technologies with new electrical storage technologies

ACCESS TO TECHNOLOGY INFORMATION

- Track significant technological developments and trends, including monitoring new players, geographical shifts and the relative participation of public and private sector actors, established firms and new entrants

- Avoid duplicative R&D, enable technological leapfrogging and innovative development processes using existing inventions to fuel further innovation

- Organize and structure technology transfer arrangements
 - an effective incentive to enter into such arrangements and include within them improvements, know-how and related technologies



THE ROLE AND ACTIVITIES OF WIPO

WIPO a specialized agency of the UN

Mission: to promote innovation and creativity for the economic, social and cultural development of all countries, through a balanced and effective international intellectual property system

- Facilitating use of IP system for development
- Registration systems (PCT, Madrid ..)
- Norm-setting (Patent Law, Copyright, Trademarks)



THE ROLE AND ACTIVITIES OF WIPO

WIPO – UN Agreement (1974)

Article 10 Transfer of Technology

“The Organization agrees to co-operate within the field of its competence with the United Nations and its organs, particularly the United Nations Conference on Trade and Development, the United Nations Development Programme and the United Nations Industrial Development Organization, as well as the agencies within the United Nations system, in **promoting and facilitating the transfer of technology to developing countries** in such a manner as to **assist these countries in attaining their objectives in the fields of science and technology and trade and development.**”

THE ROLE AND ACTIVITIES OF WIPO

■ Norm-setting (Patent Law, Copyright, Trademarks)

- Promote progressive development and harmonization of IP laws, standards, and practices among Member States
- Extensive consultation with States and interest groups to encourage international common principles and rules governing IP
- Forum for States to progress on balanced evolution of the international IP system so that it continues to serve its fundamental purpose of encouraging innovation and creativity
 - Taking into account needs and interests of countries at different stages of development
 - Building awareness of flexibilities within international IP agreements
 - Balance between
 - (i) rights of creators/ IP owners and rights of users/ public
 - (ii) encouragement of innovation and creativity and diffusion of social benefit of innovation and creative works

THE ROLE AND ACTIVITIES OF WIPO

- Facilitating use of IP system for development
 - WIPO Development Agenda aims to ensure that development considerations are integral to WIPO's work
 - Facilitating access to technology information
 - WIPO's global technology databases, infrastructure and services
 - Promoting evidence-based decision-making through provision of a wide range of statistical information and economic analysis
 - Creation of practical platforms to support technology transfer
 - Innovation capacity building
 - IP dispute resolution services

THE ROLE AND ACTIVITIES OF WIPO

- WIPO's global technology databases, infrastructure and services

Facilitating access to technology information

- Patentscope
- Patent Landscape Reports
- ARDI
- ASPI
- TISCs

Patentscope

- Access to PCT international applications in full text format on the day of publication, as well as to 30 national and regional patent collections
- User-friendly flexible search capacity, printable results
- Free of charge
- Graphical analysis tools, and technology developments in specific areas can be tracked
- Multilingual via advanced language applications

Patent Landscape Reports

- Describe the patent situation for a specific technology in a given country, region or on the global level
- Visualization of results to facilitate understanding, based on the empirical evidence
- Support policy discussions, strategic research planning, improve patent quality and technology transfer
- Derived from Development Agenda project “Developing Tools for Access to Patent Information”

Patent information

TITLE	AUTHOR	DATE	LANGUAGE
 Graphene: An analysis of worldwide patent filings relating to Graphene	UK IPO	2012	English
Desalination Technologies and the Use of Alternative Energies for Desalination	WIPO/Cambridge IP	2011	English
Current and Future Trends in Wind Turbine Technology (Summary available. Complete report fee-based)	Totaro & Associates	2011	English
 Patent and Clean Energy	UNEP/ICTSD/EPO	2010	English
Cleantech Energy Patent Landscape Report (Executive summary available. Complete report upon request)	Foley & Lardner LLP	2010	English
Lithium Metal Phosphate Batteries (Abstract available. Complete report fee-based)	Fist/Frinnov	2010	English, French
Producción de etanol a partir de residuos lignocelulósicos (Ethanol Production from Lignocellulosic Residues)	Cuban Intellectual Property Office	2010	Spanish
Innovation Nanotechnology Patent Landscape Analysis	UK IPO	2009	English
Patent-based Technology Analysis Report – Alternative Energy Technology	WIPO	2009	English
Patent Landscape Analysis of Recycling and Separation Technologies	UK IPO	2009	English
Patent Informatics Study of Energy from Waste	UK IPO	2009	English
Who Owns our Low Carbon Future?	UK Department for International Development – DFID/Chatham House/Cambridge IP	2009	English
Who Holds the Power? Lessons from Hybrid Car Innovation for Clean Technologies	Griffith Hack	2009	English
Australian Solar Innovation: Losing our Place in the Sun	Griffith Hack	2009	English
Clean Coal Technologies, Where Does Australia Stand?	Griffith Hack	2009	English
PV Thin Film Cells Patent Landscape (Photovoltaic)	Fist/Frinnov	2009	English, French
PV Organic and Hybrid Cells Patent Landscape (Photovoltaic) (Abstract available. Complete report fee-based)	Fist/Frinnov	2009	English, French
PV Crystalline Silicon Cells Patent Landscape (Photovoltaic) (Abstract available. Complete report fee-based)	Fist/Frinnov	2009	English, French
Technologiestatus der Österreichischen Umwelttechnologie (Status of the Austrian Environmental Technology)	Austrian Institute of Technology	2009	German
Carbon Nanotubes Patent Landscape (Abstract available. Complete report fee-based)	Fist/Frinnov	2008	English, French
Mapeamento tecnológico do biodiesel y tecnologías correlatas sob o enfoque dos pedidos de patentes (Biofuel Patent Mapping): Volume I – Mundo (Worldwide) Volume II – Brasil (Brazil) Volume III – Estados Unidos, China e União Européia (USA, China, European Union)	Brazilian National Institute of Industrial Property	2008	Portuguese

WIPO PROGRAMS - ARDI ASPI

- **ARDI - Access to Research for Development and Innovation program**
 - access to scholarly literature is an an important source of scientific and technical knowledge, complements patent documents
 - free online access to major scientific and technical journals to local, not-for-profit institutions in LDCs
 - low-cost access to industrial property offices in developing countries
 - Partners include: American Association for the Advancement of Science; American Institute of Physics; Elsevier; Institute of Physics; John Wiley & Sons; Oxford University Press; National Academy of Sciences; Nature Publishing Group; Royal Society of Chemistry ..

- **ASPI - Access to Specialized Patent Information (ASPI)**
 - to support developing countries to fully exploit their innovative potential
 - leveraging valuable information contained in patent documents to develop new solutions to technical problems faced at local/ international levels

TECHNOLOGY AND INNOVATION SUPPORT CENTERS (TISCs)

- Development Agenda project in cooperation with national/ regional IP Offices
- provide innovators in developing countries access to locally based, high quality technology information and services
- maximize their innovative potential by creating, protecting, and managing IP rights

- TISC Services
 - access to online patent and non-patent (scientific and technical) resources and industrial property-related publications
 - assistance in searching and retrieving technology information
 - training in database search
 - on-demand searches (novelty, state-of-the-art and infringement)
 - monitoring technology and competitors
 - information on industrial property laws, management and strategy, and technology commercialization and marketing

OFFICE OF THE CHIEF ECONOMIST

- Assisting discussions on interface between IP system and global public policy issues

- Promoting evidence-based decision-making through the provision of a wide range of statistical information and economic analysis
 - World IP Report, Economics Seminar Series
 - economics of collaborative innovation models
 - private collaboration, competition, public research

PLATFORMS TO SUPPORT TECHNOLOGY TRANSFER

■ WIPO GREEN

- Matchmaking platform designed to accelerate development and dissemination of green technologies to combat environmental challenges
- Free Database and Network
- Users access WIPO GREEN Database to make available their green technologies for licensing or partnership agreements, enter technology needs, search for technologies
- Users access WIPO GREEN Network to obtain advice and services to assist transactions, connect with experts worldwide from industry, universities, governments, IGOs and NGOs

PLATFORMS TO SUPPORT TECHNOLOGY TRANSFER

- WIPO Re:Search
 - Provides access to IP for pharmaceutical compounds, technologies
 - Access to know-how and data available for R&D for neglected tropical diseases, tuberculosis, and malaria
 - Searchable, public database of available IP assets and resources
 - Facilitates new partnerships to support organizations that conduct research on treatments for neglected tropical diseases, with the goal to improve the lives of those most in need

IP AND INNOVATION CAPACITY BUILDING

■ National IP Strategies

- Information and resources for States/ stakeholders on development and implementation of national IP strategies
- Technical assistance activities on design, development and implementation of national IP and innovation strategies.

■ Technical cooperation for development activities

- Legislative Assistance
- Successful Technology Licensing
- Exchanging Value - Negotiating Technology Licensing Agreements: A Training Manual

■ WIPO University Initiative

- Technology innovation, transfer, commercialization from research
- IP and technology management infrastructure (250 universities to date)

WIPO ARBITRATION AND MEDIATION CENTER

- Alternative Dispute Resolution Services
- Time- and cost-effective dispute resolution on a non-profit basis
- Disputes involving international and domestic R&D and transfer of technologies, rich variety of contracts and transactions, including research contracts, collaborative projects, licensing, joint ventures, alliances, spin-offs and buyer-supplier relationships
- Dispute avoidance and resolution practices
- ADR may help parties find solutions to their disputes without court litigation, contributing to continued research activities/ commercialization of research results

THANK YOU

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