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A SUMMARY REPORT OF THE CONFERENCE ON HOW IPRS COULD WORK BETTER FOR DEVELOPING COUNTRIES AND POOR PEOPLE ON-LINE AT HTTP://www.iisd.ca/linkages/sd/sdipr/

SUMMARY OF THE CONFERENCE OF THE COMMISSION ON INTELLECTUAL PROPERTY RIGHTS: HOW INTELLECTUAL PROPERTY RIGHTS COULD WORK BETTER FOR DEVELOPING COUNTRIES AND POOR PEOPLE 21-22 FEBRUARY 2002

The Conference on How Intellectual Property Rights Could Work Better for Developing Countries and Poor People took place from 21-22 February 2002, at the Royal Society in London, UK. The conference, organized by the Commission on Intellectual Property Rights (CIPR), was attended by approximately 220 participants from governments, intergovernmental and non-governmental organizations, and representatives of the scientific, academic and private sectors. The conference addressed seven major themes, including: agriculture and genetic resources; traditional knowledge and folklore; copyright in developing countries; technology, development and intellectual property rights (IPRs); medicines and vaccines; research tools, gene patenting and public-private partnerships; and international institutions, rules and practices, and capacity building. This is a summary report covering the main themes of the discussion. A full transcript of the Conference will be available shortly on the CIPR website http://www.iprcommission.org.

BACKGROUND TO THE CONFERENCE

The conference precedes the drafting of a report by the CIPR and is aimed at drawing together the different threads of its work. The CIPR was established by the British government to consider:

- how national IPR regimes could best be designed to benefit developing countries within the context of international agreements, including the Agreement on Trade-Related Intellectual Property Rights (TRIPS);
- how the international framework of rules and agreements might be improved and developed, for instance in the area of traditional knowledge, and the relationship between IPR rules and regimes covering access to genetic resources; and
- the broader policy framework needed to complement intellectual property regimes, including for instance controlling anti-competitive practices through competition policy and law.

The CIPR had its first meeting from 8-9 May 2001 in London. It has collected input through visits to developing countries, workshops of experts and stakeholders, on-line discussions and other consultations. The Commission will submit its report to the Secretary of State for International Development of the UK in June 2002.

REPORT OF THE CONFERENCE

On Thursday, 21 February, participants met in plenary to hear opening remarks, a keynote address and organizational details, and then considered agriculture and genetic resources, traditional knowledge and folklore, and copyright in developing countries. On Friday, 22 February, participants considered: technology, development and IPRs; medicines and vaccines; research tools, gene patenting and public-private partnerships; and international institutions, rules and practices, and capacity building. Participants also heard a closing address and final remarks. Each thematic session included presentations on its central issues and key perspectives, followed by discussion among the participants.

OPENING SESSION

John Barton, Stanford University and Chair of the CIPR, opened the conference and welcomed participants.

In the opening address, the Hon. Mr Justice Laddie, Intellectual Property Judge, UK, highlighted the importance of competition for the attainment of high quality goods, which benefits both the customer and manufacturer. He said that IPRs in the form of patents can suppress this competition, but underscored that in the case of pharmaceutical companies, such monopoly is necessary to generate resources for research and development (R&D). The IPR system had to properly balance the interests of creators of knowledge and consumers. Laddie noted the skepticism expressed by many developing countries that IPRs will bring development and technological advancement. He posed and discussed two questions: whether implementation of IPRs leads to development and industrialization; and whether all countries will benefit, and benefit to the same extent, from IPRs. He concluded that this was, in his opinion, not the case and that the "one size fits all" IPR model was not appropriate.

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Rt. Hon. Clare Short, MP, UK Secretary of State for International Development, delivered the keynote address, highlighting the need for a more intelligent debate on IPRs to promote development, information sharing and capacity building. She raised parallels between the industrial revolution and the current period of economic globalization, underscoring the need to manage global institutions to ensure an equitable distribution of globalization's benefits. Short emphasized a holistic perspective toward issues related to IPRs, trade, public health, the environment, and R&D. She reviewed discussions of the World Trade Organization's (WTO) recent Doha Ministerial, regarding IPRs, access to medicines and compulsory licensing. In closing, she listed priorities, including public health and the issue of compulsory licensing for countries without manufacturing capacity; understanding better the benefits of geographic indications to developing countries; access to genetic resources and traditional knowledge; differential pricing of medicines; and public-private partnerships.

Chair Barton then introduced the members of the CIPR, including Daniel Alexander, intellectual property barrister (UK), Carlos Correa, University of Buenos Aires (Argentina), Ramesh Mashelkar, Council of Scientific and Industrial Research (India), Gill Samuels, Pfizer (UK), and Sandy Thomas, Nuffield Council for Bioethics (UK), as well as the Secretary of the CIPR Secretariat, Charles Clift. Barton briefly reviewed the Commission's activities, including visits to developing countries, workshops and wide-ranging consultations. He requested recommendations on the conference's main themes specifically focusing on constructive suggestions for reform.

DISCUSSION: One participant noted the high cost of litigation and dispute resolution and suggested supporting alternative dispute resolution systems and the World Intellectual Property Organization's (WIPO) work on developing a compulsory licensing system. Laddie emphasized the need to focus on proper operationalization of IPR requirements. Short noted the controversy about creating a legal advisory center to assist developing country negotiators working in the WTO, and the importance of functioning health care systems in developing countries. Participants emphasized protection of folklore, geographic indications, use of copyrights to protect cultural diversity, rights and obligations regarding IPRs and public health, the role of international institutions and the need for balancing the rights and needs of IPR holders, consumers, producers and developed and developing countries.

AGRICULTURE AND GENETIC RESOURCES

Chair Sandy Thomas, Nuffield Council for Bioethics, UK, introduced the session.

Kerry ten Kate, Royal Botanic Gardens, Kew, outlined two themes addressing the linkages between IPRs and access to genetic resources: the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA); and, national access legislation. She indicated the need for a separate regime to address access to genetic resources, and pointed to the ITPGRFA as a central component with its coverage of

select crops important for food security. She said the treaty establishes a Multilateral System outlining conditions for facilitating access, including that recipients may not claim any intellectual property or other rights that limit access to the plant genetic resources, or their genetic parts and components, in the form received from the Multilateral System. On benefit sharing, she noted that the treaty addresses the exchange of non-confidential information; access to and transfer of technology; and commercialization. Regarding national access legislation, ten Kate highlighted laws regulating access by nationals and foreigners to genetic resources, biochemicals and associated traditional knowledge, and requiring the sharing of benefits such as royalties, technology, joint research and information. In conclusion, she said that for genetic resources, access and benefit sharing (ABS) measures may achieve equity or environmental goals better than IPRs, and highlighted the important steps in the development of the Bonn Guidelines on ABS under the Convention on Biological Diversity (CBD) and the standard Material Transfer Agreement for facilitated access under the ITPGRFA.

Kent Nnadozie, Environmental Law Foundation, Nigeria, provided an African perspective on IPRs and genetic resources. He highlighted the convergence of genetic resource issues with trade, agriculture, health, technology transfer and poverty alleviation. He noted problems in Africa with institutional and scientific capacity, the disjuncture between global discussions and community level concerns, and lack of clarity and effective national mechanisms to handle overlapping governmental jurisdictions over complex issues. He described the private property basis of international intellectual property systems such as TRIPS, the WIPO and the International Convention for the Protection of New Varieties of Plants (UPOV), and how this differed from the national sovereignty and regional approaches, addressed by the CBD, ITPGRFA and the Organization of African Unity's (OAU) African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources. He supported the development of regional approaches as a cost-effective means to address common concerns and priorities. He closed by emphasizing the need for further work in capacity building for negotiators and government agencies, taking into account local community perspectives; data collection; accessibility to and dissemination of information; and private sector involvement.

Greg Sage, International Seed Trade Federation and International Association of Plant Breeders (FIS/ASSINSEL), UK, spoke on the use of IPRs by seed breeders and farmers. He explained that farmers pay a certain amount for their seed, as well as a royalty fee to the breeder for the intellectual input. He noted that the utility of this system has been recognized through the rise in State membership in UPOV. He underscored that the use of plant variety protection (PVP) was a better way to protect the breeders' knowledge, as the protection afforded by patents could be more restrictive in terms of further research activities. He stated that private companies have become more important as national governments have decreased funding for public breeding programmes.

He noted that if private breeders are to survive without subsidies, then they must ensure that the added value to the farmer of the new varieties outweighs the added cost of producing these varieties.

DISCUSSION: Participants emphasized that industrialized countries developed their IPR systems over a long period of time whereas developing countries are being given much less time under agreements such as TRIPS. Discussants proposed allowing for greater flexibility and extended transitional periods in implementing obligations, especially those under TRIPS. Some participants cautioned against allowing double protection (the use of patents and PVP) on plants and about bilateral negotiations pressuring developing countries to adopt stronger protection than that required by TRIPS or to adopt the UPOV system of PVP. Concerns were expressed regarding the extent of biopiracy and the impact of patents on food security and research. Some participants proposed that the Commission examine: the OAU's Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources; the Africa Group's recommendations on prohibiting patents on genetic resources for food and agriculture; and a special intellectual property status for crops essential to food security.

Participants highlighted concerns regarding the use of genetic use restriction technologies (GURTs) as a means of protecting intellectual property and increasing corporate profits. Sage explained how GURTs could in some cases be of benefit to developing countries in preventing the spread of alien crops introduced for a specific purpose such as fast growing trees for use as firewood. Regarding comments on IPR policy harmonization and the raising of national standards, ten Kate noted that recent work at the national and international level on access to genetic resources has recognized the need for flexibility and the inappropriateness of a single model. Delegates stressed the need for establishing a balance between public and private rights, and for examining their wider impact. Delegates also urged consideration of non-excludable and non-depletable rights.

TRADITIONAL KNOWLEDGE AND FOLKLORE

Chair Carlos Correa, University of Buenos Aires, introduced the session, and noted that a workshop and an on line discussion on the topic had already been held.

Kamal Puri, University of Queensland, presented on how the protection of traditional knowledge and cultural expressions of communities could be provided in developing countries. He stressed an alternative model to IPR laws for this purpose. He said protection of traditional knowledge has become a mainstream issue, and is necessary as no satisfactory system of protection exists at present. One threat to traditional knowledge is its unauthorized commercial use, without any sharing of the ensuing benefits with traditional custodians and communities. He observed that the term "folklore" should be replaced by the more appropriate "expressions of culture" which represents living, functional traditions, rather than souvenirs of the past. He stressed that such expressions of culture are powerful means of bringing together commu-

nities and social groups and of asserting cultural identity. He noted that indigenous systems are driven by characteristics of trans-generational, non-materialistic, and non-exclusive or communal ownership of rights and this is why modern intellectual property laws are inadequate or unsuitable for protecting traditional knowledge. In conclusion, he stressed an urgent need to acknowledge and enforce property rights of the owners of traditional knowledge and expressions of culture, and the potential for developing a *sui generis* system of legal protection.

Richard Owens, British Music Rights, reviewed WIPO's activities in this area including their fact-finding Missions and regional consultations and their formation of an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. He outlined the Intergovernmental Committee's ongoing and future work on: model intellectual property clauses for ABS agreements; intellectual property aspects of traditional knowledge documentation; folklore; better use of existing IPRs by traditional knowledge holders; and the development of sui generis systems to protect traditional knowledge. Owens specifically noted that inadequate or misapplied resources could hamper this work, particularly if stakeholders are not adequately represented or if practical testing of IPRs by traditional knowledge holders is under-funded. He closed by cautioning that meaningful protection of traditional knowledge cannot emerge from trade negotiations, rather what is required is long-term, incremental work. He also suggested that markets may under-value traditional knowledge.

Palpu Pushpangadan, National Botanical Research Institute, India, presented a benefit-sharing experiment in India. He noted that, in general, IPR laws ignore the interests of traditional and local communities, because their concepts of intellectual property and resource rights are different from those of developed societies. He said that the experiment was based on an ethno-biological research project studying the multidimensional aspects of traditional knowledge. He highlighted the case of an anti-fatigue plant used by the Kani tribe, which has been patented and commercialized with the tribe sharing in the profits. In conclusion, he outlined how IPRs of indigenous local communities could be protected and how benefit sharing could be ensured through: survey, inventory and documentation of indigenous knowledge systems; preparation of electronic databases; access to databases with prior informed consent; negotiation and signing of agreements; development of marketable products; commercialization of the products; and benefit sharing with the indigenous and local communities.

DISCUSSION: Participants noted that traditional knowledge should not be regarded as antiquated or static, as it includes modern, dynamic systems, while also emphasizing that its characterization as collective knowledge is overly simplistic and does not recognize underlying complexities and multiple claims to ownership. One participant proposed extending the use of geographic indications beyond wines and spirits to also address traditional knowledge issues, while another cautioned against its misuse by large corporations to secure markets. Puri outlined a *sui generis* model for the Pacific region, highlighting its non-intellectual property basis and its reliance on customary law and

practices and on ownership by traditional knowledge holders. Participants underscored practical problems and constraints regarding documentation of traditional knowledge by its holders, and discussed the use of patents by knowledge holders, as well as use of traditional, documented systems such as Ayurveda. Some participants noted a disjuncture between activities at the international level, including positions taken by States, and national activities including treatment of indigenous and local communities and their knowledge. Participants also highlighted the need to examine other agreements and initiatives, including the Hague Convention on Jurisdiction and Enforcement of Foreign Judgments, Convention 169 of the International Labour Organization, the Declaration of the World's Indigenous Peoples, and activities in the digital domain.

COPYRIGHT IN DEVELOPING COUNTRIES

This session was chaired by John Barton, Stanford University.

Dianne Daley, Foga, Daley and Co., Jamaica, presented a Caribbean perspective on copyright issues in developing countries. She said that of all the forms of IPRs, copyright is seen as the most positive, and as critical to the development of local culture. She said Caribbean countries are embracing the information age, but noted that copyright laws have not progressed rapidly. For music, she highlighted merits including the reduction of costs associated with traditional producers and publishers. Threats include the digital divide between the information rich and poor, and conflicts of IPRs with access to information. She said merits outweigh the threats in Caribbean countries, but noted that a large portion of local right holders are not yet registered in the national royalty collection and rights management systems. She concluded that the information age presents formidable challenges to IPRs, and that IPRs must be safeguarded to promote legitimate e-commerce and to provide an incentive for creators. She said developing economies must seek to develop solutions that encourage use of digital technology and promote access to information while preserving the rights of copyright owners.

Denise Nicholson, University of Witswatersrand, South Africa, provided an analysis of the difficulties faced by libraries and educators within the context of South African copyright legislation. She noted that many communities have more pressing concerns than copyright rules, such as public health and basic education. She highlighted the different realities between developed, technologically proficient elements of society and poor, rural areas. Nicholson noted a number of problems affecting underdeveloped areas including illiteracy, unemployment, poorly resourced schools and libraries, falling exchange rates and high textbook prices. She highlighted the tension between meeting the public good and respecting commercial interests, and noted that the information gap will continue to widen in the digital realm as many rural areas hardly have access to print material. She stressed the need to balance public needs and copyright protection and the need to create a culture of reading. She proposed appropriate exemptions in copyright law and cheaper licensing.

Paul David, Oxford and Stanford Universities, discussed the relationship between two regimes of scientific exploration: open science and proprietary research. He explained that open science supports the dissemination of information, allowing for rapid advances in documentation and verification of scientific findings. Such open science creates a common knowledge domain, although it relies on financial support from other areas. In contrast, proprietary research allows for limited disclosure and commercialization, ensures proper attribution and prevents misappropriation. David stressed the need to find a balance between the two systems. He concluded by examining European legislation on property rights in databases, which accords a number of rights over databases' content to owners. David noted that there are no competition policies or limits on charging for access to database content even if it is public domain information. He proposed introducing fair use and research exclusions in relevant legislation.

DISCUSSION: One participant highlighted the distinction between essential and non-essential information for the purpose of access, and noted the importance of clearly defining the term "information." In the context of health related information, it was noted that the copyright policy of the World Health Organization (WHO) is designed to ensure the accuracy of information contained in its publications, rather than for financial gain. Another participant noted that academic information is becoming increasingly available on the Internet, and printed versions are less common, affecting developing countries in particular. Participants also discussed the extent to which copyright laws are now serving the interests of publishers more than authors.

TECHNOLOGY, DEVELOPMENT AND IPRS

Chair Ramesh Mashelkar, Council of Scientific and Industrial Research, India, said the session's purpose was to understand how developing countries can best use IPRs to promote technology development and eradicate poverty.

Keith Maskus, World Bank and University of Colorado, highlighted the complexity of the relationship between technical change and economic growth. In reviewing the historical role of IPRs, he noted that IPRs have largely been endogenous to inventors' needs and the political economy, and that intellectual property protection tends to accelerate as countries become wealthier. Maskus argued that the importance of IPRs depends on their objective and upon market conditions, noting that they can play a role in stimulating discrete inventions, encouraging incremental innovation, promoting dissemination and diffusion of information, extending and deepening markets, guaranteeing product origin, and attracting foreign direct investment and technology transfer. He added that conditions facilitating use of IPRs include: an effective and transparent judicial system, human capital, support for technical change and diffusion, open and competitive markets, and access to capital. He closed by noting a number of strategies for IPRs and development. Reactive strategies could include: using transition periods, procuring technical and financial standards, limiting administrative costs, adopting appropriate IPRs with suitable exemptions and safeguards, and avoiding IPRs that limit access to scientific and technical informa-

tion. Positive strategies could include: encouraging small-scale innovation through utility models and trade secrets, promoting product development, and encouraging registration and use of traditional knowledge. He noted that because the immediate impact of globalizing IPRs is to effect a transfer from developing to developed countries, the developed countries should seek to ensure that their promises on opening markets to developing countries are fulfilled.

Christopher May, University of the West of England, addressed the problem of "inappropriate" technology transfer and the historical links between technology transfer and IPRs. He underscored the need to consider the effects of IPRs in a wider context and the question of intellectual property's importance. He highlighted three historical arguments relevant to current debates: that intellectual property is a legal construction, and IPRs artificially make knowledge scarce; that awards for invention are not distributed fairly; and that IPRs are a disincentive to rival inventions. He stressed the importance of political will in order to encourage inventive activity, but noted the importance of clarity on the role of IPRs. May suggested that differential treatment of IPRs between developing and developed countries should be considered, which could allow for more effective dissemination of knowledge and innovations.

DISCUSSION: In their comments, participants suggested considering a grassroots-based IPR programme for the poor, particularly in LDCs, and establishing a mechanism to access technology. Several participants supported differential treatment of IPRs in developed and developing countries, and noted that rigorous application of IPRs is disadvantageous to poor developing countries. One participant noted China's important role within such discussions, especially in view of its recent acceptance into the WTO. Another said that stronger IPRs in developing countries will benefit not only foreign companies but also scientists in those countries. This may lead to an increase in research in developing countries. A participant queried if IPRs provide too much protection to the inventor. Several discussants noted that IPRs encourage dissemination of knowledge, but access to that information did not necessarily follow. Maskus stressed that IPRs on their own may not be sufficient to correct market failure.

MEDICINES AND VACCINES

Chair Daniel Alexander, intellectual property barrister, UK, introduced the session, noting that recent developments have fortunately started turning from contentious litigation towards problem-solving efforts.

Robert Mallett, Pfizer, US, highlighted that most medicinal break-throughs in developed countries have come from the private sector and that IPRs have served as the fuel for such innovation. He underscored the need to maintain this model, while meeting the moral obligation to those with poor healthcare systems. Mallett noted a number of diseases afflicting developing countries, such as AIDS, malaria and tuberculosis, while adding that AIDS has gained significant attention because it also affects the North. Noting that patents are not the primary obstacles to access to medicines, he reviewed surveys stating that many medicines

to treat such diseases are not covered by patents in African developing countries. He urged delegates not to view the solution to the AIDS epidemic as a matter of IPRs, but of infrastructure and financing. He closed by stressing the need to address all elements of healthcare systems and to take advantage of partnerships and initiatives offered by pharmaceutical companies.

Francisco Cannabrava, Brazil Mission, Switzerland, spoke on how TRIPS could affect public health policies. He highlighted the WTO's Doha Ministerial Declaration as an example of how developing countries were able to achieve positive results in trade negotiations. He noted that the Declaration provides unambiguous support for a broad and flexible interpretation of TRIPS. He emphasized three elements: innovation; the need to level the playing field in existing intellectual property standards; and the need to ensure technology transfer. On innovation, he noted that IPRs, and particularly patents, have been an incentive to develop new drugs, however, these should not be placed above national public health objectives. On leveling the playing field, he said that TRIPS does not take measures to protect public health fully into account, and should be interpreted in a manner to provide flexibility, noting the potential benefit of compulsory licensing. He said that the issue of technology transfer, which is the main objective of TRIPS for developing countries, is not getting enough attention.

Sisule Fredrick Musungu, South Centre, Switzerland, stressed the need to look at the imbalances in TRIPS and, particularly whether or not technical assistance by intergovernmental agencies has allowed developing countries to assess their needs fairly and critically. He cited failures to advise Francophone African countries on the use of transition periods under TRIPS. He highlighted the need for a short-term perspective to address immediate problems of access, as well as a longer-term approach to issues including capacity building. He cited numerous examples indicating how pricing schemes and donations have particular conditions attached which can inhibit the development of national infrastructures. Musungu closed by drawing attention to the Universal Declaration of Human Rights and its relevant articles addressing IPRs and public health issues.

DISCUSSION: Several participants highlighted that poverty, and inadequately financed health delivery systems, rather than patents, posed the central obstacle to resolving health issues in the developing world. They cited as evidence the lack of patent protection in many African countries. Others did not think this a reason for ignoring the role that IPRs played in access to medicines. Some participants noted how the market directs research to Western ailments, rather than health problems in developing countries. Some discussants stressed the role of infrastructure, financing and technology transfer, while underscoring the need for governments and bilateral donors to provide sufficient funding to address public health issues in developing countries. A few participants noted that patents are more often a factor in access to medicines for middle-income countries, than for the poorest countries. It was noted that some of the "off-patent" medicines are potentially hazardous.

Some of the patented medicines, whose prices had been recently reduced dramatically, now appeared to be in short supply in certain countries.

Significant discussion focused on specific national legal contexts, particularly in countries such as Brazil and India, and the role of their pharmaceutical sectors. One participant said that India had a low treatment rate for HIV/AIDS sufferers, while others noted that low prices in India facilitated access by the poor to a wide range of medicines. Regarding compulsory licensing, discussants differed over its costs, use and procedures for engaging governments and drug developers in negotiations.

Some noted that the private sector has enjoyed global intellectual property protection without addressing global health issues and suggested developing incentives for the private sector to address the needs of developing countries. Participants discussed terms for private sector donations, tiered pricing schemes and production of generic drugs. Some participants also recommended looking at support for vaccine development, reduction of the term of patents on essential medicines, exemptions for non-commercial uses and of the need to avoid the "evergreening" of patents where protection is unfairly extended by allowing patents on trivial amendments to the basic product.

RESEARCH TOOLS, GENE PATENTING AND PUBLIC-PRIVATE PARTNERSHIPS

Gill Samuels, Pfizer, UK, chaired the session, which addressed R&D challenges to gene patenting and public-private partnerships (PPPs).

John Sulston, Wellcome Trust Sanger Institute, UK, spoke on his experience with human genome sequencing, and the social implications of this project. . He noted that human genes *per se* should be beyond patent protection, as is the genome sequence now that it is in the public domain. The genes and their associated properties have been "discovered" not "invented," and should not therefore be patentable. However, he stressed that there is too much patenting of gene functions, which restricted research by others. The case of the patenting of CCR5 was cited. Sulston suggested narrowing the scope of gene patents to the particular function that constituted the "invention." He said TRIPS should be renegotiated, because it was inequitable. He said legal representation should be balanced, and that the spread of infrastructure and technology throughout the world should be encouraged. He concluded that corporate responsibility should not be relied on, as the goal of companies, quite properly, is to make money.

Joseph Straus, Max Planck Institute, Germany, noted that legislation in developed countries generally does not allow patents on the simple disclosure of a DNA sequence, while patents may be allowed with inclusion of information on the sequence's production and use. He suggested that the inventive step requirement would result in more focus being placed on the use of a particular gene. He reviewed the mandatory requirements within TRIPS for patenting in all fields of technology, as well as provisions under Article 27.3(b) allowing excep-

tions for plants and animals other than microorganisms, and for essentially biological processes for the production of plants and animals other than non-biological and microbiological processes. He noted additional space for legal maneuvering in research exemptions, compulsory licensing and farmers' privileges. Straus highlighted the aims of IPRs to: provide incentives for local R&D; secure optimal use of local genetic resources; attract foreign investment; satisfy specific needs for drugs, nutrition and breeding; and secure participation in global markets. He closed by emphasizing the use of the full range of TRIPS exceptions; benefit sharing, including a focus on capacity building in local research; and attention to contract negotiation and monitoring.

Roy Widdus, Global Forum for Health Research, Switzerland, presented on PPPs for health and IPRs. He stated that PPPs can reduce health inequities and provide win-win solutions for business and public health, but noted that they do not remove governments' responsibility to ensure that health systems are in place. He emphasized that equal access to R&D for the poor was a social goal shared by a number of funding institutions. Widdus noted that PPPs require intellectual property management as they may have or develop intellectual property assets or they may need access to intellectual property. He said the goals of PPP for intellectual property are to ensure continued development of candidate products if commercial interest falters, and to achieve the lowest priced sustainable supply of the product for the target population. He concluded that the challenges for PPPs and other public interest funders include: lack of capacity in, or poor access to, expertise in intellectual property management, coupled with low willingness to pay; relative scarcity of experience in contractual negotiations where social goals are made explicit; and the availability of financing if the product is to be successfully developed.

Greg Galloway, Falco-Archer, US, highlighted the role of intellectual property in the research activities of the Malaria Vaccine Initiative (MVI). He noted MVI's goal of accelerating development of malaria vaccines and ensuring their availability and accessibility in the developing world. He reviewed the Initiative's industrial development model and the scientific, technical, institutional, economic and IPR complexities encountered. Galloway provided details on patent work on the MSP-1 antigen, which involved mapping existing patents. Such mapping efforts found 39 patent families with various unclear and possibly conflicting claims, diffuse nomenclature, few citations to intellectual property heritage, and questions about scope and enforceability. He stressed that complex patent landscapes can dissuade companies, limit access to enabling technologies and increase costs, while also revealing claims over parts of an antigen without concern for the whole. He closed by recommending that patent landscapes should be mapped and disseminated, dynamic knowledge bases should be shared, and public institutions should orchestrate, manage and license patents wisely.

DISCUSSION: Some participants noted that reducing the duration of patents may not be appropriate as commercial development may take at least five years to complete, and patents could expire before any

commercial value is gained. It was noted that PPP is not a solution in itself, and further commitment to fund development and engage industry and other partners is essential. One participant said that developing countries do not have the funds to hire expensive lawyers, and that any system that requires litigation to reach agreement should be restructured. A question was raised about the prospects that future medicines may involve targeting more than one gene and that development of such products might be hindered by the number of patents covering those genes. A respondent however noted that multiple narrow patents might not be as problematic as one broad patent.

INTERNATIONAL INSTITUTIONS, RULES AND PRACTICES AND CAPACITY BUILDING

H.E. Dr Supachai Panitchpakdi, future WTO Director General, introduced the session and highlighted the complexities faced by developing countries in putting their TRIPS and WTO obligations into practice.

Adrian Otten, WTO Intellectual Property Division, outlined the main tasks for the TRIPS Council resulting from the Doha Ministerial in the areas of: public health and medicines, geographic indications, the review of Article 27.3(b), the relation between TRIPS and the CBD, protection of traditional knowledge and folklore, the review the implementation of Article 66(2) covering incentives for technology transfer, the scope and modalities of non-violation complaints, transition periods and electronic commerce. He also outlined perspectives regarding the changing nature of North-South relations within the international trade negotiations, noting that the Uruguay Round focused on trade-offs and balancing advantages of all members, whereas the Doha Declaration is oriented towards ensuring that negotiated components contribute to development interests. Otten closed by noting the increased participation of developing countries and influence of public interest groups within WTO negotiations.

Francis Gurry, WIPO, stressed the complexity of the topic of international institutions, rules and practices. He underscored the wide range of financial wealth among developing countries. He said that, although this is increasing, the share of developing countries in international patent applications is only five percent. Addressing functionality, he noted that patents and copyright represent a means of converting creativity and innovation into marketable assets thereby encouraging technological investment. Addressing users could be another method to achieve functionality. On the resource base, he said there is a need for attention to the forms of creativity and innovation in developing countries. Regarding traditional knowledge, he noted the interface between traditional knowledge and the external world; prevention of unfair acquisition of proprietary rights over traditional knowledge by third parties; and the use of IPR systems to protect traditional knowledge.

Rashid Kaukab, South Centre, Switzerland, noted that the current international trade system lacks balance and advocated that it needs to protect the interests of all countries. He highlighted developing countries' position that intellectual property systems should be constructed in the context of national development frameworks. He stated that

developing country participation within the WTO has not been full and effective because of capacity constraints and official procedures, which are a challenge for smaller and less experienced delegations. Kaukab stated that the WTO's principle of reaching agreement by consensus is passive, and excludes absent delegations, and suggested that it be made active by requiring formal approval by all members. He closed by recommending an independent evaluation of capacity-building programmes to assess whether they have enabled developing countries to make independent and informed decisions or instead have narrowed development options.

Richard Yung, European Patent Office, Germany, outlined four main observations. He said IPRs have become a major issue in political debates and international discussions, and the previous secretive and hidden approach to IPRs should be adjusted to a more transparent one. He stressed the financial needs for technical assistance, and urged greater effort by developed countries to contribute. Yung identified lack of expertise and human resources as barriers. He said that fees paid by patent applicants in developing countries currently go directly to the government but should instead be kept and used within the IPR system. He noted a need to adapt legal and technical assistance for search and examination procedures for patents in developing countries, and that patent information should be made more widely accessible. In conclusion, he encouraged regional cooperation, better coordination, and further cooperation with WIPO.

Martin Khor, Third World Network, Malaysia, noted that TRIPS has established a new international intellectual property arena based on a "one size fits all" model of minimum standards in comparison to previous flexibility to choose sectors for protection. Noting that no distinction is made based on the different capacities of countries, except for the length of transition periods, he proposed differential treatment. He highlighted problems regarding consumer access (e.g., medicines, food, information), negative impacts on research and technology (e.g., duplicative imitation, reverse engineering), and the reverse flow of technology from South to North (e.g., biopiracy of genetic resources and traditional knowledge). Regarding TRIPS implementation in developing countries, Khor recommended: recognizing different levels of development and linking intellectual property levels to capacity; allowing preferential treatment for nationals over foreign companies; allowing for exemptions to essential products in sensitive areas such as drugs and agriculture; extending transition periods until after a proper review of TRIPS is conducted; providing different options for national intellectual property regimes; and defending against bilateral pressures to develop TRIPS+ systems (i.e., accepting standards higher than those in TRIPS).

DISCUSSION: Participants suggested changes in TRIPS to protect the poorer developing countries, possibly in the form of a peace clause, or with a cap on government expenditure for IPR administration. Another alternative would be a new and additional section to the TRIPS agreement. Participants stressed that the options for TRIPS implementation should be open and transparent to developing countries. They

also raised the important role that collective management can play for authors' rights. One participant suggested that WIPO, WTO and WHO work together with developing country experts to ensure safeguards can be used. Otten noted that no dispute settlement proceeding has been initiated against countries requiring more time to come into compliance. Yung highlighted the experience of some countries with economies in transition in the regional formation and harmonization of intellectual property frameworks. Khor supported use of the "development test" as a means to address conflicts regarding non-compliance and meeting national development needs.

CLOSING SESSION

H.E. Dr Supachai Panitchpakdi, future WTO Director General, commended CIPR's work and stressed the WTO's role in meeting the needs of all its members, which requires ensuring the right for all to participate. He provided a historical review of the negotiation of TRIPS, noting that developing countries lacked the advice and ability to negotiate effective trade-offs between TRIPS and their interests in agriculture and textiles. He also noted that TRIPS was originally conceived to address anti-counterfeiting codes and the enforcement of the Paris and Berne Conventions, but as negotiations proceeded and items such as geographic indications were added, the final agreement had a fundamentally different nature. Noting criticisms that TRIPS arose from the work of industry associations, he highlighted the need to ensure that governments and the WTO address broader interests and not just those of the private sector. Supachai concluded with a number of recommendations for future work, including:

- research on the success and failures of TRIPS implementation in developing countries in areas of investment, technology transfer and development;
- examination of tangible and intangible costs, trends in the falling
 price of agricultural products and the rising price of inputs, and
 increases in rent payments and patent fees by developing countries
 licensing foreign technologies;
- education and awareness raising of publics and parliaments;
- emphasis on TRIPS' potential benefits and means to employ its flexibilities and exceptions in national laws;
- pressure on the private sector to assist in technology transfer, joint ventures and investment;
- avoidance of resolving conflicts through the dispute panel; and
- coherence between the work of WIPO and the WTO.

Closing the Conference, Chair John Barton thanked participants for their helpful questions and comments, and applauded the Secretariat for the well-organized meeting.

THINGS TO LOOK FOR

WTO TRIPS COUNCIL: This meeting is scheduled to take place from 5-7 March 2002, at WTO Headquarters in Geneva, Switzerland. For more information contact: WTO Secretariat; tel: +41-22-739-5111; fax: +41-22-739-5783; e-mail: enquiries@wto.org; Internet: http://www.wto.org/english/tratop_e/trips_e/trips_e.htm

GLOBE 2002 CONFERENCE - ACCELERATING BUSINESS AND SUSTAINABLE DEVELOPMENT STRATEGIES: This event is scheduled to take place from 13-15 March 2002, in Vancouver, Canada. For more information contact: GLOBE Foundation; tel: +1-604-775-7300; fax: +1-604-666-8123; e-mail: info@globe.apfnet.org; Internet: http://www.globe2002.com/conference.htm

THE PHARMACEUTICALS INDUSTRY: SQUARING THE CIRCLE - SHAREHOLDER VALUE AND CORPORATE SOCIAL RESPONSIBILITY: This meeting will take place from 14-15 March 2002, in London, UK. For more information, contact Georgina Wright, Royal Institute for International Affairs; tel: +44-20-7957-5754 or +44-20-7957-5700; fax: +44-20-7321-2045 or +44-20-7957-5710; e-mail: conferences@riia.org; Internet: http://www.riia.org/Conferences/PharmaceuticalIndustry.pdf

INTERNATIONAL CONFERENCE ON GLOBALIZATION, GROWTH AND (IN)EQUALITY: This conference is scheduled to take place from 15-17 March 2002, at the University of Warwick, Coventry, UK. This international event will focus on how globalization impinges upon growth and equality. For more information contact: Denise Hewlett or Domenica Scinaldi; tel: +44-24-7657-2533; fax: +44-24-7657-2548; e-mail: Denise.Hewlett@warwick.ac.uk or D.Scinaldi@warwick.ac.uk; Internet: http://www.warwick.ac.uk/fac/soc/CSGR/5th_Annual_Conference

WORKSHOP ON CAPACITY BUILDING ON ENVIRON-MENT, TRADE AND DEVELOPMENT: This workshop is scheduled to take place on 19 March 2002, in Geneva, Switzerland. The workshop aims to provide a forum for identifying capacity building activities needed to assist countries effectively engage in trade and environment negotiations, assess the environmental as well as the developmental implications of the WTO agreements, and develop and implement mutually supportive trade and environment policies. For more information contact: Division of Technology, Industry, and Economics; tel: +41-22-917-8243; fax: +41-22-917-8076; e-mail: etb@unep.ch; Internet: http://www.unep.ch/etu/etp/events/upcming/19March_CB.htm

INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT IN THE NEW ROUND - TRADE, INVEST-MENT AND ENVIRONMENT AFTER DOHA: This conference will take place from 13-14 May 2002, in London, UK. Organized by the Royal Institute of International Affairs, this conference will discuss the major issues arising from the WTO's Doha Ministerial Declaration and look at what the new round will bring to the debate regarding multilateral environmental agreements, dispute settlement, institutional changes, investment and services, agriculture and fisheries, and the role and position of developing countries. For more information contact: Chatham House, London; tel: +44-20-7957-5700; fax: +44-20-7957-5710; Internet: http://www.riia.org

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