

Policy Dialogue on a Proposal for an International Science and Technology Treaty



Science and Technology Diplomacy Initiative and the
ICTSD–UNCTAD Project on IPRs and Sustainable Development



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Science and Technology Treaty**

Room XXV, Palais des Nations, Geneva

Friday, 11 April 2003, 10:00a.m. - 1p.m.

Provisional Programme

1. Welcome by Mr. Rubens Ricupero, Secretary-General of UNCTAD
2. “International Science and Technology Treaty”, by John Barton, Professor of Law at Stanford University and Chair of the Commission on Intellectual Property Rights, United Kingdom
3. Discussants:

Keith E. Maskus, Professor and Chair of Economics at the University of Colorado, Boulder, USA;

Ricardo Meléndez-Ortiz, Executive Director of the International Centre for Trade and Sustainable Development (ICTSD); and

Pedro Roffe, Director of the ICTSD-UNCTAD Project on Intellectual Property Rights and Sustainable Development.
4. Questions and answers

Preserving the Global Scientific and Technological Commons

By John H. Barton

Science and technology require a commons of data, ideas, and insight. Everyone benefits from the openness of that commons. A scientist or engineer is more effective if he or she has access to the work of predecessors – and this contribution will be greater if others have access to his or her work. The commons is global, not just national. Exchange of data and scientific communication across borders is not only part of the mythology of science; it also contributes to the rate of progress of science and technology. And the modern research-based corporation is itself global, combining research and personnel from all over the world.

Restrictions on the Global Scientific/Technological Commons

This global commons faces a number of restrictions. One group arises from regulations designed to protect short-term national competitiveness. In the United States, for example, a license from federally-funded technology must preferentially be given to national firms.¹ Special research exemptions in U.S. antitrust law favor production by U.S. firms.² The U.S. research tax credit is available only for research done within the United States, even by a United States company.³ Similarly, the European Union has recently created a European Research Area, designed to support European competitiveness.⁴

A second and increasingly strong group of restrictions arises from the global trend to expand the scope of intellectual property protections from products to reach more basic ideas, procedures, and materials fundamental to the progress of science and technology. Many have been concerned about the “anti-commons” arising from patents on basic research tools and methodologies, especially in areas like genomics.⁵ A U.S. court has just narrowed the research exemption from patent infringement.⁶ Data bases are subject to protection in Europe.⁷ Meteorological data, once freely shared, are now sold by some European Union governments.⁸ And the costs of satellite photography to scientists are likely to increase.⁹

Finally, our current scientific and technological institutions exclude those potential scientists and engineers in the developing world who do not have an opportunity for education. And those who do obtain education in the developing world often lack the resources to attend international conferences or buy scientific journals. Only some can

¹ 35 U.S.C. § 209(b) (manufacture of products derived from licenses under Bayh-Dole Act).

² 15 U.S.C. § 4306 (manufacture of products under the National Cooperative Research Act of 1984 and the National Cooperative Production Amendments of 1993).

³ 26 U.S.C. § 41(d)(4)(F).

⁴ Decision No. 1513/2002/EC of the European Parliament and of the Council of 27 June 2002.

⁵ Michael A. Heller & Rebecca S. Eisenberg, Can Patents Deter Innovation? The Anticommons in Biomedical Research, *Science* 280: 698 (1998). UK Commission on Intellectual Property Rights, Integrating Intellectual Property Rights and Development Policy 126-30 (2002).

⁶ *Madey v. Duke University*, 307 F.3d 1351 (CAFC 2002).

⁷ S.M. Maurer, P.B. Hugenholtz, and H.J. Onsrud, Europe’s Database Experiment, *Science* 294:789-90 (26 Oct. 2001).

⁸ See, e.g., The Meteorological Office Agency, Framework Document, April 1996, available at <http://www.metoffice.com/corporate/legal/framework.pdf>, (U.K.).

⁹ D. Malakoff, Will the U.S. Bring Down the Curtain on Landsat?, *Science* 288: 2309 (30 June 2000).

participate through access to the Internet. The world as a whole loses.

Possibility of Expanding the Commons through Reciprocity

The world has previously faced analogous barriers, in the form of protectionist restrictions to free trade, restrictions that appeared to serve national self interest and in fact deprived all of the benefits of free trade. Through the GATT (the General Agreement on Tariffs and Trade), which was negotiated in 1947, and converted into the WTO (the World Trade Organization) in 1995, diplomats found a way to lower protectionist restrictions by negotiating on the basis of reciprocity: “I’ll lower my tariffs and help your exports if you’ll lower yours and help my exports.” The resulting GATT/WTO system has a variety of codes and rules requiring the dismantling of particular trade barriers. These are regularly revised and improved in negotiating rounds such as current Doha Round or the Uruguay Round that led to the 1995 creation of the WTO. The process has been so successful that the last half of the 20th century has seen an unprecedented growth in international trade.

The scientific/technological commons could be expanded the same way: “I’ll let your firms and scientists benefit from my research subsidies and basic data if you’ll let my firms and scientists benefit from your subsidies and data.” As with free trade, the net benefits are positive, for a more inclusive and open global scientific/technological commons will be more dynamic. To do this requires a treaty that defines rules freeing scientific/technological exchange and establishes procedures for negotiating regular improvements and expansions of those rules.

There are precedents. There is already a dense network of bilateral scientific exchange agreements, some as full treaties and some as agreements between counterpart agencies.¹⁰ These typically provide a framework for designated cooperative public sector programs and sort out such issues as intellectual property rights. But they do not generally apply to other than designated programs.¹¹ Many might work much better if globalized, especially because current digital network technology facilitates multilateral collaboration. Congress may be supportive, for it has declared that “The mutually beneficial applications of technology in bilateral and multilateral agreements and activities involving the United States and foreign countries or international organizations should be recognized and supported as an important element of United States foreign policy.”¹² And Philippe Busquin, the European Commissioner for Research, has stated that “The European Research Area must be opened up to the rest of the world. This openness should enable EU countries to benefit from international cooperation in science and technology paving the way for closer political and economic relations with third countries.”¹³

¹⁰ See Science, Technology and American Diplomacy 1995, Sixteenth Annual Report Submitted to the Congress by the President Pursuant to Section 503(b) of Title V of Public Law 95-426. Joint Committee Print, Committee on Science and Committee on International Relations, April 1996. (The series has since been discontinued.)

¹¹ See, e.g. Art. 2, Agreement for Scientific and Technological Cooperation between the European Community and the Government of the United States of America, signed Dec. 5, 1997.

¹² 22 U.S.C. § 2656b (2002). The language derives from the 1988 authorization act for the Uruguay Round trade negotiations, P.L. 95-426 § 502.

¹³ International Scientific Cooperation Policy, available at europa.eu.int/comm/research/iscp/welcome_en.html.

Possible provisions of a treaty

The key legal provision of such a treaty would require that, in as many ways as possible, foreign scientists and firms be treated the same way as national ones with respect to access to a nation's scientific and technological support and capability. Specific provisions might include reciprocal commitments to ensure that the benefits of publicly funded research are made available to all and not just to nationals. Similar reciprocal commitments would prohibit favoritism to national firms in areas like participation in research consortia and access to research-oriented tax benefits. And there might be commitments against visa restrictions that limit the ability of students to study at universities in another nation, or restrict the ability of scientists or engineers to participate in conferences or gain experience at firms in another nation. Other issues that might be covered include access to scientific databases and ensuring that intellectual property law not restrict access to basic scientific advances.

These would have to be balanced by safeguard provisions, to ensure, for example, that intellectual property associated with international scientific and technological collaboration is managed in a fair way, and to respond appropriately to national security and technology proliferation concerns, as with respect to military uses of biotechnology. The latter issue is especially important after September 11, 2001. The United States has proposed, for example, programs to create new kinds of security classification for biological data¹⁴ and recent legislation restricts certain foreign students from studying particular areas of biotechnology.¹⁵ Such restrictions may be in the national and global interest – but only if they are reasonably applied and make a proper balance between anti-terrorism concerns and scientific/technological commons concerns. A treaty could usefully spell out this balance.

There would also need to be provisions for regular meetings, for a small secretariat to evaluate the actual degree of scientific and technological cooperation and its mutual benefit, and for continuing negotiations. Such negotiations could provide a focal point for scientific and technical constituencies interested in further opening of the global scientific/technological commons

Helping the Developing Nations

Strengthening openness on a global basis will itself greatly help developing countries, not just by giving them increased access to information and ideas, but also by accelerating the rate of development of science and technology. But a treaty might go much further to help the scientific and technological communities in these nations. Developed nations might commit themselves to assist developing nations in achieving specific educational and scientific/technological goals. This form of international assistance has proven particularly effective, even if rare – broad commitments to technology transfer such as those in TRIPS¹⁶ have not generally contributed much technology to developing nations. It is strong and relatively specific treaty

¹⁴ Ronald M. Atlas, National Security and the Biological Research Community, *Science* 298: 753 (25 Oct. 2002).

¹⁵ USA Patriot Act of 2001, § 817, codified at 18 U.S.C. § 175(b).

¹⁶ See, e.g. Article 66.2, covering incentives for private sector technology transfer to developing nations.

commitments that are likely to be especially useful. The economic benefit of such assistance is often long-term while the political support may be short term.

Of special importance should be commitments to support programs for providing global public scientific and technological goods for the developing world, such as the Consultative Group on International Agricultural Research and the new public-private partnerships for research on HIV, TB, and malaria. Dealing with these needs is absolutely crucial to human survival and to the stability of international society – and the programs are greatly underfunded.¹⁷ Financial commitments would be excellent; they could well be supplemented by commitments to help deal with possible intellectual property difficulties, such as obtaining access to patented platform technologies.

Negotiating a Treaty

Although it is possible to begin with an emphasis on technology flow, this may raise concerns about threats to trade secrets and industrial competitiveness. Therefore, it is probably wise to begin with science, since that is easier, but to do so in a way that permits expansion into more technological areas.

The reciprocal benefits of broadening the commons may make a globally oriented treatment more feasible than one focused primarily on developing nations. The globally-oriented treaty would still significantly benefit developing nations, and could easily include provisions giving these nations preferential benefits. Most important, it would help these nations gain the stronger human resources they need to develop – which is an important step toward achieving technological capability.

For a treaty with a global scientific focus, there are two reasonable negotiating fora. One is UNESCO, the United Nations Educational, Scientific and Cultural Organization. This might be a good place to begin, but is certainly more scientific than technological.

The better forum for the more technological issues, and possibly for all issues, is the WTO. This organization already has responsibility for significant agreements governing intellectual property and international trade in services (where issues of visa rights are involved), and may well move on to deal with international competition laws, which will certainly be important for technology-based industry. The WTO already has a negotiating process that allows for dynamic strengthening of agreements, based on reciprocity and trade-offs of concessions in one sector for counter-concessions in another sector. With some adaptation to create the necessary secretariat, the model developed to help the world gain the benefit of free trade could also help the world gain the benefit of a stronger, more open global scientific/technological commons.

¹⁷ Commission on Macroeconomics and Health, *Macroeconomics and Health, Investing in Health for Economic Development*, (Dec. 2001).

Doha Mandates

"We agree to an examination, in a Working Group under the auspices of the General Council, of the relationship between trade and transfer of technology, and of any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries. The General Council shall report to the Fifth Session of the Ministerial Conference on progress in the examination."

(Para. 37 of the Doha Ministerial Declaration)

"Reaffirming that the provisions of Article 66.2 of the TRIPS Agreement are mandatory, it is agreed that the TRIPS Council shall put in place a mechanism for ensuring the monitoring and full implementation of the obligations in question. To this end, developed-country Members shall submit prior to the end of 2002 detailed reports on the functioning in practice of the incentives provided to their enterprises for the transfer of technology in pursuance of their commitments under Article 66.2. These submissions shall be subject to a review in the TRIPS Council and information shall be updated by Members annually."

(Para. 11.2 of the Decision on Implementation-related Issues and Concerns)

Trade and Transfer of Technology

Background

The Doha Ministerial Declaration has, for the first time in the history of the multilateral trading system, introduced a binding mandate for WTO Members to examine the relationship between trade and technology transfer. To this end, ministers established a Working Group on Trade and Transfer of Technology (WGTTT), open to all Members, to operate within the permanent structure of the WTO.

The main *demandeurs* for examining this issue are developing countries seeking the full implementation of technology transfer clauses in all WTO Agreements. Some developed countries tend to perceive the mandate as an academic exercise and are reluctant to deepen the work towards the implementation of technology transfer clauses in WTO Agreements or to initiate negotiations for increasing technology transfer flows.

Mandated Deadline

The General Council shall report to the fifth WTO Ministerial Conference (10-14 September 2003 in Cancun, Mexico) "any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries."

Current State of Play

Reaching agreement on a substantive agenda for the WGTTT and the process to follow was not an easy task in the first meetings of the Working Group. Fifteen developing countries proposed a set of objectives and terms of reference for the work to be pursued along five clusters (WT/WGTTT/W/2):

- provision of the WTO Agreements related to the transfer of technology (ToT);
- specific analytical work;

- technical co-operation;
- possible areas of consensus-building; and
- the role of international and non-governmental organisations.

In contrast, the EU (WT/WGTTT/1) suggested that the Group should focus on:

- a common understanding of the definition of technology transfer;
- identification of technology transfer channels; and
- assessment of technology transfer channels with a view to recommendations.

To reconcile these differences, the Working Group Chair proposed an exploratory agenda covering a broad range of issues including:

- analysis of the relationship between trade and transfer of technology;
- work by other intergovernmental organisations and academia;
- sharing of country experiences;
- identification of provisions related to transfer of technology in WTO agreements; and
- any possible recommendations on steps that might be taken within the WTO's mandate to increase flows of technology to developing countries.

The Main Approaches Taken by WTO Members

Several developing countries have taken an active role by clearly stating their objectives for the WGTTT. This is reflected in the 15-country proposal described above, as well as a submission listing the provisions relating to technology transfer in all WTO Agreements from Cuba, Egypt, Honduras, Indonesia, Kenya and Zimbabwe (WT/WGTTT/3).

These two submissions have stressed the need to engage in a creative effort on practical means to increase flows of technology transfer and an adequate implementation of relevant trade disciplines. The approach of these proponents can be summarised in the following five aspirations:

- effective implementation of ToT clauses in WTO Agreements;
- enhanced flexibility to implement active country measures (developed and developing) designed to encourage technology flows;
- examination of restrictive practices on technology transfer in light of competition policy;
- increased technical co-operation; and
- capacity-building to facilitate technology transfer.

The EU has laid emphasis on definitional issues, technology transfer channels and assessment of the effectiveness of those channels. On definitional issues, it considers that a broad working definition should be used. It notes that the overall objective of technology transfer is to integrate developing countries in the global economy. According to the EU, there are several main channels for technology transfer including investment, trade in services, trade in goods, licensing of intellectual property rights (IPRs), government procurement, development cooperation, and multilateral environmental agreements. Overall, the EU has shown a rather co-operative stand on moving the WGTTC's mandate forward.

Other OECD countries have expressed strong doubts over the value of the exercise. For instance, the US has shown no enthusiasm on the reach of the WGTTC's prescriptive mandate, arguing that there is no obligation for the Group to explore recommendations for Cancun regarding provisions in WTO Agreements. It has hinted at a preference for maintaining the Group in an 'analytical mode', favouring the exchange of national experiences and a debate on mechanisms to promote technology development and transfer without interfering with the *status quo* of WTO obligations. Japan has kept a low profile role in the talks.

Sharing Experience

In the absence of deep substantive discussion, Canada, Brazil and China have presented their country experiences. Canada's submission describes the type of domestic policies that the country has implemented in various fields including its general regulatory system, intellectual property regulations, competition policies, government procurement tools and specific initiatives and programmes

on technology transfer (WT/WGTTT/2). Many of the policies used by Canada tend to be active and oriented towards strengthening domestic innovation capacity. The submission in particular underlines the ability to attract, absorb, use and export technology.

While stressing the Working Group's importance, Brazil has been critical about the value of the TRIPs Agreement as a tool for technology transfer. In particular, it has highlighted the trade-distorting effects of developed country public funding schemes in support of research and development and the serious consequences for the competitiveness of developing countries.

UNCTAD, the United Nations University (UNU/INTECH) and UN Industrial Development Organisation (UNIDO) have also contributed presentations on their relevant programmes and accumulated experience.

Links to Intellectual Property Rights and the TRIPs Debate

Various delegations have recognised that intellectual property rights (IPRs) can stimulate innovation and that the TRIPs Agreement can have an impact on technology transfer. The EU and Canada believe that licensing technology subject to IPRs allows the transfer of certain know-how, skills and application technologies. Canada specifically mentions using the flexibility of the TRIPs Agreement with regard to the 'early working' clause, which allows the manufacture of patented inventions (both products and procedures) for the purpose of obtaining regulatory approval for generic production of pharmaceutical products even before the patent expires. However, 'early working' consisting of stockpiling production prior to the patent's expiration — with the purpose of having a certain quantity of ready-to-sell products for when the patent protection ends — was found incompatible with the TRIPs Agreement in the EU-Canada dispute on pharmaceutical products.

Developing countries have noted the need to encourage co-operation for establishing appropriate norms and practices that lower transaction costs of intellectual property and dissemination of technology. They have also identified the lack of will by many countries to engage in effective transfer programmes among the major problems that limit technology transfer.

Implementation Issues

Currently, the TRIPs Council is working specifically on incentives for the transfer of technology to least-developed countries in light of Article 66.2 of the TRIPs Agreement, which commits

developed countries to "provide incentives to enterprises and institutions in their territories for the purpose of promoting... technology transfer" to least-developed country Members to help them create a "sound and viable technological base." According to paragraph 11.2 of the Doha Decision on Implementation-related Issues and Concerns, the provisions of Article 66.2 are mandatory, and the TRIPs Council "shall put in place a mechanism for ensuring the monitoring and full implementation of the obligations in question. To this end, developed country Members shall submit prior to the end of 2002 detailed reports on the functioning in practice of the incentives provided to their enterprises for the transfer of technology in pursuance of their commitments under Article 66.2. These submissions shall be subject to a review in the TRIPs Council and information shall be updated by Members annually."

As outlined in the Council's year-end report (IP/C/27), as of 6 December, information on technology transfer incentives had been received and circulated (under IP/C/W/388 and addenda) by Australia, Canada, the EU and its member states, Japan, New Zealand, Norway and Switzerland.

Least-developed countries have submitted one proposal on the type of mechanism that should be put in place for monitoring and implementing Article 66.2 of the TRIPs Agreement (IP/C/W/357). According to this proposal, a mechanism under article 66.2 should take into account the following considerations:

- it must require specific reporting on incentives, enterprises involved, transaction cost, type of technology, appropriateness and local adaptability of the technology transferred and the beneficiary enterprise or institution;
- it must indicate the terms under which technology is transferred and if it meets certain standards of competitiveness;
- it must not fall within the general rubric of overseas development assistance; and
- it must require annual updates and opportunities for review and monitoring.

The proposal also notes that once Members have worked out a monitoring mechanism, its incorporation into the TRIPs Agreement will be critical.

See also the section on technology transfer in the Doha Round Briefing No. 1 on Implementation-related Issues and Concerns.

Outstanding Implementation Issues

“Articles 7 and 8 of the TRIPs Agreement to be operationalised by providing for transfer of technology on fair and mutually advantageous terms” (tired 94 of the Compilation of Outstanding Implementation Issues, document JOB(01)/152/Rev.1).

This tired has not yet been explicitly addressed and/or resolved.

Open Expectations

The Working Group has made some progress in the identification of possible areas of work. However, its future is uncertain and unclear. In the view of

many observers, in the current policy environment where development has been placed at the centre, the WGTTC offers a unique opportunity for developing countries to redress the current imbalances of the multilateral trading system. Upgrading technology could assist them in reaching wider development goals and thus lead to a more balanced integration into the global economy. Notwithstanding this imperative, the discussions have also highlighted the difficulties of developing countries in addressing the different negotiating tracks simultaneously, particularly with regard to a subject like this where there is an urgent need for new ideas and a clear negotiating strategy.

Proposals and other documents can be found at <http://docsonline.wto.org/> under WT/WGTTC/.*

This series of **Doha Round Briefings** is published by the International Centre for Trade and Sustainable Development (ICTSD) and the International Institute for Sustainable Development (IISD).

Mark Halle (IISD) and Ricardo Meléndez-Ortiz (ICTSD) conceived the Briefings. Contributing writers at ICTSD included: Heike Baumüller, Hugo Cameron, Anja Halle, Ricardo Meléndez-Ortiz, Victor Mosoti, David Primack, Mahesh Sugathan, David Vivas and Alexander Werth. Trineesh Biswas (IISD) served as copy editor, Donald Berg as graphic designer and Stuart Slayen (IISD) as publication manager. Funding for this project has been provided by the Swiss Agency for Development and Cooperation through IISD and by ICTSD's supporting donors. Series Editor: Anja Halle, ahalle@ictsd.ch. Series Directors: Ricardo Meléndez-Ortiz, rmelendez@ictsd.ch and Mark Halle, mhalle@iisd.ca.

The full series as well as upcoming updates can be found at www.ictsd.org and at www.iisd.org. Copyright: ICTSD and IISD, February 2003.

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The ICTSD-UNCTAD Project on IPRs and Sustainable Development

A Brief Overview of the Project and its Publications

The Capacity Building Project on Intellectual Property Rights (IPRs) and Sustainable Development is being implemented by the United Nations Conference on Trade and Development (UNCTAD) and the International Centre for Trade and Sustainable Development (ICTSD) over two years. The main goals of the project are:

- To improve understanding of the development implications of the TRIPS Agreement.
- To strengthen the analytical and negotiating capacity of developing countries so that they are better able to participate in IPR-related negotiations in an informed fashion in furtherance of their sustainable development objectives.

Outputs of the Project

The project is producing a series of documents through a participatory process involving trade negotiators, national policy makers, as well as eminent experts in the field, NGOs, international organizations, and institutions in the North and the South dealing with IPRs and development. The published outputs are not intended to be academic exercises, but instruments that, in their final forms, will be the result of a thorough process of consultation. This is being achieved by rapid development of working drafts and circulation of these to experts and to the intended audiences for their comments. These documents are available on the project Web site at <http://www.ictsd.org/iprsonline/index.htm>. They include:

- **Policy Discussion Paper**

This is intended to be a clear, jargon-free synthesis of the main issues to help policy makers, stakeholders and the public in developing and developed countries to understand the varying perspectives surrounding different IPRs, their known or possible impact on sustainable development, and different policy positions.

- **Resource Book on TRIPs and Development**

This is a guide that provides background and technical information on the main issues under discussion in TRIPS. It should be a practical tool for negotiators and policymakers in order to facilitate their informed participation in negotiations and decision-making processes. It is in six parts:

- 1: Nature of Obligations, Principles and Objectives (Articles 1 – 8 of TRIPS and the preamble)
- 2: Substantive Obligations (Sections 1 – 7 of Part II of TRIPS)
- 3: Intellectual Property Rights and Competition (Article 8.2 and Section 8 of Part II of TRIPS, Article 40)
- 4: Enforcement, Acquisition and Maintenance of Rights (Parts III and IV of TRIPS)
- 5: Interpretation and Dispute Prevention and Settlement (Part V of TRIPS)
- 6: Transitional and Institutional Arrangements (Parts VI and VII of TRIPS)

The TRIPS provisions are analysed according to the following structure:

1. Introduction: Terminology, Definition and Scope
2. History of the Provision (Situation pre-TRIPS and Negotiating History)
3. Possible Interpretations
4. WTO Jurisprudence
5. Relationship with other International Instruments
6. New Developments (National Laws, International Instruments, Regional and Bilateral Contexts and Proposals for Review)
7. Comments, including Economic and Social Implications

A draft of each section is published on the web as soon as it is available.

- **Research Tools**

Research on background material includes a literature survey on intellectual property rights and sustainable human development and ongoing work in the areas covered by the project.

- *Inventory of Relevant International Negotiations, Activities and Processes on Intellectual Property*, by David Vivas Eugui, July 2002.
- *Literature survey on intellectual property rights and sustainable human development*, selected and compiled by Graham Dutfield, January 2003.

- **Case Studies**

The Project is providing a series of Case Studies on various IPR issues to supplement the Resource Book and the Paper. This allows concrete evidence to emerge and shed light on the impact and relevance of IPRs in developing countries. The case studies have been selected on the basis of concerns expressed by developing countries as well as priority areas identified by their negotiators.

- *Technology Transfer and Intellectual Property Rights: Lessons from Korea's Experience*, by Linsu Kim, October 2002.
- *Non-Voluntary Licensing of Patented Inventions : Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the United States of America*, by Jerome H. Reichman and Catherine Hasenzahl, September 2002.
- *Non-Voluntary Licensing of Patented Inventions : The Canadian Experience*, by Jerome H. Reichman and Catherine Hasenzahl, October 2002.
- *Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation*, by Graham Dutfield, October 2002.
- *Geographical Indications: A Review of Proposals at the TRIPS Council*, by Dwijen Rangnekar, June 2002.
- *Indicators of the relative importance of IPRs in developing countries*, by Sanjaya Lall, November 2001.

The following case studies are in preparation:

- *Non-Voluntary Licensing of Patented Inventions : The US Experience*, by Jerome H. Reichman and Catherine Hasenzahl.
- *The Economics of Geographical Indications*, by D. Rangnekar.
- *Small-scale Agriculture and the Nutritional Safeguard under Article 8(1) of the TRIPS Agreement: Case Studies from Kenya and Peru*, by R. Lettington.
- *Strategies for Development in the Information Age: Issues in the Regulation of Computer Software and Electronic Commerce*, by R. Okediji.
- *Computer software, intellectual property and developing countries*, by Alan Story
- *Biotechnology and Food Security*, by P. Cullet.

Institutional matters

The Project is managed jointly by the UNCTAD secretariat and ICTSD, and is guided by a steering committee consisting of Mr Ricardo Melendez-Ortiz (Executive Director of ICTSD), Mr Rubens Ricupero (Secretary-General of UNCTAD), Mr Pedro Roffe (Project Director) and Mr Geoff Tansey (Independent Consultant). The project has received funding from the UK's Department for International Development (DFID), the Swedish International Development Agency (SIDA) and the Rockefeller Foundation.

A Panel of Reviewers consisting of specialists on intellectual property rights has been established to provide guidance and orientation to the various phases of the implementation of the Project and to ensure that the outputs achieve high standards of quality and objectivity.

Further information

For further information please see the project web site:

<http://www.ictsd.org/iprsonline>

or, if you have comments and suggestions, please contact:

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