



NMUN • NY

# WORLD INTELLECTUAL PROPERTY ORGANIZATION

## BACKGROUND GUIDE 2011

WRITTEN BY: Mark Edwards, Angela Merriam, Denise Chau and Kaitlin Justice



NATIONAL MODEL UNITED NATIONS  
nmun.org

## CONTACT THE NMUN

Please consult the FAQ section of [nmun.org](http://nmun.org) for answers to your questions. If you do not find a satisfactory answer you may also contact the individuals below for personal assistance. They may answer your question(s) or refer you to the best source for an answer.

NMUN Director-General (Sheraton)  
Holger Baer | [dirgen@nmun.org](mailto:dirgen@nmun.org)

NMUN Director-General (Marriott)  
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NMUN Secretary-General  
Ronny Heintze | [secgen@nmun.org](mailto:secgen@nmun.org)

### NMUN•NY 2011 Important Dates

**IMPORTANT NOTICE:** To make hotel reservations, you must use the forms at [nmun.org](http://nmun.org) and include a \$1,000 deposit. Discount rates are available until the room block is full or one month before the conference – whichever comes first. **PLEASE BOOK EARLY!**

31 January 2011	<ul style="list-style-type: none"> <li>• Confirm Attendance &amp; Delegate Count. (Count may be changed up to 1 March)</li> <li>• Make Transportation Arrangements - DON'T FORGET! (We recommend confirming hotel accommodations prior to booking flights.)</li> </ul>
15 February 2011	<ul style="list-style-type: none"> <li>• Committee Updates Posted to <a href="http://www.nmun.org">www.nmun.org</a></li> </ul>
1 March 2011	<ul style="list-style-type: none"> <li>• Hotel Registration with FULL PRE-PAYMENT Due to Hotel - Register Early! Group Rates on hotel rooms are available on a first come, first served basis until sold out. Group rates, if still available, may not be honored after that date. See hotel reservation form for date final payment is due.</li> <li>• Any Changes to Delegate Numbers Must be Confirmed to: <a href="mailto:outreach@nmun.org">outreach@nmun.org</a></li> <li>• Preferred deadline for submission of Chair / Rapp applications to Committee Chairs</li> <li>• All Conference Fees Due to NMUN for confirmed delegates. (\$125 per delegate if paid by 1 March; \$150 per delegate if received after 1 March. Fee is not refundable after this deadline.</li> </ul>
15 March 2011	<ul style="list-style-type: none"> <li>• Two Copies of Each Position Paper Due via E-mail (See Delegate Preparation Guide for instructions).</li> </ul>
NATIONAL MODEL UNITED NATIONS	<p>The 2011 National Model UN Conference</p> <ul style="list-style-type: none"> <li>• 17 - 21 April – Sheraton New York</li> <li>• 19 - 23 April – New York Marriott Marquis</li> </ul> <p>The 2012 National Model UN Conference</p> <ul style="list-style-type: none"> <li>• 1 - 5 April – Sheraton New York</li> <li>• 3 - 7 April – New York Marriott Marquis</li> <li>• 30 March - 3 April – New York Marriott Marquis</li> </ul>

## POSITION PAPER INSTRUCTIONS

**Two copies of each position paper should be sent via e-mail by 15 MARCH 2011**

### 1. TO COMMITTEE STAFF

A file of the position paper (.doc or .pdf) for each assigned committee should be sent to the committee e-mail address listed below. Mail papers by 15 March to the e-mail address listed for your particular venue. These e-mail addresses will be active when background guides are available. Delegates should carbon copy (cc:) themselves as confirmation of receipt. Please put committee and assignment in the subject line (Example: GAPLEN\_Greece).

### 2. TO DIRECTOR-GENERAL

- Each delegation should send one set of all position papers for each assignment to the e-mail designated for their venue: positionpapers.sheraton@nmun.org or positionpapers.marriott@nmun.org.

This set (held by each Director-General) will serve as a back-up copy in case individual committee directors cannot open attachments.

*Note:* This e-mail should only be used as a repository for position papers.

- The head delegate or faculty member sending this message should cc: him/herself as confirmation of receipt. (Free programs like Adobe Acrobat or WinZip may need to be used to compress files if they are not plain text.)

- Because of the potential volume of e-mail, only one e-mail from the Head Delegate or Faculty Advisor containing all attached position papers will be accepted.

Please put committee, assignment and delegation name in the subject line (Example: Cuba\_U\_of\_ABC). If you have any questions, please contact the Director-General at dirgen@nmun.org.

nmun.org  
for more information

### COMMITTEE

### EMAIL - SHERATON

General Assembly First Committee .....	ga1st.sheraton@nmun.org
General Assembly Second Committee .....	ga2nd.sheraton@nmun.org
General Assembly Third Committee.....	ga3rd.sheraton@nmun.org
Human Rights Council.....	hrc.sheraton@nmun.org
ECOSOC Plenary .....	ecosoc.sheraton@nmun.org
Commission on Crime Prevention and Criminal Justice .....	ccpcj.sheraton@nmun.org
Commission on the Status of Women .....	csw.sheraton@nmun.org
Economic and Social Commission for Asia and the Pacific .....	escap.sheraton@nmun.org
Economic and Social Commission for Western Asia .....	escwa.sheraton@nmun.org
United Nations Environment Programme .....	unep.sheraton@nmun.org
United Nations Population Fund .....	unfpa.sheraton@nmun.org
United Nations Children's Fund.....	unicef.sheraton@nmun.org
World Intellectual Property Organization .....	wipo.sheraton@nmun.org
African Development Bank .....	afdb.sheraton@nmun.org
Group of 20.....	g20.sheraton@nmun.org
Organization of American States .....	oas.sheraton@nmun.org
Organization for Security and Co-operation in Europe.....	osce.sheraton@nmun.org
Security Council.....	sc.sheraton@nmun.org
Security Council 2.....	sc2.sheraton@nmun.org
International Court of Justice.....	icj.sheraton@nmun.org
Non-Proliferation Treaty Review Conference .....	npt.sheraton@nmun.org

### COMMITTEE

### EMAIL - MARRIOTT

General Assembly First Committee .....	ga1st.marriott@nmun.org
General Assembly Second Committee .....	ga2nd.marriott@nmun.org
General Assembly Third Committee.....	ga3rd.marriott@nmun.org
Human Rights Council.....	hrc.marriott@nmun.org
ECOSOC Plenary .....	ecosoc.marriott@nmun.org
Commission on Crime Prevention and Criminal Justice .....	ccpcj.marriott@nmun.org
Commission on the Status of Women .....	csw.marriott@nmun.org
Economic and Social Commission for Asia and the Pacific .....	escap.marriott@nmun.org
Economic and Social Commission for Western Asia .....	escwa.marriott@nmun.org
United Nations Environment Programme .....	unep.marriott@nmun.org
United Nations Population Fund .....	unfpa.marriott@nmun.org
United Nations Children's Fund.....	unicef.marriott@nmun.org
World Intellectual Property Organization .....	wipo.marriott@nmun.org
African Development Bank .....	afdb.marriott@nmun.org
Group of 20.....	g20.marriott@nmun.org
Organization of American States .....	oas.marriott@nmun.org
Organization for Security and Co-operation in Europe.....	osce.marriott@nmun.org
Security Council.....	sc.marriott@nmun.org
Security Council 2.....	sc2.marriott@nmun.org
International Court of Justice.....	icj.marriott@nmun.org
Non-Proliferation Treaty Review Conference .....	npt.marriott@nmun.org

### OTHER USEFUL CONTACTS

Entire Set of Delegation Position Papers .....	positionpapers.sheraton@nmun.org
(send only to e-mail for your assigned venue).....	positionpapers.marriott@nmun.org
Secretary-General .....	secgen@nmun.org
Director(s)-General .....	dirgen@nmun.org
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Dear Delegates,

We are pleased to welcome you to the 2011 National Model United Nations (NMUN). This year's World Intellectual Property Organization (WIPO) staff is: Directors Mark Edwards and Angela Merriam, and Assistant Directors Denise Chau and Kaitlin Justice. Mark graduated from University of California at Santa Cruz with a B.A. in History with an emphasis in Africa. He has been involved with MUN for eleven years. This is his fifth year at NMUN, third on staff. Angela has a B.S. in Economics, as well as an M.A. in Public Policy from Carleton University. She has been involved in various MUN conferences over the past 7 years, with this her second year taking on the role of Director at NMUN. She is originally from Toronto, Canada and currently resides in Beijing, China. Denise is from Vancouver, Canada and has been involved in MUN for 5 years. She has attended 15+ conferences as a delegate or staff member. She graduated in 2010 from the University of British Columbia as a Science major with a minor in Commerce. This is her first year on staff. Kaitlin graduated from The College of Idaho in 2010 with a B.A. in International Political Economy and a minor in Asian Studies. She has been involved with NMUN for 4 years, and this is her first year on staff.

The topics under discussion for WIPO at the 2011 NMUN are:

1. Pharmaceutical Patents and the Fight Against HIV/AIDS in Developing Nations
2. Differentiated Intellectual Property Rights for Environmental and Climate Technologies
3. Patenting Life: Intellectual Property and Complex Structures

WIPO is the international body that is committed to developing an international set of intellectual property laws. WIPO has enacted numerous treaties that have shaped intellectual property practices, such as the Patent Law Treaty. NMUN will be simulating the WIPO Conference.

The background guide will serve as a brief introduction to the three topics listed. Accordingly, it is not meant to be used as an all inclusive analysis, but as the groundwork for your own analysis and research. To conduct your research, please consult scholarly materials, including journals, international news, and the United Nations website, amongst others. You will also need to familiarize yourself with the work and current operations of WIPO.

Each delegation must submit a position paper. NMUN will accept position papers via e-mail by March 15, 2011. Please refer to the message from your Directors-General explaining the NMUN position paper requirements and restrictions. Delegates' adherence to these guidelines is crucial. NMUN can be one of the most rewarding academic experiences of your college career. We hope that you as delegates take full advantage of this year's conference to not only advance your understanding of the UN and its role in international affairs, but also to open your imaginations to the various interpretations of the heavily contested issues we will discuss. If you have any questions regarding preparation, please feel free to contact any of the WIPO substantive staff or the Under-Secretaries General for Specialized Agencies, Katharina Weinert (Sheraton) and Daniel Lemay (Marriott). Good luck in your preparation for the conference. We look forward to seeing you in April!

*Sheraton Venue*

Mark Edwards

Director

Denise Chau

Assistant Director

[wipo.sheraton@nmun.org](mailto:wipo.sheraton@nmun.org)

*Marriott Venue*

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## Message from the Directors-General Regarding Position Papers for the 2011 NMUN Conference

At the 2011 NMUN New York Conference, each delegation submits one position paper for each committee it is assigned to. Delegates should be aware that their role in each committee impacts the way a position paper should be written. While most delegates will serve as representatives of Member States, some may also serve as observers, NGOs or judicial experts. To understand these fine differences, please refer to the Delegate Preparation Guide.

Position papers should provide a concise review of each delegation's policy regarding the topic areas under discussion and establish precise policies and recommendations in regard to the topics before the committee. International and regional conventions, treaties, declarations, resolutions, and programs of action of relevance to the policy of your State should be identified and addressed. Making recommendations for action by your committee should also be considered. Position papers also serve as a blueprint for individual delegates to remember their country's position throughout the course of the Conference. NGO position papers should be constructed in the same fashion as position papers of countries. Each topic should be addressed briefly in a succinct policy statement representing the relevant views of your assigned NGO. You should also include recommendations for action to be taken by your committee. It will be judged using the same criteria as all country position papers, and is held to the same standard of timeliness.

Please be forewarned, delegates must turn in material that is entirely original. ***The NMUN Conference will not tolerate the occurrence of plagiarism.*** In this regard, the NMUN Secretariat would like to take this opportunity to remind delegates that although United Nations documentation is considered within the public domain, the Conference does not allow the verbatim re-creation of these documents. This plagiarism policy also extends to the written work of the Secretariat contained within the Committee Background Guides. Violation of this policy will be immediately reported to faculty advisors and may result in dismissal from Conference participation. Delegates should report any incident of plagiarism to the Secretariat as soon as possible.

Delegation's position papers can be awarded as recognition of outstanding pre-Conference preparation. In order to be considered for a Position Paper Award, however, delegations must have met the formal requirements listed below. Please refer to the sample paper on the following page for a visual example of what your work should look like at its completion. The following format specifications are **required** for all papers:

- All papers must be typed and formatted according to the example in the Background Guides
- Length must **not** exceed two single spaced pages (one double sided paper, if printed)
- Font **must** be Times New Roman sized between 10 pt. and 12 pt.
- Margins must be set at 1 inch for whole paper
- Country/NGO name, School name and committee name clearly labeled on the first page; the use of national symbols is highly discouraged
- Agenda topics clearly labeled in separate sections

To be considered timely for awards, please read and follow these directions:

1. **A file of the position paper** (.doc or .pdf) **for each assigned committee** should be sent to the committee email address listed in the Background Guide. These e-mail addresses will be active after November 15, 2010. Delegates should carbon copy (cc:) themselves as confirmation of receipt.
2. Each delegation should also send **one set of all position papers** to the e-mail designated for their venue: [positionpapers.sheraton@nmun.org](mailto:positionpapers.sheraton@nmun.org) or [positionpapers.marriott@nmun.org](mailto:positionpapers.marriott@nmun.org). This set will serve as a back-up copy in case individual committee directors cannot open attachments. These copies will also be made available in Home Government during the week of the NMUN Conference.

Each of the above listed tasks needs to be completed no later than **March 15, 2010 (GMT-5) for delegations attending the NMUN conference at either the Sheraton or the Marriott venue.**

**PLEASE TITLE EACH E-MAIL/DOCUMENT WITH THE NAME OF THE COMMITTEE, ASSIGNMENT AND DELEGATION NAME (Example: AU\_Namibia\_University of Caprivi)**

*A matrix of received papers will be posted online for delegations to check prior to the Conference. If you need to make other arrangements for submission, please contact Holger Baer, Director-General, Sheraton venue, or Brianna Johnston-Hanks, Director-General, Marriott venue at [dirgen@nmun.org](mailto:dirgen@nmun.org). There is an option for delegations to submit physical copies via regular mail if needed.*

Once the formal requirements outlined above are met, Conference staff use the following criteria to evaluate Position Papers:

- Overall quality of writing, proper style, grammar, etc.
- Citation of relevant resolutions/documents
- General consistency with bloc/geopolitical constraints
- Consistency with the constraints of the United Nations
- Analysis of issues, rather than reiteration of the Committee Background Guide
- Outline of (official) policy aims within the committee's mandate

Each delegation can submit a copy of their position paper to the permanent mission of the country being represented, along with an explanation of the Conference. Those delegations representing NGOs do not have to send their position paper to their NGO headquarters, although it is encouraged. This will assist them in preparation for the mission briefing in New York.

Finally, please consider that over 2,000 papers will be handled and read by the Secretariat for the Conference. Your patience and cooperation in strictly adhering to the above guidelines will make this process more efficient and is greatly appreciated. Should you have any questions please feel free to contact the Conference staff, though as we do not operate out of a central office or location your consideration for time zone differences is appreciated.

Sincerely yours,

*Sheraton Venue*  
Holger Baer  
Director-General  
[holger@nmun.org](mailto:holger@nmun.org)

*Marriott Venue*  
Brianna Johnston-Hanks  
Director-General  
[briannaj@nmun.org](mailto:briannaj@nmun.org)

## Sample Position Paper

The following position paper is designed to be a sample of the standard format that an NMUN position paper should follow. While delegates are encouraged to use the front and back of a single page in order to fully address all topics before the committee, please remember that only a *maximum* of one double-sided page (or two pages total in an electronic file) will be accepted. Only the first double-sided page of any submissions (or two pages of an electronic file) will be considered for awards.

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*Delegation from*  
Canada

*Represented by*  
(Name of College)

### *Position Paper for General Assembly Plenary*

The topics before the General Assembly Plenary are: Breaking the link between Diamonds and Armed Conflict; the Promotion of Alternative Sources of Energy; and the Implementation of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Particularly in Africa. Canada is dedicated to collaborative multilateral approaches to ensuring protection and promotion of human security and advancement of sustainable development.

#### **I. Breaking the link between Diamonds and Armed Conflict**

Canada endorses the Kimberly Process in promoting accountability, transparency, and effective governmental regulation of trade in rough diamonds. We believe the Kimberly Process Certification Scheme (KPCS) is an essential international regulatory mechanism and encourage all Member States to contribute to market accountability by seeking membership, participation, and compliance with its mandate. Canada urges Member States to follow the recommendations of the 2007 Kimberley Process Communiqué to strengthen government oversight of rough diamond trading and manufacturing by developing domestic legal frameworks similar to the Extractive Industries Transparency Initiative. We call upon participating States to act in accordance with the KPCS's comprehensive and credible systems of peer review to monitor the continued implementation of the Kimberley Process and ensure full transparency and self-examination of domestic diamond industries. We draw attention to our domestic programs for diamond regulation including Implementing the Export and Import of Rough Diamonds Act and urge Member States to consider these programs in developing the type of domestic regulatory frameworks called for in A/RES/55/56. Canada recognizes the crucial role of non-governmental organizations (NGOs) in the review of rough diamond control measures developed through the Kimberly Process and encourages States to include NGOs, such as Global Witness and Partnership Africa Canada, in the review processes called for in A/RES/58/290. We urge Member States to act in accordance with A/RES/60/182 to optimize the beneficial development impact of artisanal and alluvial diamond miners by establishing a coordinating mechanism for financial and technical assistance through the Working Group of the Kimberly Process of Artisanal Alluvial Producers. Canada calls upon States and NGOs to provide basic educational material regarding diamond valuation and market prices for artisanal diggers, as recommended by the Diamond Development Initiative. Canada will continue to adhere to the 2007 Brussels Declaration on Internal Controls of Participants and is dedicated to ensuring accountability, transparency, and effective regulation of the rough diamond trade through the utilization of voluntary peer review systems and the promotion of increased measures of internal control within all diamond producing States.

#### **II. The Promotion of Alternative Sources of Energy**

Canada is dedicated to integrating alternative energy sources into climate change frameworks by diversifying the energy market while improving competitiveness in a sustainable economy, as exemplified through our Turning Corners Report and Project Green climate strategies. We view the international commitment to the promotion of alternative sources of energy called for in the Kyoto Protocol and the United Nations Framework Convention on Climate Control (UNFCCC) as a catalyst to sustainable development and emission reduction. Canada fulfills its obligations to Article 4 of the UNFCCC by continuing to provide development assistance through the Climate Change Development Fund and calls upon Member States to commit substantial financial and technical investment toward the transfer of sustainable energy technologies and clean energy mechanisms to developing States. We emphasize the need for Member States to follow the recommendations of the 2005 Beijing International Renewable Energy Conference to strengthen domestic policy frameworks to promote clean energy technologies. Canada views

dissemination of technology information called for in the 2007 Group of Eight Growth and Responsibility in the World Economy Declaration as a vital step in energy diversification from conventional energy generation. We call upon Member States to integrate clean electricity from renewable sources into their domestic energy sector by employing investment campaigns similar to our \$1.48 billion initiative ecoENERGY for Renewable Power. Canada encourages States to develop domestic policies of energy efficiency, utilizing regulatory and financing frameworks to accelerate the deployment of clean low-emitting technologies. We call upon Member States to provide knowledge-based advisory services for expanding access to energy in order to fulfill their commitments to Goal 1 of the Millennium Development Goals (MDGs). Canada urges States to address the concerns of the 2007 Human Development Report by promoting tax incentives, similar to the Capital Cost Allowances and Canadian Renewable and Conservation Expenses, to encourage private sector development of energy conservation and renewable energy projects. As a member of the Renewable Energy and Energy Efficiency Partnership, Canada is committed to accelerating the development of renewable energy projects, information sharing mechanisms, and energy efficient systems through the voluntary carbon offset system. We are dedicated to leading international efforts toward the development and sharing of best practices on clean energy technologies and highlight our release of the Renewable Energy Technologies Screen software for public and private stakeholders developing projects in energy efficiency, cogeneration, and renewable energy. Canada believes the integration of clean energy into State specific strategies called for in A/62/419/Add.9 will strengthen energy diversification, promote the use of cogeneration, and achieve a synergy between promoting alternative energy while allowing for competitiveness in a sustainable economy.

### **III. Implementation of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Particularly in Africa**

Canada views the full implementation of the treatment and prevention targets of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Especially in Africa, as essential to eradicating malaria and assisting African States to achieve Target 8 of Goal 6 of the MDGs by 2015. We recommend Member States cooperate with the World Health Organization to ensure transparency in the collection of statistical information for Indicators 21 and 22 of the MDGs. Canada reaffirms the targets of the Abuja Declaration Plan of Action stressing regional cooperation in the implementation, monitoring, and management of malaria prevention and treatment initiatives in Africa. To fully implement A/RES/61/228, Canada believes developed States must balance trade and intellectual property obligations with the humanitarian objective of the Doha Declaration on the TRIPS Agreement and Public Health. We continue to implement Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health into our compulsory licensing framework through the Jean Chrétien Pledge to Africa Act. We urge Member States to support compulsory licensing for essential generic medicines by including anti-malarial vaccines and initiating domestic provisions to permit export-only compulsory licenses to domestic pharmaceutical manufacturers, similar to Canada's Access to Medicines Regime. Canada calls upon Member States to establish advanced market commitments on the distribution of pneumococcal vaccines to developing States in cooperation with PATH and the Malaria Vaccine Initiative. We emphasize the need for greater membership in the Roll Back Malaria initiative to strengthen malaria control planning, funding, implementation, and evaluation by promoting increased investment in healthcare systems and greater incorporation of malaria control into all relevant multi-sector activities. Canada continues to implement the Canadian International Development Agency's (CIDA) New Agenda for Action on Health to reduce malaria infection rates among marginalized populations in Africa, increase routine immunizations rates, and reduce infection rates of other neglected infections. Canada will achieve the goal of doubling aid to Africa by 2008-2009 by providing assistance to the Global Fund to Fight Aids, Tuberculosis, and Malaria. We urge Member States to increase donations to intergovernmental organizations and NGOs that support malaria programming in Africa, exemplified by CIDA's contribution of \$26 million to the Canadian Red Cross. We continue our efforts to provide accessible and affordable vector control methods to African States through the Red Cross' Malaria Bed Net Campaign and the African Medical Research Foundation Canada by supplying insecticide-treated mosquito nets and Participatory Malaria Prevention and Treatment tool kits.



# History of the World Intellectual Property Organization (WIPO)

## *The Organization and the United Nations*

The World Intellectual Property Organization (WIPO) was established in 1967 following the signing of the Convention Establishing the World Intellectual Property Organization in Stockholm, Sweden.<sup>1</sup> It had two main objectives: to promote the protection of intellectual property worldwide through member state cooperation and collaboration and to ensure that there was administrative cooperation present.<sup>2</sup> The organization is currently headquartered in Geneva, Switzerland.<sup>3</sup>

WIPO is a specialized agency of the United Nations (UN).<sup>4</sup> It coordinates closely with the UN General Assembly (GA) and the UN Economic and Social Council (ECOSOC) to ensure that policies and activities of each organ do not overlap and are effective; WIPO is also a member of the UN Administrative Committee on Coordination, currently known as the UN System Chief Executives Board for Coordination.<sup>5</sup> The organization is also responsible for independently compiling statistics within its mandated activities for use within the UN.<sup>6</sup>

In today's increasingly globalized world economy, the rules and mechanisms governing and protecting intellectual property worldwide are constantly debated upon to reflect current trends. Intellectual property rights, which grant a temporary monopoly to an inventor for their product, are used to protect technological innovations from being copied or imitated. They also help protect the profits of the inventor and associated initial investors, as they provide an incentive for would-be inventors to invest time and effort in developing a product, and stimulates investors to provide capital for the research and development of such products and inventions.<sup>7</sup> A fine balance must be established between protecting knowledge and the flow of information as excessive protection would hinder the spread of innovative knowledge or lead to permanent monopolies that limit consumer choice.<sup>8</sup> WIPO works to ensure that the international intellectual property system is balanced and accessible, safeguards public interest, and allows all nations involved to develop socially, culturally, and economically.<sup>9</sup>

## *Predecessors of WIPO*

The trigger that led to the creation of an international body to oversee a worldwide modern patent system and provide protection of intellectual property occurred in 1873 when exhibitors refused to attend the International Exhibition of Inventions in Vienna because they feared that their ideas would be stolen and used without their knowledge.<sup>10</sup> This led to the Paris Convention for the Protection of Industrial Property in 1883, which established a uniform patent law system that protected and enforced patent law across all signatories to the Convention<sup>11</sup>. Three years later in 1886, the Berne Convention on the Protection of Literary and Artistic Works created an international framework for the protection of literary and artistic works.<sup>12</sup> In 1893, the two bureaux created from the conventions merged to form the United International Bureaux for the Protection of International Property (known by its French acronym, BIRPI).<sup>13</sup> In 1967, BIRPI became WIPO following the signing of the Convention Establishing the World Intellectual Property Organization; WIPO became part of the UN framework in 1974 and continues to administer many treaties concerning intellectual property matter.<sup>14</sup>

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<sup>1</sup> WIPO, *Convention Establishing the World Intellectual Property Organization*, 1967, p.1.

<sup>2</sup> WIPO, *Convention Establishing the World Intellectual Property Organization*, 1967, p.2.

<sup>3</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>4</sup> WIPO, *Agreement between the United Nations and the World Intellectual Property Organization*, 1974, Article 1.

<sup>5</sup> WIPO, *Agreement between the United Nations and the World Intellectual Property Organization*, 1974, Article 2.

United Nations, *United Nations Document Repository: Administrative Committee on Coordination Web site*, 2002.

<sup>6</sup> WIPO, *Agreement between the United Nations and the World Intellectual Property Organization*, 1974, Article 7.

<sup>7</sup> Falvey, *The role of intellectual property rights in technology transfer and economic growth: theory and evidence*, 2006, p.1.

<sup>8</sup> Falvey, *The role of intellectual property rights in technology transfer and economic growth: theory and evidence*, 2006, p.1.

<sup>9</sup> WIPO, *WIPO: An Overview*, 2009, p. 2.

<sup>10</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>11</sup> WIPO, *Paris Convention for the Protection of Industrial Property*, 1883, Article 2.

<sup>12</sup> WIPO, *Berne Convention for the Protection of Literary and Artistic Works*, 1886, Article 2.

<sup>13</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>14</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

## ***Current Structure of WIPO***

WIPO currently consists of 184 member states, which comprises over 90% of the countries in the world.<sup>15</sup> Within WIPO, there are many different decision-making bodies, including Governing Bodies, Standing Committees, Permanent Committees, and Working Groups, as well as Unions that are formed to administer the treaties established by WIPO.<sup>16</sup> The highest decision-making organs are the Governing Bodies, which consist of the WIPO General Assembly, the WIPO Conference, and the WIPO Coordination Committee.<sup>17</sup> The WIPO General Assembly consists of all WIPO member states; its various duties include adopting the budget and financial regulations of WIPO and reviewing and approving the reports of the other WIPO committees.<sup>18</sup> The WIPO Conference discusses matters of general interest in the field of intellectual property and adopts recommendations of such matters, while the WIPO Coordination Committee performs administrative work and gives advice concerning such matters to both the UN and other WIPO bodies.<sup>19</sup> The work of WIPO is overseen by a Secretariat, which coordinates meetings between the member states and administers the global information protection systems of WIPO.<sup>20</sup> It is led by the Director-General Francis Gurry, who has filled that role since 2008.<sup>21</sup>

Each Member State of WIPO contributes a set sum of money to WIPO annually; however, this does not make up a large amount of the income of WIPO.<sup>22</sup> WIPO is unusual among UN agencies as it is largely self-financing.<sup>23</sup> Almost 90% of WIPO's income is generated from its collection of fees associated with the global information protection services that it offers, such as the Patent Cooperation Treaty (PCT), the Madrid System, and the Hague System; the PCT alone contributes most of WIPO's income, at 73% of total income.<sup>24</sup> In addition to these systems, WIPO also administers 21 other treaties concerning intellectual property protection, the global protection system, and classification.<sup>25</sup>

## ***Current Issues***

The work of WIPO is far-reaching and manifests itself in many issues that face the world today, from the problems of development to the rapid rise of new technology that push the boundaries of life. The issue of the enforcement of patents has played a prominent role in the developing world, as WIPO attempts to address the overarching question: "does the patent system hamper development rather than promote it?"<sup>26</sup> The underground industries of trademark counterfeiting and copyright piracy of intellectual property have proliferated, as governments and international organizations such as WIPO and the World Trade Organization (WTO) attempt to introduce initiatives to curb the production of the illicit products.<sup>27</sup> The companies and individuals who own intellectual property rights of any sort place high importance on protecting their patents, especially in countries where piracy is common, as the counterfeiters can harm the brand name, compromise product quality, and be direct competition to a market that the patent holders are interested in establishing a presence in and boost sales.<sup>28</sup> The patent holders are often private firms from developed nations; however, national governments are often drawn to this issue. Even though the intellectual property in question belongs to private firms, it is governments which are often involved in helping enforce and prosecute those who violate the intellectual property rights, and make decisions regarding the financial resources available to combat piracy- decisions that may be difficult in governments of developing nations facing many pressing matters.<sup>29</sup> However, the need for enforcement needs to be balanced with the need for technological progress and innovation in developing nations. This technological learning curve occurs primarily through the

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<sup>15</sup> WIPO, *World Intellectual Property Organization Web site*, 2010, Member States.

<sup>16</sup> WIPO, *World Intellectual Property Organization Web site*, 2010, Decision-making Bodies.

<sup>17</sup> WIPO, *Convention Establishing the World Intellectual Property Organization*, 1967, p. 3-5.

<sup>18</sup> WIPO, *Convention Establishing the World Intellectual Property Organization*, 1967, Article 6, p. 2-3.

<sup>19</sup> WIPO, *Convention Establishing the World Intellectual Property Organization*, 1967, Articles 7-8, p. 4-5.

<sup>20</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>21</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>22</sup> WIPO, *Financial Regulations and Rules of the World Intellectual Property Organization*, 2008, Chapter 3: Funds.

<sup>23</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>24</sup> WIPO, *WIPO: An Overview*, 2009, p. 61.

<sup>25</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>26</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>27</sup> Fink, *Enforcing Intellectual Property Rights: an Economic Perspective*, 2009, p. xv.

<sup>28</sup> Fink, *Enforcing Intellectual Property Rights: an Economic Perspective*, 2009, p. 1.

<sup>29</sup> Fink, *Enforcing Intellectual Property Rights: an Economic Perspective*, 2009, p. xv.

acquisition, diffusion, and upgrading of technologies already existing in more developed nations in order to have the knowledge capital to build upon and contribute to today's technological world.<sup>30</sup>

The emergence of open-source software and concerns with computer technology has also been brought to the attention of WIPO as it has implications in today's information society. Open-source software is software for computer programs created by volunteers, and disseminated free of charge to others to use, modify, and develop new programs.<sup>31</sup> The principal issue concerning WIPO regarding patenting and open-source software is the question of whether the patents are an incentive or hindrance to the software industry.<sup>32</sup> A study done in 2006 from the European Commission indicates some of the benefits of the open-source software economy- one such benefit is the amount of quality open-source software produced for free, the equivalent of which would cost firms almost 12 billion Euros to reproduce.<sup>33</sup> This translates to savings of over 36% in software development that can lead to further profits and investments. However, some software experts disagree and state that it is difficult to enforce quality standards in open source software and collect data regarding its productivity and quality.<sup>34</sup> The concept of open-source is not only limited to the field of computer science, and can also be found in fields such as human health and agricultural biotechnology.<sup>35</sup> In addition to the issues of development and open-source software, WIPO is also currently involved in issues concerning biotechnology and the sharing of genetic resources, nanotechnology, public health and patents, and the protection of traditional knowledge.<sup>36</sup>

### **Conclusion**

The goals and issues of WIPO affect both the global economy and everyday lives through patents on many of the products used in the global community. One of the trends in patent applications in recent years has been the rise in innovation for environmental and climate technologies, especially in the United States.<sup>37</sup> The debate regarding genetics and the patenting of life has also been brought to the forefront in recent years concerning the patenting of genes on animals and plants.<sup>38</sup> The problems of development and the proliferation of patent infringement continue in developing countries.<sup>39</sup> In face of these multi-faceted issues, WIPO must be able to take into consideration all the perspectives of the issues and the ethics concerned to provide boundaries in light of the rapid technological advancement of the world today.

## **I. Pharmaceutical patents and the fight against HIV/AIDS in developing countries**

*"There is no point in having new medicines unless they can benefit those who need them."*<sup>40</sup>

### **Introduction**

The issue of Intellectual Property Rights (IPRs) is one of the most contentious in the international community today, and few topics have received as much attention as pharmaceutical patents and their relationship to public health. With the duly deserved show of global solidarity against the HIV/AIDS epidemic, the issues of pharmaceutical patents and access to HIV/AIDS drugs have received considerable attention from the international community. Given WIPO's focus on IPR, and its development agenda adopted by the General Assembly in 2007, it is well

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<sup>30</sup> United Nations Conference on Trade and Development, *The Least Developed Countries Report 2007: Knowledge, Technological Learning and Innovation for Development*, 2007, p. 6.

<sup>31</sup> Bessen, *Open Source Software: Free Provision of Complex Public Goods*, 2005, p. 1.

<sup>32</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>33</sup> European Commission, *Economic impact on open source software on innovation and the competitiveness of the Information and Communications Technologies (ICT) sector in the EU*, 2006, p. 2.

<sup>34</sup> Stamelos et al., *Code quality analysis in open source software development*, 2002, p. 214.

<sup>35</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>36</sup> WIPO, *World Intellectual Property Organization Web site*, 2010.

<sup>37</sup> Popp, *Lessons from patents: Using patents to ensure technological change in environmental models*, 2005, p. 214.

<sup>38</sup> Lane, *Patenting Life: Responses of Patent Offices in the US and Abroad*, 1991, p. 89.

<sup>39</sup> Fink, *Enforcing Intellectual Property Rights: an Economic Perspective*, 2009, p. 1.

<sup>40</sup> World Intellectual Property Organization, *WHO, WIPO, WTO join forces to put access-to-medicines under the microscope*, 2010

positioned to address the issue of access to HIV/AIDS drugs, including antiretroviral drugs and drugs for the treatment of opportunistic infections and malignancies.<sup>41</sup>

Given the severity of the HIV/AIDS pandemic, many believe that access to HIV/AIDS drugs ought to be classified as a human right.<sup>42</sup> These drugs, including antiretroviral drugs, increase the lifespan of HIV-infected persons, where “every year of life gained provides greater economic stability, food security and educational opportunities for the families of those living with HIV/AIDS and strengthens their wider communities.”<sup>43</sup> These drugs are also crucial to the prevention of HIV/AIDS as they can help prevent mother-to-child transmission, a critical yet often overlooked mode of transmission.<sup>44</sup> The patents on these drugs often create price barriers that make the drugs inaccessible to developing country governments as well as citizens of developing countries.

The World Health Organization (WHO), the leading UN body on international public health issues, declared in 2003 that the failure to deliver antiretroviral drugs to those who need it constitutes a global health emergency.<sup>45</sup> According to the WHO, one-third of the world’s population does not have access to existing essential drugs; in the poorest parts of Africa and Asia this number is more than one-half.<sup>46</sup> Out of the 33.4 million people living with AIDS worldwide, approximately 97% of whom live in the developing world, only 4 million people in low and middle income countries, are receiving antiretroviral therapy (as of December 2009).<sup>47</sup> While there are many factors which limit access to these drugs, including poor distribution mechanisms and a lack of broader infrastructure, the monopoly prices of patented antiretroviral drugs, whose patents last on average 20 years, remain among the most serious limiting factors.<sup>48</sup>

### ***WIPO’s development agenda***

In 2007, as a response to criticisms that the practical interpretation of WIPO’s mandate meant simply lengthening and extending IPRs as far as possible, the General Assembly of WIPO adopted 45 recommendations which provide the organization with a more clear development agenda.<sup>49</sup> This agenda includes the provisions that WIPO’s norm-setting activities ought to be supportive of the development goals in the UN Millennium Declaration, and more broadly to “approach intellectual property enforcement in the context of broader societal interests and especially development-oriented concerns.”<sup>50</sup> “The Development Agenda rejects a one-size, especially a supersize, model of global IP law;” thus this agenda represents a significant shift in the role WIPO plays in the global IPR regime.<sup>51</sup> On this issue, there exists a fundamental tension in the role of WIPO: it has agreed to work toward the promotion of development, which includes access to medicines, while on the other hand is to promote and defend the interests of copyright holders, which tends inherently to restrict access to pharmaceuticals. Thus the primary task of WIPO is managing the trade-off between promoting innovation and ensuring that the product of this innovation will help those who need it most.

There is considerable empirical evidence that patents help stimulate innovation within the pharmaceutical sector.<sup>52</sup> For one, research and development (R&D) is particularly costly in this sector. Most new drugs fail to reach the public market and the clinical testing process is long and complex (sometimes pre-clinical and clinical testing phases

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<sup>41</sup> United Nations General Assembly, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>42</sup> Third World Network, *US access-to-drugs policy contravenes human rights, say groups*, 2010

<sup>43</sup> World Health Organization, *Progress on Global Access to HIV Antiretroviral Therapy: A Report on ‘3x5’ and Beyond*, 2006, p.5

<sup>44</sup> Global Fund, *Preventing mother-to-child transmission of HIV is critical to achieving Millennium Development Goals in Africa*, 2010

<sup>45</sup> World Health Organization, *World Health Organization says failure to deliver AIDS medicines is a global health emergency*, 2003

<sup>46</sup> Rand Technical Study, *Intellectual Property and Developing Countries: A review of the literature*, 2010

<sup>47</sup> United States Agency for International Development, *HIV/AIDS: Frequently Asked Questions*, 2010 UNAIDS, *AIDS Epidemic Update*, 2009

<sup>48</sup> World Intellectual Property Organization, *Frequently Asked Questions*, 2010

<sup>49</sup> Boyle, James, *A Manifesto on WIPO and the Future of Intellectual Property*, 2004. UN General Assembly, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>50</sup> UN General Assembly, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>51</sup> De Beer, Jeremy, *Implementing WIPO’s Development Agenda*, 2009

<sup>52</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 25

take more than a decade to complete).<sup>53</sup> Beyond this, manufacturing pharmaceuticals requires a large up-front investment of capital which represents a significant financial risk.<sup>54</sup> A patent provides the innovating company with monopoly rights to distribute and sell the patented product and it is this promise of a future monopoly (and the market prices inherently higher than would exist in a competitive market) that acts as an incentive make the very large investment necessary to create new drugs. This process by which temporary monopolies are granted has been an accepted international norm since the Paris convention of 1883 and the Berne convention of 1886, the predecessors of WIPO.<sup>55</sup> However, since these conventions initially set out the principle of IPR protection, the actual rules have been widened in scope of applicability as well as been deepened in longevity and enforceability to the extent that many argue places the international patent regime in an imbalance; that is, that the regime is skewed toward the protection of private interests versus service to the public good.<sup>56</sup>

As stated by WIPO's Director-General in the introductory quote to this section, if those who need certain life-saving drugs are unable to acquire them due to high, monopoly-driven prices charged by pharmaceutical companies, then perhaps we have missed the point of creating the drugs in the first place. While many HIV/AIDS drugs have been produced for markets in developed countries, the full social benefit of these drugs remains unrealized as there are still many people who are unable to access them.<sup>57</sup> Thus, a number of schemes to decrease prices, particularly in the developing world, have been devised with the goal of balancing the public interest with private benefit. Allowing for competition from generic brands has been shown to reduce prices of these drugs.<sup>58</sup> Also, compulsory licensing may further reduce prices, particularly when combined with an allowance for generic competition.<sup>59</sup> The goal with all of these schemes is to meter prices on a country-specific level which would help to ensure that prices are lower where countries have a lower ability to pay.<sup>60</sup>

These types of differential pricing strategies are often viewed as the best way to combine equity with coverage of R&D costs, yet their practical implementation faces the challenge of parallel importing (i.e. individuals buying drugs from a country where the cost is lower, and profiting from importing them to a country where the price is higher), as well as the problem of political resistance from people in wealthy countries.<sup>61</sup> Prior to the WTO agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) this type of differential pricing scheme was much simpler to implement, as countries could opt in and out of various IPR agreements as they deemed beneficial. Understanding the global IPR regime created under TRIPS is essential to understand the role of WIPO today.

### ***WIPO and the WTO TRIPS Agreement***

Until 1995, WIPO was the primary international body that dealt with IPRs, and while it did not represent a legally enforceable global regime, it was the body primarily responsible for dealing with setting norms and standards on IPRs, in addition to providing technical assistance on IPR protection.<sup>62</sup> This changed with the creation of the WTO in 1995, when the TRIPS agreement created the first enforceable global IPR regime. TRIPS was part of the "single-undertaking," or the core set of agreements that all WTO members are obliged to sign and ratify, and allows IPR violations to be tried through the WTO's Dispute Settlement Mechanism. This new enforceability has created significant controversy, especially as many perceive the UN to be a more democratic forum than the WTO and thus would prefer IPR to remain primarily under UN jurisdiction.<sup>63</sup> While TRIPS may seem primarily relevant to WTO member countries, it is in fact the backbone of the global IPR regime: with a few notable exceptions, most WIPO

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<sup>53</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 25-26

<sup>54</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 26

<sup>55</sup> Musungu, Sisele and Graham Dutfield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organization (WIPO)*, 2003, p.4

<sup>56</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010

<sup>57</sup> Rand Technical Study, *Intellectual Property and Developing Countries: A review of the literature*, 2010

<sup>58</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 27

<sup>59</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 27

<sup>60</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 28

<sup>61</sup> Rand Corporation, *Intellectual Property and Developing Countries: A Review of the Literature*, 2010, p. 29

<sup>62</sup> Musungu, Sisele and Graham Dutfield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*, 2003, p.10

<sup>63</sup> Musungu, Sisele and Graham Dutfield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*, 2003

member countries are also WTO member countries, and most of those that are not are working towards WTO membership and thus aiming to harmonize their domestic law with WTO regulations.<sup>64</sup>

The TRIPS agreement is one of the most controversial elements of a package of agreements that all members of the WTO are obliged to abide by, despite allegations that it restricts policy options to promote longer-term development.<sup>65</sup> As a response to the criticisms relating to public health concerns (primarily regarding access to essential medicines), in 2001 the WTO adopted the Doha Declaration on TRIPS and Public Health.<sup>66</sup> This declaration aimed to create more flexible options for member countries to grant domestic pharmaceutical companies a license to manufacture generic versions of patented drugs, a process called compulsory licensing, which is included in Article 31 of the declaration.<sup>67</sup> Its interpretation since then has allowed countries with limited manufacturing capability to import generic versions of drugs from other countries (Paragraph 6 of the declaration).<sup>68</sup> It also gave countries the right to self-declare a 'national emergency', a precondition for seeking flexibilities under TRIPS which, prior to this agreement was dependant on UN approval.<sup>69</sup> While this Declaration represented recognition by the WTO that the global IPR regime must be context specific in order to align with development principles, the practical problem of how to take advantage of these flexibilities still remains.<sup>70</sup> This is one area that WIPO may look to in the future when considering its role in the TRIPS-era global IPR regime.

Shortly after the TRIPS agreement came into force (1995), WIPO adopted a resolution stating it would provide technical assistance to WIPO members on TRIPS-related issues.<sup>71</sup> Afterward, it adopted another resolution saying it would provide technical assistance to developing countries that were members of the WTO, regardless of their membership in WIPO.<sup>72</sup> In the TRIPS-era IPR regime, the technical assistance provided by WIPO may be increasingly relevant, particularly as many see extending IPR provisions beyond TRIPS (TRIPS-plus) as unnecessary.<sup>73</sup> In terms of the fight against HIV/AIDS, the improvement of WIPO's technical assistance programs, have potential to play a considerable role in helping countries gain access to necessary drugs or technologies.

#### ***Case study: Brazil's HIV/AIDS treatment policy***

In 1996, Brazil committed to a national policy of free and universal provision of antiretroviral therapy and in doing so initiated one of the world's most ambitious national plans for the treatment of AIDS.<sup>74</sup> The financial costs of this plan are quite large and patents on many of the necessary drugs have made the cost even higher.<sup>75</sup> To address this, the Brazilian government has invoked Article 68 of Brazil's industrial property code, which allows for compulsory licensing.<sup>76</sup> This means that if a patented invention is not domestically manufactured within three years of its issue date, the government may give a Brazilian company the right to manufacture a generic version of the drug.<sup>77</sup> This may also help promote Brazil's national industry, and in turn, promote long-term development. In terms of health, the clause has not only meant that the price of drugs has been reduced in Brazil due to generic competition, but even when not invoked, the mere possibility of competition created by compulsory licensing has also led to a reduction in prices.<sup>78</sup>

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<sup>64</sup> World Trade Organization, *Understanding the WTO: The Organization*, 2010

<sup>65</sup> Rodrik, Dani, *Industrial Policy for the 21<sup>st</sup> Century*, p.35

<sup>66</sup> World Trade Organization, *Declaration on the TRIPS Agreement and Public Health*, 2001

<sup>67</sup> World Trade Organization, *Declaration on the TRIPS Agreement and Public Health*, 2001

<sup>68</sup> World Trade Organization, *Declaration on the TRIPS Agreement and Public Health*, 2001

<sup>69</sup> World Trade Organization, *Declaration on the TRIPS Agreement and Public Health*, 2001

<sup>70</sup> De Beer, Jeremy, *Implementing WIPO's Development Agenda*, 2009

<sup>71</sup> Musungu, Sisele and Graham Dutfield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*, 2003, p.11

<sup>72</sup> Musungu, Sisele and Graham Dutfield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*, 2003, p. 11

<sup>73</sup> Deere-Birkbeck, Carolyn and Ron Marchant, *The Technical Assistance Principles of the WIPO Development Agenda and their Practical Implementation*, 2010.

<sup>74</sup> Boseley, Sarah, *Legal Roadshow Rolls on to Brazil*, 2001

<sup>75</sup> Okie, Susan. *Fighting HIV: Lessons from Brazil*, 2006

<sup>76</sup> Galvão, J., *Access to antiretroviral drugs in Brazil*, 2004

<sup>77</sup> Galvão, J., *Access to antiretroviral drugs in Brazil*, 2004

<sup>78</sup> Okie, Susan. *Fighting HIV: Lessons from Brazil*, 2006



In 2001, the WTO accepted a proposal by the United States to officially call into question the compatibility of Brazil's patent law with TRIPS, particularly in regard to compulsory licensing.<sup>79</sup> However, the request was recalled shortly thereafter, and by the end of 2001 the Doha Declaration on TRIPS and Public Health was released, which as mentioned above, created flexibility for compulsory licensing in cases of declared national public-health emergencies. Brazil, who has been domestically producing generic versions of patented drugs since 2001, issued its first official compulsory license in 2007, and the willingness to use this option has continued to grant greater bargaining power to the Brazilian government during price negotiations with pharmaceutical companies.<sup>80</sup> Due to its compulsory licensing program, the government's expenditure on antiretroviral drugs has decreased from \$6,240 per patient in 1997 to \$1,336 in 2004.<sup>81</sup> However, since 2004 the average cost has been steadily rising on account of drug resistance and the need for newer and more expensive medicines.<sup>82</sup> This demonstrates, in a sense, the entire dichotomy of the IPR problem. While the government of Brazil initially made use of more limited IPR regulations in order to decrease costs, the innovation and technological advances promoted by more stringent IPR were soon needed.

### ***TRIPS Flexibilities and TRIPS-plus legislation: WIPO's Future Role***

The global IPR regime is rapidly changing. Currently, in addition to standards set by WIPO and the WTO, the IPR regime is being shaped through a number of bilateral and multilateral fora, including a convoluted web of bilateral free trade agreements as well as negotiations toward the Anti-Counterfeiting Trade Agreement (ACTA), primarily being organized among developed countries.<sup>83</sup> WIPO must therefore continue to create and shape its own niche within this TRIPS-era IPR regime in order to remain relevant. While some developed countries argue that WIPO ought to continue in its role primarily as a norm-setting agency, thus advancing into the realm of TRIPS-plus standards, many developing countries argue that rather than promote stronger and deeper IPRs, WIPO ought to focus more on its development agenda, which would likely place its technical assistance in a much more prominent position.<sup>84</sup>

WIPO's technical assistance activities have drawn a variety of criticisms. These are effectively summed up in a study by the International Centre for Trade and Development as being primarily: poor management and cost-effectiveness, weak development orientation, inadequate insulation from political pressures, excessive reliance on IPR offices, and inadequate connection with UN goals and agencies.<sup>85</sup> This same study presents 10 recommendations for WIPO stakeholders on short and medium-term solutions to the criticisms of its work to date.<sup>86</sup> Some others contend that political-economic pressure may also work to discourage developing countries from taking advantage of the flexibilities under TRIPS.<sup>87</sup> Greater consideration of WIPO's technical assistance programs and how they affect the policy-making process in developing countries is essential to implementing the organization's development agenda.

The "paragraph 6" flexibility in the Doha Declaration on Public Health, which grants developing countries lacking in manufacturing capacity the flexibility to import generic versions of patented drugs has more recently also received considerable attention. It is unclear why many governments are unwilling to make use of this provision, although some point to political pressure from donor countries, the lack of competitiveness with developing countries (to which this provision is often irrelevant), or the desire to develop a country's own manufacturing sector rather than import goods from other countries.<sup>88</sup> The one case available, that of Canada's proposed export of one

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<sup>79</sup> Galvão, J., *Access to antiretroviral drugs in Brazil*, 2004

<sup>80</sup> Galvão, J., *Access to antiretroviral drugs in Brazil, 2004*; Intellectual Property Watch, *Brazil Declares Patented AIDS Drug Of Public Interest, Could Expand Access*, 2008

<sup>81</sup> Okie, Susan. *Fighting HIV: Lessons from Brazil*, 2006

<sup>82</sup> Okie, Susan. *Fighting HIV: Lessons from Brazil*, 2006

<sup>83</sup> Rodrik, Dani, *Industrial Policy for the 21<sup>st</sup> Century*, 2004

<sup>84</sup> Musungu, Sisele and Graham Dufield, *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*, 2003

<sup>85</sup> Deere-Birkbeck, Carolyn and Ron Marchant, *The Technical Assistance Principles of the WIPO Development Agenda and their Practical Implementation*, 2010

<sup>86</sup> Deere-Birkbeck, Carolyn and Ron Marchant, *The Technical Assistance Principles of the WIPO Development Agenda and their Practical Implementation*, 2010

<sup>87</sup> Cohen-Kohler, Jillian et al, *Canada's implementation of the Paragraph 6 Decision: is it sustainable public policy?*, 2007

<sup>88</sup> Cohen-Kohler, Jillian et al, *Canada's implementation of the Paragraph 6 Decision: is it sustainable public policy?* 2007

antiretroviral drug to Rwanda, may be useful to examine when considering the future application of this provision. Although Rwanda officially notified the WTO of its plan to import HIV drugs in 2007, the agreement is currently at a standstill, some speculate due to political forces pressuring Rwanda not to buy generic drugs.<sup>89</sup> The relevance of this provision, and how to improve it in implementation, may also be useful issues for WIPO to consider.

Another issue that has been termed by some as another form of TRIPS-plus IPRs, is that of pharmaceuticals being detained/seized in transit. There have been several recent cases of generic drugs between India and Brazil being detained while in transit through the EU.<sup>90</sup> India and Brazil have both been quite critical of the EU for this action, with the Brazilian ambassador commenting that “not only is this a violation of the WTO disciplines, but it runs counter to the spirit of everything developing countries negotiated under TRIPS to get the flexibilities that would allow public health concerns of developing countries to be taken into consideration, to be protected.”<sup>91</sup> They have said the seizure of these drugs violates the spirit of the Doha Declaration on Public Health, and worry that this kind of action in the future may endanger the paragraph 6 system if the denial of transit to generic medicines becomes widespread and systematic.<sup>92</sup>

### **Conclusion**

The issue of pharmaceutical patents and their relationship to antiretroviral drugs, which fight and prevent HIV/AIDS, necessarily presents larger problems of the tension between public benefit and private gain in the global IPR regime. Private gains are of course essential within a market-led system in order to provide incentives for research and development, but pharmaceuticals only benefit the public good if they are actually used. Many developing countries would argue that the lack of access to the many drugs that already exist indicates a potential imbalance between private gains and public benefit. WIPO’s future work in terms of research, norm-setting, and technical assistance must carefully consider these tensions in order to thoroughly internalize the Development Agenda set out in 2007. Given this shift in its mandate, it will also have a number of larger issues to deal with. For example, given that drug accessibility is most effective when part of a larger, more holistic effort to address the HIV/AIDS epidemic, how might WIPO better cooperate with domestic agencies in its technical assistance?<sup>93</sup> To what degree is WIPO’s technical assistance demand-driven, and consistent with the principles as set out in its Development Agenda? What precisely is WIPO’s responsibility in terms of the global fight against the AIDS epidemic, and how may its activities further this goal?

## **II. Differentiated intellectual property rights for environmental and climate technologies**

*“WIPO is committed to building a broader understanding of the important contribution that intellectual property can make in generating and disseminating technological solutions to address the multi-faceted challenges that climate change presents.”<sup>94</sup>*

### **Technology’s role in anthropogenic climate change**

According to the Intergovernmental Panel on Climate Change (IPCC), the observed “increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level” is evidence of the unequivocal warming in the global climate system.<sup>95</sup> The IPCC’s *Synthesis Report* also shows that the major drivers of the increase in average global temperature are anthropogenic, i.e. caused by human activity, and include the increased atmospheric concentration of four major greenhouse gases (GHGs): carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and halocarbons. In addition to this, decreased amounts of natural land cover (the physical material covering the earth’s surface), are diminishing the earth’s natural capacity to absorb GHGs in the

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<sup>89</sup> Cotter, Christina, *The Implications of Rwanda’s Paragraph 6 Agreement with Canada for other Developing Countries*, 2009

<sup>90</sup> World Trade Organization, *News Items*, 2010

<sup>91</sup> Third World Network, *Developing countries attack Dutch seizure of generic medicine*, 2009

<sup>92</sup> Third World Network, *Developing countries attack Dutch seizure of generic medicines*, 2009

<sup>93</sup> Rand Technical Study, *Intellectual Property and Developing Countries: A review of the literature*, 2010

<sup>94</sup> Gurry, *Developing IPR is Not a Zero-Sum Scenerio, Q&A by Mathew, J.*, 2009

<sup>95</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report*, 2007, 1.1 “Observations in Climate Change”

atmosphere, which adds to the warming effect.<sup>96</sup> The foremost source of anthropogenic climate change is technology, from the industrial revolution to today's extensive use of hydrocarbon fuels.<sup>97</sup> To ensure the rise in global temperatures stays below two degrees Celsius, according to the Royal Institute of International Affairs in London, GHG emissions need to be reduced between 50% and 85% before 2050 and peak before 2020.<sup>98</sup> However, global emissions increased 70% between 1970 and 2004 and are projected to increase another 25% to 90% by 2030.<sup>99</sup>

Anthropogenic climate change, as well as its negative impacts, is likely to continue at an increasing rate. The negative impacts from climate change, which include, "increased water stress, food insecurity, abrupt changes in population dynamics, vulnerability of human settlements, livelihoods and society as a whole, as well as major negative repercussions on the health status of millions of people," are projected to increase in severity for the vast majority of countries.<sup>100</sup> New technologies to address the negative impacts of climate change are seen as a viable part of the solution, and include technologies in the energy, agricultural, industrial, tourism, and transportation sectors among others.<sup>101</sup> Although technology is the main source of climate change, technology will also be central to addressing the issue.<sup>102</sup> The international community is currently looking at technologies to mitigate and adapt to climate change as a critical component to an effective global solution. Mitigation technologies, to reduce GHG emission levels, and adaption technologies, to enable governments to adjust to altered environmental conditions, remain indispensable in combating the growing threat caused by climate change.<sup>103</sup> However, the effectiveness of technological innovation for mitigation and adaption is dependent on the capacity in which these technologies can be deployed on a large scale.<sup>104</sup> Environmental and climate technologies are becoming increasingly prominent in global climate change dialogue, and have brought intellectual property rights (IPR) to the forefront of the debate.

To understand the complexity of the debate over the role of IPR for environmental and climate technologies, some key terms must first be clarified. As defined by the World Intellectual Property Organization (WIPO), intellectual property (IP) "refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce."<sup>105</sup> The laws that safeguard the creators of IP and other producers of intellectual goods and services are known as IPR.<sup>106</sup> The two main reasons for IPR outlined in the WIPO Intellectual Property Handbook are to "give statutory expression to the moral and economic rights of creators in their creations and the rights of the public in access to those creations" and to "promote, as a deliberate act of Government policy, creativity and the dissemination and application of its results and to encourage fair trading which would contribute to economic and social development."<sup>107</sup> The IPR system, both domestically and internationally, potentially affects the rate of innovation, rate of dissemination, and socioeconomic impacts from environmental and climate technologies. In the context of environmental and climate technologies, relevant IPR includes patents, utility models, plant breeders' rights, traditional knowledge and genetic resources, copyrights, and trade secrets.<sup>108</sup>

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<sup>96</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report*, 2007, 2.2 "Drivers of climate change."

<sup>97</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>98</sup> Bowman, *Innovation, the Environment, and the Future*, 2010

<sup>99</sup> Tanunchaiwatana, *Role of Patents in Green Technology Transfer in the Context of Climate Change*, 2009

<sup>100</sup> United Nations System Chief Executives Board for Coordination (CEB), *Acting on Climate Change: the UN System Delivering as One*, 2008, p. 7.

<sup>101</sup> Tanunchaiwatana, *Role of Patents in Green Technology Transfer in the Context of Climate Change*, 2009

<sup>102</sup> Tanunchaiwatana, *Role of Patents in Green Technology Transfer in the Context of Climate Change*, 2009

<sup>103</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>104</sup> March, *Climate Change—The Technology Challenge*, 2008

<sup>105</sup> World Intellectual Property Organization, *WIPO Intellectual Property Handbook: Policy, Law and Use*, 2004, Publication No. 489

<sup>106</sup> World Intellectual Property Organization, *WIPO Intellectual Property Handbook: Policy, Law and Use*, 2004, Publication No. 489

<sup>107</sup> World Intellectual Property Organization, *WIPO Intellectual Property Handbook: Policy, Law and Use*, 2004, Publication No. 489

<sup>108</sup> World Intellectual Property Organization, Report on *WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

## ***The United Nations and IPR for Environmental and Climate Technologies***

Widespread agreement exists in the international community with regard to the importance of technology diffusion and transfer in mitigation of and adaptation to global climate change.<sup>109</sup> However, debate over new ways to use or reform the international IPR system remains controversial.<sup>110</sup> IPR has only recently had a significant presence in the global climate debates.<sup>111</sup> Although changes to the current IPR regime have been increasingly discussed at high-level meetings for the United Nations Framework Convention on Climate Change (UNFCCC), no consensus has been reached by Member States. The current round of UNFCCC negotiations to work towards a global agreement to replace the Kyoto Protocol after 2012 began in December 2007 in Bali, Indonesia. At the Bali summit, the Bali Road Map, including the Bali Plan of Action, was adopted.<sup>112</sup> The Bali Plan of Action identifies four pillars, four primary areas for action, one of which is technology transfer.<sup>113</sup> The Bali Plan of Action calls for “enhanced action on technology development and transfer to support action on mitigation and adaptation,” including “ways to accelerate deployment, diffusion and transfer of affordable environmentally sound technologies.”<sup>114</sup>

Attention to technological development, transfer and diffusion in UNFCCC negotiations increased leading up to the Copenhagen meeting in 2009.<sup>115</sup> At the Poznań Conference, held in December 2008, increased focus was given to the debate over the potential use of differentiated IPR for climate technologies.<sup>116</sup> The Poznań Conference also held a side event on “technology transfer, the IP system and climate change – challenges and options.” Delegates at this conference highlighted practical work being done to leverage more effective transfer and absorption of environmental and climate technologies, held discussions on the use of regulators in the form of an international body to verify that public interests are protected in the IPR system, and potential opportunities to more effectively use patent information as a policy tool.<sup>117</sup> In October 2009, at the Bangkok negotiations, a non-paper was released by the Chair outlining that, despite options being put on the table with regard to modifying the IPR regime, no significant gains were made.<sup>118</sup> While increased attention was given to IPR prior to the 2009 Copenhagen conference, no further developments have resulted regarding the use of the IPR system to enhance efforts for mitigation and adaptation in UNFCCC negotiations.<sup>119</sup> Past UNFCCC negotiations have made clear the strength of the positions of Member States regarding IPR.<sup>120</sup> Several developed countries, including the United States, have stated they will not sign any agreement that includes compulsory licensing, while others are unwilling to discuss changes in the IPR regime.<sup>121</sup> Despite opposition from the United States, developing countries including Bolivia, indicate reform to the IPR system is critical in order to diffuse climate technologies globally.<sup>122</sup>

## ***IPR and Technology Transfer to Least Developed Countries***

IPR give temporary exclusivity to “produce, distribute, license, and import a new technology,” promoting research and development (R&D) and spurring innovation within the private sector. However, it can significantly delay the widespread dissemination of technological innovations.<sup>123</sup> The perceived tradeoff between the rate of innovation and rate of transfer and dissemination of environmental and clean technologies is central to the use of IPR and a remains contentious issue in the global debate.<sup>124</sup> Finding a middle ground that will protect private interests while allowing for speedy delivery and dissemination of any technologies that may potentially contribute to the global

<sup>109</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010

<sup>110</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010

<sup>111</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>112</sup> United Nations Framework Convention on Climate Change Conference of the Parties, *Addendum, Part Two: Action taken by the Conference of the Parties at its thirteenth session*, 2007

<sup>113</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>114</sup> United Nations Framework Convention on Climate Change Conference of the Parties, *Addendum, Part Two: Action taken by the Conference of the Parties at its thirteenth session*, 2007

<sup>115</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010

<sup>116</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>117</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>118</sup> Mara, “Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved,” 2009

<sup>119</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

<sup>120</sup> Mara, “Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved,” 2009

<sup>121</sup> Mara, “Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved,” 2009

<sup>122</sup> Mara, “Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved,” 2009

<sup>123</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p.15

<sup>124</sup> Taubman, *IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań*, 2009

public good remain one of the main barriers impeding effective use of technology to address climate change.<sup>125</sup>

Both country blocs should have the same end goal; however, the main problem is a disagreement on how best to reach that goal. While IPR has become a linchpin of sorts in global talks, the significance of IPR in the ability to adequately transfer environmental and climate technologies remains essentially untested.<sup>126</sup> Initial research by the International Centre for Trade and Sustainable Development (ICTSD) found that the impact of patents, as they are currently, on the transfer of solar, wind, and biofuel technologies to Least Developed Countries (LDCs) may be a significant hindrance to development in these areas.<sup>127</sup> However, the ownership of climate-related patents remains predominately in developed countries, particularly the European Union, the United States, and Japan.<sup>128</sup> With patent ownership concentrated primarily in the developed world and developing countries needing access to environmental and climate technologies but otherwise unable or unwilling to pay international market prices as inflated by the current IPR regime, the question of technology transfer and modified IPR schemes can be quite divisive.<sup>129</sup>

The rate and effectiveness of technology transfer may also be impacted by IPR. Technology transfer, defined by the IPCC, is:

“The broad set of processes covering the flows of knowledge, experience and equipment amongst different stakeholders such as governments, private sector entities, financial institutions, NGOs and research/educational institutions... The broad and inclusive term “transfer” encompasses diffusion of technologies and technology co-operation across and within countries. It comprises the process of learning to understand, utilize and replicate the technology, including the capacity to choose it and adapt it to local conditions.”<sup>130</sup>

As legal and policy tools, IPR measures can be either incentives or barriers to the ability to access technologies crucial to an effective response to climate change.<sup>131</sup> By creating incentives through the stages of technological development, diffusion, and implementation, IPR affect the effectiveness of technology transfer within and across borders.<sup>132</sup>

The issue of how best to use the IPR system to facilitate technology transfer is central to the controversy between developed and developing countries. Developed countries argue that strengthening the IPR system in developing countries and having a strong international IPR system, is the most effective means to facilitate the innovation of environmental and green technologies to developing countries. Developed countries argue that a strong IPR system promotes innovation and the dissemination of knowledge, provides incentive for foreign direct investment (FDI), and provides the incentive for private sector investment.<sup>133</sup> Conversely, developing countries argue that differentiated IPR and flexible regulations are the most effective means for technology transfer, because the high cost of patented technologies is often prohibitive given budgetary constraints faced by most developing countries.<sup>134</sup> Many developing countries argue that differentiated IPR is essential to the developed world fulfilling their obligations in fighting climate change.<sup>135</sup> Strong IPR increases the cost of technologies, and since the adoption of environmental and climate technologies has a significant social benefit (i.e. considerable positive externalities), differentiated IPRs would have a similar effect to a positive subsidy.<sup>136</sup> Many developing countries argue that since they have had a relatively insignificant role in the cause of climate change, and since their efforts to slow down

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<sup>125</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010

<sup>126</sup> ICTSD, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>127</sup> ICTSD, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>128</sup> The Department of Economic and Social Affairs of the United Nations Secretariat. *World Economic and Social Survey*, 2009

<sup>129</sup> ICTSD, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>130</sup> ICTSD, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>131</sup> ICTSD, *Climate Change, Technology Transfer and Intellectual Property Rights*, 2008

<sup>132</sup> Okediji, *Intellectual Property Rights and the Transfer of Environmentally Sound Technologies*, 2009

<sup>133</sup> International Center for Trade and Sustainable Development, *Climate Change, Technology Transfer and Intellectual Property Rights*, 2008

<sup>134</sup> International Center for Trade and Sustainable Development, *Climate Change, Technology Transfer and Intellectual Property Rights*, 2008

<sup>135</sup> Mara, “Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved,” 2009

<sup>136</sup> World Intellectual Property Organization, *Climate Change and the Intellectual Property System: what Challenges, what options, what solutions?*, 2008

global warming are also beneficial to developed countries, they have little responsibility to take on the considerable financial burden of enhanced environmental technology without assistance.<sup>137</sup>

Weak IPR regimes in developing countries is seen, by many developed countries, as a potential barrier to innovation and transfer of environmental and climate technologies.<sup>138</sup> According to a recent working paper by the Organization for Economic Cooperation and Development (OECD), when a developing country reforms and strengthens their patent system, it leads to increased imports of capital and high-technology goods from OECD nations, increased foreign direct investment, and expansion of licensing contracts.<sup>139</sup> Thus, some governments, predominantly developed countries, have proposed strengthening IPR in developing countries as a means to better access to climate technologies.<sup>140</sup>

For the majority of developing countries, the capacity to absorb technologies and adapt them to local needs and conditions constituted a major element in effective technology transfer.<sup>141</sup> The global effort to adopt environmental and climate technologies will be disproportionately challenging for developing countries, particularly less developed countries (LDCs).<sup>142</sup> The added challenge is due in part to the high cost of environmental and climate technologies in comparison to the country's gross domestic product (GDP). The capacity for developing countries to acquire and absorb these technologies is low.<sup>143</sup> According to estimates done by the OECD, in some African countries adaption would cost up to 10% of their national incomes and would exceed entirely the GDP of other LDCs.<sup>144</sup> Furthermore, the research conducted by the International Centre for Trade and Sustainable Development (ICTSD) indicates that the absorption and adaptation of existing technologies in LDCs today mainly occurs through informal mechanisms such as imitation.<sup>145</sup> While many companies file patents in emerging economies, few companies file patents in the rest of the developing world.<sup>146</sup> Consequently, in countries where a patent is not filed, the invention is in the public domain.<sup>147</sup> For LDCs, "limited market size, weak regulatory mechanisms and minimal technological capability of local firms" potentially encumber the implementation of a strong IPR system and formal channels for technology transfer.<sup>148</sup>

In certain cases, the lack of patents in developing countries leads to their ability to implement existing environmental and climate technologies. For example, in 2003, students from the Science Research Park in Harare, Zimbabwe installed solar-powered streetlights on the avenue outside the park using their own industry and established technology.<sup>149</sup> Because the solar technology was not patented in Zimbabwe, they were able to imitate the technology without restriction from IPR.<sup>150</sup> The Barefoot College in Tilonia, India also offers a useful example of the transfer of climate-related technologies within and across borders in the patent-free geographical areas of the world. The Barefoot College has trained hundreds of illiterate women as solar engineers throughout India and other developing countries.<sup>151</sup> At Barefoot College, solar engineers have installed "8,700 solar units, generating 500 kilowatts (kW) per day, and manufactured 4,100 solar lanterns" which are providing solar power to "574 villages and hamlets (nearly 100,000 people) as well as 870 schools."<sup>152</sup> The College has successfully trained women in Ethiopia, Afghanistan, Tanzania, Benin, Bhutan, Cameroon, Gambia, Mali, Malawi, Mauritania, Rwanda, and Sierra Leone.<sup>153</sup> The College provides villages in many developing countries with clean energy alternatives to traditional

<sup>137</sup> Mara, "Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved," 2009

<sup>138</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 17

<sup>139</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 17

<sup>140</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 17

<sup>141</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 13

<sup>142</sup> Okediji, *Intellectual Property Rights and the Transfer of Environmentally Sound Technologies*, 2009

<sup>143</sup> Okediji, *Intellectual Property Rights and the Transfer of Environmentally Sound Technologies*, 2009

<sup>144</sup> Okediji, *Intellectual Property Rights and the Transfer of Environmentally Sound Technologies*, 2009

<sup>145</sup> International Center for Trade and Sustainable Development, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>146</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>147</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>148</sup> International Center for Trade and Sustainable Development, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>149</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>150</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>151</sup> Castonguay, "Barefoot College: Teaching Grandmothers to be Solar Engineers," 2009

<sup>152</sup> Castonguay, "Barefoot College: Teaching Grandmothers to be Solar Engineers," 2009

<sup>153</sup> Castonguay, "Barefoot College: Teaching Grandmothers to be Solar Engineers," 2009



pollution generating kerosene lighting and the extensive burning of wood.<sup>154</sup> The Barefoot College is helping villages gain and absorb needed environmentally clean technologies, without bringing in new competition to the international solar market. It provides an example of how environmental and climate technologies can be transferred to some of the poorest communities and areas in the world. This begs the question whether weak IPR systems in the developing world are beneficial to adapting environmental and climate technologies or if the presence of strong IPR could be more effective.

### ***Differentiated Intellectual Property Rights***

Contention remains as to whether strong IPR is detrimental, beneficial, or insignificant to effective technology transfer.<sup>155</sup> The majority of technology transfer occurs in the private sector, but because it is not a costless or automatic process, policy and legal incentives from the public sector continue to be critical.<sup>156</sup> The challenge is how to utilize the IPR regime to find an appropriate balance between IP protection and addressing immediate public necessity to disseminate, adapt, and absorb environmental and climate technologies.<sup>157</sup>

The IPR system for future environmental and green technologies is more critical than second or third generation technologies such as wind and solar, because many of the patents pertaining to the latter have already matured and information on their development is already available to the public. Research conducted by the Chatham House reveals that it takes two to three decades for innovations in the energy sector to reach the mass market, creating a significant time lag between technological development and widespread availability.<sup>158</sup> The widespread dissemination of key climate technologies persists as a challenge to effective mitigation measures. According to a report by the Chatham House, carbon capture and storage technology is not expected to see full scale deployment until 2020-2025, and it remains questionable when wind, solar, and nuclear energy technologies will be capable of being deployed on a large scale.<sup>159</sup> In some instances, differentiated IPR already exist, and have been created on a voluntary basis. Several countries have implemented policy measures to fast-track patents on green technologies, including the United States, the United Kingdom, Australia, and the Republic of Korea, including decreasing the traditional 20-year lifespan of patents.<sup>160</sup> The United Kingdom announced a fast-track scheme in 2009 that accelerates the patent application process from three to five years to eight to nine months for climate-related technologies.<sup>161</sup> Governments have not been alone in implementing differentiated approaches to IPR. Some private companies have undertaken similar initiatives of their own accord. Nokia, IBM, Sony, and Pitney Bowes founded the Eco-Patent Commons which allows environmentally beneficial patents to be used free of charge by other contributors.<sup>162</sup> The Eco-Patent Commons was founded so that the technology could be adopted more quickly and over a broader area.<sup>163</sup>

Many options have been proposed for an international differentiated IPR system to expedite and enhance environmental and climate technology transfer including compulsory licensing, volunteer licensing, pooling and sharing, joint ownership between countries, joint ownership between the public and private sector, public purchasing and flexible technology transfer schemes. The above is not an exhaustive list of differentiated approaches to IPR that could be potentially useful in the context of environmental and climate technologies. Currently, differentiated approaches to IPR, with the exception of compulsory licensing, have only been implemented on a case-by-case basis rather than multilaterally.<sup>164</sup>

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<sup>154</sup> Castonguay, "Barefoot College: Teaching Grandmothers to be Solar Engineers," 2009

<sup>155</sup> International Center for Trade and Sustainable Development, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>156</sup> International Center for Trade and Sustainable Development, *Climate Change, Technology Transfer and Intellectual Property Rights*, 2008

<sup>157</sup> International Center for Trade and Sustainable Development, *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*, 2009

<sup>158</sup> Chatham House, *IPRs and the Innovation and Diffusion of Climate Technologies*, 2007

<sup>159</sup> Chatham House, *IPRs and the Innovation and Diffusion of Climate Technologies*, 2007

<sup>160</sup> Bowman, "Innovation, the Environment, and the Future," 2010

<sup>161</sup> Bowman, "Innovation, the Environment, and the Future," 2010

<sup>162</sup> Bowman, "Innovation, the Environment, and the Future," 2010

<sup>163</sup> Bowman, "Innovation, the Environment, and the Future," 2010

<sup>164</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

Looking to past multilateral agreements encompassing differentiated IPR, compulsory licensing has been proposed as a possible IPR measure for accelerating the dissemination of needed environmental and climate technologies. Compulsory licensing was made legal under Article 31 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement and Public Health.<sup>165</sup> Compulsory licensing is a legal principle that allows, under TRIPS, a Member State to use a patent without authorization of the owner, in cases when IP needed for the public good is not made available by the private owner.<sup>166</sup> Many developing countries, including Thailand, South Africa, and Indonesia, have used compulsory licensing under TRIPS, although they consequently faced political repercussions from some developed countries.<sup>167</sup> For example, when the Thai government implemented compulsory licensing under TRIPS for anti-viral, cancer, and heart disease medication it caused a dramatic response from the international media, pharmaceutical companies, and politicians who portrayed the Thai government as a “pirating military junta” who did not regard IPR.<sup>168</sup> Certain developed countries responded with outrage at Thailand’s use of compulsory licensing even though the government’s order followed all national and international legal and procedural requirements.<sup>169</sup> Such reactions from developed countries have become a disincentive for developing countries to invoke compulsory licensing, even though it is perfectly legal under certain conditions.<sup>170</sup> Under WIPO’s Development Agenda Recommendations, “WIPO shall make available advice to developing countries and LDCs, on the implementation and operation of the rights and obligations and the understanding and use of flexibilities contained in the TRIPS Agreement.”<sup>171</sup> While WIPO has been useful in providing developing countries with the knowledge of their rights under TRIPS and going through all of the legal channels when invoking compulsory licensing, they have not been able to curb the resulting political backlash.<sup>172</sup> In order for an international agreement such as TRIPS to be a viable option for environmental and climate technologies, the broader political-economic attitudes of the actors involved will need to be addressed.

The use of patent pools and commons has also been proposed as a means for developing countries to gain better access to climate and environmental technologies. The definition and use of patent pools remain inconsistent because the purpose and operational rules vary greatly, and include standards consortium, standards consortium with administrative body, cross-licensing, open-licensing, and dedicated patents.<sup>173</sup> Generally speaking, a patent pool is “an agreement by multiple patent holders to share intellectual property among themselves or to license a portfolio of patents as a package to outsiders.”<sup>174</sup> Patent pools allow for users to acquire needed technology licenses from the pool in exchange for royalty payments at an agreed upon rate.<sup>175</sup> For environmental and climate technologies such royalties could potentially be differentiated for developing countries.<sup>176</sup> One advantage to patent pools is they offer a single point of distribution of technologies, cutting down on licensing costs.<sup>177</sup> On the other hand, members of patent pools are typically large companies with strong patent portfolios, excluding small players and nonmembers from potential benefits.<sup>178</sup> While participation by developing countries in patent pools is minimal, the argument exists for public subsidization for the royalties normally paid for by institutions, in order to increase participation by developing countries.<sup>179</sup>

Patent information databases have also been proposed to provide greater access to climate change technology. Using patent information as a tool to provide greater access to technology in developing countries is actively advocated by WIPO.<sup>180</sup> The organization’s effort to make patent information widely available, evolved into the creation of PatentScope, a database that aggregates International Patent Classification (IPC) patents from developed and

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<sup>165</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>166</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>167</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>168</sup> ‘t Hoen, *The Global Politics of Pharmaceutical Monopoly Power*, 2009

<sup>169</sup> ‘t Hoen, *The Global Politics of Pharmaceutical Monopoly Power*, 2009

<sup>170</sup> ‘t Hoen, *The Global Politics of Pharmaceutical Monopoly Power*, 2009

<sup>171</sup> World Intellectual Property Organization, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>172</sup> ‘t Hoen, *The Global Politics of Pharmaceutical Monopoly Power*, 2009

<sup>173</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>174</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>175</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p.27

<sup>176</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 27

<sup>177</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p.27

<sup>178</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>179</sup> Maskus, *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, 2010, p. 8

<sup>180</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

developing countries.<sup>181</sup> PatentScope provides the full-text of over 1.7 million published international patent applications, in part, to provide technical guidance to developing countries.<sup>182</sup> Although patent information databases allow current climate technology patents to be searched, it only provides the legal document that defines the parameters of an invention, which does not help a country imitate the technology if they are in a country where it is not patented.<sup>183</sup> While patent information databases are useful source of information, alone they will not solve the current dissent with the international IPR regime held by several governments.

### ***Environmental and Climate Technologies in WIPO's recent work***

As an expert committee on IPR, WIPO's role is significant in the global policy dialogue on climate change. In 2007, the WIPO General Assembly formally established the Development Agenda of WIPO, which included the adoption of 45 Development Agenda Recommendations, in an effort to place development at the foundation of the organization's work.<sup>184</sup> Several of the recommendations pertain to the organization's recent work involving environmental and climate technologies, including Recommendation 25 which aims, "to explore intellectual property-related policies and initiatives necessary to promote the transfer and dissemination of technology, to the benefit of developing countries and to take appropriate measures to enable developing countries to fully understand and benefit from different provisions, pertaining to flexibilities provided for in international agreements, as appropriate."<sup>185</sup> Mainstreaming and implementing the Development Agenda has become a main priority and is significant in WIPO's recent efforts to address IPR for environmental and climate technologies.<sup>186</sup>

As a specialized agency of the United Nations, WIPO's Development Agenda is congruent with the United Nation's Millennium Development Goals (MDGs). Recommendation 22 of WIPO's Development Agenda states that "norm setting activities should be supportive" of the Millennium Declaration.<sup>187</sup> A report on WIPO's contributions to the MDGs, presented during the fifth session of the Committee on Development and Intellectual Property (CDIP), highlights the role of WIPO and IPR in meeting MDG 7, Ensuring Environmental Sustainability.<sup>188</sup> The organization has enhanced its work connecting IPR and the environment, in terms of connection between IPR and environmental technologies, genetic resources, and technology transfer.<sup>189</sup> In 2008, WIPO launched a policy forum on Patent Landscaping and Transfer of Technology under Multilateral Environmental Agreements (MEAs) to address possible IP issues that may occur in implementing MEAs.<sup>190</sup> In 2009, at WIPO's conference on IP and Public Policy Issues, green technology was one of the main topics and the conference including dialogues on the development and transfer of mitigation and adaptation technologies.<sup>191</sup> The organization has also had an active role promoting global policy dialogue on IP in the context of climate change in the UNFCCC.<sup>192</sup> This was particularly true at COP 14 and 15, where WIPO developed policy materials and co-organized side events.<sup>193</sup> By integrating a

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<sup>181</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>182</sup> World Intellectual Property Organization, PatentScope, 2007

<sup>183</sup> Cannady, *Access to Climate Change Technology by Developing Countries: A Practical Strategy*, 2009

<sup>184</sup> World Intellectual Property Organization, *Overview of the Development Agenda*, 2007.

<sup>185</sup> World Intellectual Property Organization, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>186</sup> Committee on Development and Intellectual Property, *Initial Working Document for the Committee on Development and Intellectual Property: Revised Text in Respect of Recommendations Considered During Informal Consultations on April 16 and 17, 2008*, 2008

<sup>187</sup> World Intellectual Property Organization, *The 45 Adopted Recommendations under the WIPO Development Agenda*, 2007

<sup>188</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>189</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>190</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>191</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>192</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>193</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

Technology Focus on alternative energies into WIPO's patent information services, greater access to published international patent applications for alternative energies is available.<sup>194</sup>

WIPO has undertaken work involving IPR for environmental and climate technologies alone and as a joint effort with other agencies. WIPO has been involved with the Convention on Biological Diversity (CBD) in regards to CBD's disclosure requirements and technology transfer.<sup>195</sup> At the request of the COP of the CBD, WIPO prepared a Technical Study on Disclosure Requirements in Patent Systems Related to Genetic Resources and Traditional Knowledge, as well as a joint paper on "The Role of Intellectual Property Rights in Technology Transfer in the Context of the Convention on Biological Diversity" with CBD and UNCTAD.<sup>196</sup> In the *Proposed Program and Budget for the 2010/11 Biennium*, WIPO outlines its program concerning IP and Global Challenges, which, in part, aims to: "develop practical IP-based initiatives, such as an open innovation platform for green technologies, to help address the global challenges of climate change, food security and public health."<sup>197</sup> The program will promote the acceleration of innovation and dissemination of adaption and mitigation technologies, and address the technical and legal challenges that arise in the potential use of new environmental and climate technologies.<sup>198</sup>

The publication, WIPO's Contribution to Meeting the Challenge of Climate Change, outlines four main areas WIPO can contribute to the global mitigation and adaption efforts.<sup>199</sup> The four areas of contribution are to "serve as the international forum for IP and technology transfer discussions post-Copenhagen;" as well as provide:

"patent mapping or 'landscaping' services to help better understand technology profiles and property rights in climate friendly technologies; capacity building support for the management and transfer of technologies reducing greenhouse gas emissions, including assistance in drafting IP clauses in technology transfer agreements (and)... targeted dispute resolution services in technology transfer agreements."<sup>200</sup>

The above contributions will be important in shaping the future work of WIPO in using IPR to facilitate innovation, dissemination, and transfer of climate technologies.

## **Conclusion**

The need for the international community to adopt mitigation and adaption measures multilaterally to address global anthropogenic climate change is growing in urgency. The inability of the UNFCCC to reach a consensus on what measures should be taken and how best to implement them is due, in part, to the continuing contentiousness of the IPR regime debate. The extent of the impact of climate change and the affects it will have on the global population are difficult to predict with certainty. However, there is international consensus that new technologies will have a significant role in adapting to the consequent disturbances and in mitigating harm as much as possible. As the specialized UN agency on IPR, it is WIPO's responsibility to contribute informed recommendations and practical strategies for utilizing IPR for environmental and climate technologies to the global dialogue.

All of the differentiated IPR systems for environmental and climate technologies that have been discussed, as well as those that were not, have both advantages and drawbacks. Also, results tend to vary on a case-by-case basis, leaving the potential effectiveness of each system as a central question for the WIPO committee. It will be up to the delegates to decide if reform to the international IPR system is needed for climate-related technologies and if it is needed what reforms should be made. Other questions that should be considered by the committee include: does IPR significantly impact the innovation and dissemination of environmental and climate technologies? Is strong

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<sup>194</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>195</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>196</sup> World Intellectual Property Organization, *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*, 2010

<sup>197</sup> World Intellectual Property Organization Program and Budget Committee, *Proposed Program and Budget for the 2010/11 Biennium*, 2009, p.5

<sup>198</sup> World Intellectual Property Organization Program and Budget Committee, *Proposed Program and Budget for the 2010/11 Biennium*, 2009, p.118

<sup>199</sup> World Intellectual Property Organization, *WIPO's Contribution to Meeting the Challenge of Climate Change*, 2007

<sup>200</sup> World Intellectual Property Organization, *WIPO's Contribution to Meeting the Challenge of Climate Change*, 2007

enforcement of IPR protection or more flexible arrangements in the dissemination of technologies related to climate change more effective? Are there serious barriers to technology development and transfer in developing countries and if so how can they best be overcome? How can the concerns of both developed and developing countries on the issue of IPR be better addressed? How can IPR be used to fast-track the production and transfer of environmental and climate technologies? How might the experience with differentiated IPR regimes through the TRIPS flexibilities on public health contribute to this debate or the generation of further similar systems or accommodations?

### III. Patenting Life: Intellectual Property and Complex Structures

#### *Definition of Life*

As technology and science develop, a new question has arisen over who has control and should control information regarding the genes that are the ‘building blocks of life’.<sup>201</sup> Patenting genes and other forms of life give protection and incentives to further development; however, it also can affect the basic practice of equal human rights for all.<sup>202</sup> The Convention on Biological Diversity (CBD) defines terms appropriate to intellectual property. “Biotechnology means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.”<sup>203</sup> A gene is the basic unit of heredity in human populations and is made of DNA base pairs.<sup>204</sup> Under CBD, “Genetic Material means any material of plant, animal, microbial, or other origin containing functional units of heredity.”<sup>205</sup> The terminology of genes includes human and non-human genes; however, human genes also are found in non-human genetic codes.<sup>206</sup>

The adoption of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) created a debate between developed and developing countries regarding who actually controls the patenting of life.<sup>207</sup> TRIPS was passed by the World Trade Organization (WTO) in 1994 as a way to set an international set of protections for intellectual property laws.<sup>208</sup> According to Article 27.3 in TRIPS, “plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes” may be excluded from being patented.<sup>209</sup> Developed countries have expanded individual patenting systems to include genetic material.<sup>210</sup> For instance, the United States Patent and Trademark Office (PTO) had issued over six thousand patents on genes from living organisms by mid-2000.<sup>211</sup> The international community in general is concerned over the morality and issues of state sovereignty regarding the patenting of genetic materials from living organisms.<sup>212</sup>

#### *Developing Countries and TRIPS*

TRIPS is defended and applauded by proponents because it creates innovation, encourages a transfer of technology, and because strong intellectual property rules are designed to assist in to economic growth and development by most developed countries.<sup>213</sup> TRIPS has been attacked by the developing world for medical reasons mainly because HIV/AIDS medications are harder to attain because of patent protection on these drugs.<sup>214</sup> The Committee on Economic, Social, and Cultural Rights (ESCR) adopted a statement in 2001 on this issue saying that intellectual

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<sup>201</sup> Safrin, *Hyperownership in a Time of Biotechnological Promise*, 2004, p. 641.

<sup>202</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 404.

<sup>203</sup> United Nations Environmental Program, *Convention on Biological Diversity*, 1992, Article 2.

<sup>204</sup> Resnik, *The Morality of Human Gene Patents*, 1997, p. 44.

<sup>205</sup> United Nations Environmental Program, *Convention on Biological Diversity*, 1992, Article 2.

<sup>206</sup> Resnik, *The Morality of Human Gene Patents*, 1997, p. 44.

<sup>207</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 404.

<sup>208</sup> World Trade Organization, *Understanding the WTO: The Agreements*, 2010.

<sup>209</sup> World Trade Organization, *Agreement on Trade-Related Aspects of Intellectual Property*, 1994, Article 27.3(b).

<sup>210</sup> Safrin, *Hyperownership in a Time of Biotechnological Promise*, 2004, p. 641.

<sup>211</sup> Safrin, *Hyperownership in a Time of Biotechnological Promise*, 2004, p. 641.

<sup>212</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 404.

<sup>213</sup> Helfer, *Regime Shifting*, 2004, p. 2.

<sup>214</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 413-414.

property protection must help human well-being.<sup>215</sup> In February 2003, the United Nations Development Program (UNDP) released a report that stated TRIPS is not favorable among developing countries and they have called on developed countries to replace it.<sup>216</sup> TRIPS is only enforceable in the World Trade Organization and in that body, there are questions about how to effectively stand by the treaty when individual nations can modify parts to fit their standards.<sup>217</sup> The rise of opposition to TRIPS primarily came from developing countries with HIV/AIDS problems because many of the drugs to combat HIV/AIDS are protected by patents, which make those drugs expensive and unattainable for some developing nations, mainly because developing nations are left out of the patent process and are unable to profit from their raw material productions.<sup>218</sup>

In the era of biodiversity, TRIPS has also been criticized by developing nations and non-governmental organizations (NGOs) because TRIPS does not require patent requesters to provide information on the origin of the genetic resources.<sup>219</sup> Developing nations are concerned because they rarely see monetary benefits from their raw materials and they also do not have the technology to effectively apply for patents on any discovery they make.<sup>220</sup> Part of the debate revolves around the protection and crediting of knowledge, which has been addressed by the CBD Conference of the Parties (COP) by proposing sui generis system to protect traditional knowledge.<sup>221</sup> The COP, which is made up of several developing nations, the Group of 77, the People's Republic of China, Greenpeace, and the International Union for the Conservation of Nature have also expressed concern that TRIPS is creating adverse affects on the CBD because it modifies some of the definitions of genetic material as set forth in the CBD.<sup>222</sup> One of the adverse affects is crediting the location of raw genetic material, which TRIPS does not take into account, but CBD does.<sup>223</sup> The difference in opinion regarding TRIPS also demonstrates issues of morality of patenting life materials as well as a question of sovereignty.

### ***Morality and Sovereignty of Patenting Life***

The morality of patenting genetic material has come into question.<sup>224</sup> Article 25 of the Universal Declaration of Human Rights states that, "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services."<sup>225</sup> The International Covenant on Economic, Social, and Cultural Rights (ICESCR) also says that all people have the right to the highest attainable standard of physical and mental health.<sup>226</sup> The question of patenting of genetic materials was decided in 1980 in the United States through the Supreme Court case *Diamond v. Chakrabaty* when microorganisms were allowed to be patented.<sup>227</sup> That ruling was expanded to multi-cellular organisms a few years later.<sup>228</sup> In 1993, the United States PTO rejected a bid by the National Institutes of Health to patent genetic material despite this law.<sup>229</sup> By mid-2000, the number of patents had increased to over six thousand.<sup>230</sup> The moral debate centers on religion and legality of these patents. In the United States in 1995, 186 religious leaders called for the banning of patents on human and animal genes because the genes were creations of God rather than human inventions.<sup>231</sup> In Europe, the European Patent Convention excludes any invention that threatens *ordre public* or common morality.<sup>232</sup> Also, the European Biotechnology Directive prohibits patenting on human cloning processes, modification of the human germ, embryos used for industrial or commercial purposes, and human embryonic stem

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<sup>215</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 414-415.

<sup>216</sup> Helfer, *Regime Shifting*, 2004, p. 3-4.

<sup>217</sup> Johnston and Wasunna, *Patents, Biomedical Research, and Treatments*, 2007, p. S5.

<sup>218</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 413-414.

<sup>219</sup> Helfer, *Regime Shifting: The TRIPS Agreement*, 2004, p. 28-29.

<sup>220</sup> Juma, *Intellectual Property Rights and Globalization: Implications for Developing Countries*, 1999, p. 4.

<sup>221</sup> Helfer, *Regime Shifting: The TRIPS Agreement*, 2004, p. 33.

<sup>222</sup> Helfer, *Regime Shifting: The TRIPS Agreement*, 2004, p. 28-29.

<sup>223</sup> Helfer, *Regime Shifting: The TRIPS Agreement*, 2004, p. 29.

<sup>224</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 415.

<sup>225</sup> United Nations, *Universal Declaration of Human Rights*, 1948, Article 25.

<sup>226</sup> Cullet, *Human Rights and Intellectual Property Protection in the TRIPS Era*, 2007, p. 415.

<sup>227</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 69.

<sup>228</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 69.

<sup>229</sup> Resnik, *The Morality of Human Gene Patents*, 1997, p. 43.

<sup>230</sup> Safrin, *Hyperownership in a Time of Biotechnological Promise*, 2004, p. 641.

<sup>231</sup> Resnik, *The Morality of Human Gene Patents*, 1997, p. 43.

<sup>232</sup> Johnston and Wasunna, *Patents, Biomedical Research, and Treatments*, 2007, p. S10.



cells.<sup>233</sup> The United Kingdom's Nuffield Council on Bioethics noted that the subject of 'morality' and *ordre public* required expert knowledge that individual patent offices do not have.<sup>234</sup>

One of the concerns of international patents revolves around the location where genetic material is found or grown. In terms of farmers' rights, farmers are involved in the process of growing because they form new seed varieties through domestication, selection, and breeding.<sup>235</sup> The concept of individual plants being private good is accepted; however, plant genetic resources have been perceived as the public good.<sup>236</sup> This debate was incorporated into the Food and Agricultural Organization (FAO) International Undertaking on Plant Genetic Resources, which was adopted in 1983; however, by 1985, developed countries demanded that the raw genetic diversity of the global South be called 'common heritage of humanity' and the plant breeders in the global North were protected by intellectual property rights.<sup>237</sup> The same debate rages for other living genetic material because the genetic material is not as valuable as the blueprint inside.<sup>238</sup> The origin of the gene is impossible to track and can be moved easily because genes can exist on items such as a twig, leaf, or butterfly wing.<sup>239</sup> As an example, plant genetic resources are economically valuable to developed countries when harvested, and those who had original physical domain are not profiting or receiving credit for those materials.<sup>240</sup> These genetic resources are commonly called 'common heritage of mankind',<sup>241</sup> which is the center of the debate over sovereignty and the rights to raw genetic material. The European Community submitted a document to WIPO through the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore that called for the disclosure of the origin of any raw genetic material in accordance with the CBD.<sup>242</sup> In any patent application, the application should declare the country of origin only if one is aware of it, which is defined by the CBD as, "the country that possesses those genetic resources in *in situ* conditions," which are conditions where resources exist in a natural habitat.<sup>243</sup> Under the Biodiversity Convention of 1992, the donor country of raw genetic material is allowed to obtain a fair share of the benefits of their use by way of monetary or non-monetary benefits, which would mean research or development.<sup>244</sup>

### ***WIPO and Genetic Patents***

WIPO has addressed this problem by forming the Patent Law Treaty (PLT), which is a guideline for how to prepare, file and manage patent laws in different countries, but the PLT has yet to be enacted due to lack of ratification by individual governments.<sup>245</sup> Another part of the negotiations for the PLT was the discussion of the requirement for origin of the genetic material before a patent can be issued, which developed countries and industrial representatives labeled an administrative burden.<sup>246</sup> A new treaty called the Substantive Patent Law Treaty (SPLT) is in the foundation process and it is based on the principles of the PLT and combines the agreed upon points from previous treaties.<sup>247</sup> The bulk of SPLT is the question over which court or courts would handle challenges and problems covered in SPLT.<sup>248</sup> Regarding the establishment of a legal process, other things such as international court rules, long and expensive litigation, and the enforcement and recognition of a judgment must be considered.<sup>249</sup> Another document that must be considered is the Patent Agenda, which came from the WIPO Conference on the International Patent System held in 2002.<sup>250</sup> The main goals of the Agenda are to distinguish public and private

<sup>233</sup> Johnston and Wasunna, *Patents, Biomedical Research, and Treatments*, 2007, p. S10.

<sup>234</sup> Johnston and Wasunna, *Patents, Biomedical Research, and Treatments*, 2007, p. S10.

<sup>235</sup> Zerbe, *Contesting Privatization: NGOs and Farmers' Rights in the African Model Law*, 2007, p. 100.

<sup>236</sup> Zerbe, *Contesting Privatization: NGOs and Farmers' Rights in the African Model Law*, 2007, p. 100.

<sup>237</sup> Zerbe, *Contesting Privatization: NGOs and Farmers' Rights in the African Model Law*, 2007, p. 100-101.

<sup>238</sup> Safrin, "Hyperownership in a Time of Biotechnological Promise, 2004, p. 665.

<sup>239</sup> Safrin, *Hyperownership in a Time of Biotechnological Promise*, 2004, p. 665.

<sup>240</sup> Gulati, *The 'Tragedy of the Commons' in Plant Genetic Resources*, 2001, p. 63-64.

<sup>241</sup> Gulati, *The 'Tragedy of the Commons' in Plant Genetic Resources*, 2001, p. 64.

<sup>242</sup> World Intellectual Property Organization, *Disclosure of Origin or Source of Genetic Resources and Associated Traditional Knowledge in Patent Applications*, 2005, Annex, pg.2.

<sup>243</sup> World Intellectual Property Organization, *Disclosure of Origin or Source of Genetic Resources and Associated Traditional Knowledge in Patent Applications*, 2005, Annex, pg.2.

<sup>244</sup> Cullet & Raja, *Intellectual Property Rights and Biodiversity Management: The Case of India*, February 2004, p. 98-99.

<sup>245</sup> *WIPO Moves Towards 'World' Patent System*, 2002.

<sup>246</sup> *WIPO Moves Towards 'World' Patent System*, 2002.

<sup>247</sup> *WIPO Moves Towards 'World' Patent System*, 2002.

<sup>248</sup> *WIPO Moves Towards 'World' Patent System*, 2002.

<sup>249</sup> Bobrow and Thomas, *Patents in a Genetic Age*, February 2001.

<sup>250</sup> World Intellectual Property Organization, *Patent Agenda*, 2002, p. 2.

practices when it comes to intellectual property, patent harmonization, reduce duplication, and draw attention to the role of developing nations.<sup>251</sup> Chapter VII calls for increased patent standards for patents that create policy issues, such as genetic materials.<sup>252</sup>

The developing world has been pressing for an international intellectual property set of laws.<sup>253</sup> In 2008, the total number of applications filed with the Patent Cooperation Treaty (PCT) was 1,907,915 with the number granted at 777,556 and developed countries were severely limited in their application numbers.<sup>254</sup> With any production of intellectual property on genetics, advanced technology is required for research or discovery of genetic material, which is lacking in the developing world.<sup>255</sup> Another reason is monetary. Under Article 67 of TRIPS, developed nations will provide financial assistance to developing countries in the quest for intellectual property rights.<sup>256</sup> However, in the United States, “Patent examiners are encouraged with monetary bonuses to grant patent applications,” which has led to suggestions of a set of fair and even international training guidelines for patent examiners.<sup>257</sup> There are also morality debates among developing nations because the African Group, which has been pressing for a modification in TRIPS, has pushed for the prohibition of the patenting of genetic materials related to life.<sup>258</sup> In response to the issues with TRIPS, in 1998, the Organization of African Unity (now African Union) enacted the African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources.<sup>259</sup> This regional legislation calls for access to biological resources to not be patented and to review intellectual property rights as it applies to farmers’ rights over their resources.<sup>260</sup>

### **Case Study: Europe**

There are divisions within the European Union when it comes to patentability of genetic resources, specifically a moral dilemma.<sup>261</sup> In October 1977, the European Patent Organization, now called the European Patent Office (EPO), was established as a part of the European Patent Convention (EPC), signed in Munich in 1973 to establish a regional set of guidelines regarding patentability.<sup>262</sup> Currently, there are 37 Member States to the EPO.<sup>263</sup> Under the EPC, an invention must be new, be made of patentable matter, be ‘susceptible of industrial application’, and involve an invention ‘step’.<sup>264</sup> The EPO has a three phase procedure of obtaining any patent: phase one involves filing the application and a search by EPO staff for previous knowledge and inventions; phase two involves a substantial and close examination of the application, which results in an acceptance or rejection of the application; and phase three, if the application is granted, allows for opposition to be filed against the application by a third party, which includes the EPO.<sup>265</sup> Patent applications must also be submitted to the local patent office of the Member State.<sup>266</sup> For the most part, if granted, most patents last twenty years from the application date.<sup>267</sup> Most countries also operate a ‘first-to-file’ system where the earliest completed application receives the patent is multiple applications are filed on one invention.<sup>268</sup>

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<sup>251</sup> World Intellectual Property Organization, *Patent Agenda*, 2002.

<sup>252</sup> World Intellectual Property Organization, *Patent Agenda*, 2002, Chapter VII.

<sup>253</sup> Drahos, *Developing Countries and International Intellectual Property Standard-Setting*, September 2002, p. 779.

<sup>254</sup> World Intellectual Property, *World Intellectual Property Indicators 2010*, September 2010.

<sup>255</sup> Juma, *Intellectual Property Rights and Globalization: Implications for Developing Countries*, 1999, p. 4.

<sup>256</sup> Juma, *Intellectual Property Rights and Globalization: Implications for Developing Countries*, 1999, p. 6.

<sup>257</sup> Johnston and Wasunna, *Patents, Biomedical Research, and Treatments*, January-February 2007, p. S10.

<sup>258</sup> Drahos, *Developing Countries and International Intellectual Property Standard-Setting*, September 2002, p. 782.

<sup>259</sup> Organization of African Union, *African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources*, 2000.

<sup>260</sup> Organization of African Union, *African Model Legislation for the Protection of the Rights of Local Communities...*, 2000.

<sup>261</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 70.

<sup>262</sup> European Patent Organisation, *EPO – Legal Foundations*, 2010.

<sup>263</sup> European Patent Organisation, *EPO – Legal Foundations*, 2010.

<sup>264</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*, 2001, p. 1644.

<sup>265</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 73.

<sup>266</sup> Organisation for Economic Co-operation and Development, *Genetic Inventions, Intellectual Property Rights and Licensing Practices: Evidence and Policies*, 2002, p. 23.

<sup>267</sup> Organisation for Economic Co-operation and Development, *Genetic Inventions, Intellectual Property Rights*, 2002, p. 23.

<sup>268</sup> Organisation for Economic Co-operation and Development, *Genetic Inventions, Intellectual Property Rights*, 2002, p. 23.

In 1988, the Commission of the European Communities drafted the Legal Protection of Biotechnological Inventions, which was revised and continuously rejected until 2004-05 because of moral questions regarding the patentability of genetic research and materials.<sup>269</sup> The 1988 draft did not give an indication that patenting biotechnology and genetics was un-ethical, but could not be agreed upon and the issue was revisited in 1992.<sup>270</sup> In 1992, the ethics of patenting genetic were recognized and included a clause that stated, “the following shall be unpatentable: the human body or parts of the human body *per se*.”<sup>271</sup> The term *per se* was never clarified in the document or supporting documentation, so the exact definition was left vague.<sup>272</sup> It was not until 1994 that the definition was changed to include all genetic materials inside the human body.<sup>273</sup> The debate continued until a final document was adopted by the European Parliament in 1998 with a rule that the human body could not be patented inside the body and the only patentable material was an element isolated from the human body or produced by a technical process.<sup>274</sup> Soon after adoption in 1998, individual countries, led by the Netherlands, Italy, and Norway, began challenging the ethics and legality of the 1998 document and after years of legal debate in the European Court, the debate ended in 2004 with the Court upholding the directive.<sup>275</sup> After 2005, European countries set their own rules about patenting of life and no binding document in the European Union was agreed upon.<sup>276</sup> One argument against patenting genetic materials is that living organisms, which include DNA, are ‘products of nature’ and therefore cannot be claimed as owned, but this has been struck down by the EPC and EPO.<sup>277</sup> European public opinion is also against the idea of patenting of biotechnology and has shown dissent against the Biotechnology Derivative based on the idea that morality should not be disregarded in effort to make a profit.<sup>278</sup> European law allows individual citizens to challenge a patent law on moral grounds.<sup>279</sup> In response to public and official opposition, Jeremy Bentham, a very influential utilitarian, patenting of DNA sequences is moral and ethical because it would lead to medical advances that will help and preserve human life.<sup>280</sup> Other scientists believe that, “A human gene patent would be analogous to a patent for making or manipulating other kinds of human body parts, such as hair, bones, or hearts.”<sup>281</sup> The debate continues in the European Union and throughout the world as to the legal, moral, religious, and ethical arguments for and against the patenting of genetic material.

## Conclusion

One of the biggest questions of concern for this topic is whether or not genetic material is patentable. There is no question that getting a patent requires money and advanced technology, so how can developing nations become global competitors on this subject? The question over whether or not patenting genetic material is plausible must be answered with legality and morality considerations, depending on the policy of each Member State. If intellectual property laws are allowed for genetic materials, what international rules will be associated with these laws? What role will the TRIPS, CBD, the Patent Agenda, and PLT documents be considered? If there is an agreement on international intellectual property laws, what group or individual will be in charge of the patent application process? Also, how can developing countries receive credit, both in the patent process and monetarily, in the international community? Should the location of raw materials or knowledge be included in the application process? These questions are just a few that need to be answered by the committee to come to an affective conclusion for this topic.

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<sup>269</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 70.

<sup>270</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 73-74.

<sup>271</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 74-75.

<sup>272</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 75.

<sup>273</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 77.

<sup>274</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 80.

<sup>275</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 86-88.

<sup>276</sup> Brody, *Intellectual Property and Biotechnology: The European Debate*, 2007, p. 71.

<sup>277</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*. 2001, p. 1645.

<sup>278</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*. 2001, p. 1658.

<sup>279</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*. 2001, p. 1658.

<sup>280</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*. 2001, p. 1659.

<sup>281</sup> Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: an Argument for Compulsory Licensing and Fair-use Exemption*. 2001, p. 1660.

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Bessen, J. (2005). *Open Source Software: Free Provision of Complex Public Goods*. United Nations Conference on Trade and Development. Retrieved on August 18, 2010, from <http://stuermer.ch/blog/documents/FLOSSImpactOnEU.pdf>

*An overview about what open-source software is and its benefits to not only the creators of such software, but also the software development industry. It also explores why private software firms are investing money and resources into open-source software. Recommended for those that are unfamiliar with the concept of open-source; it also provides useful information on the relevance to the high-tech industry.*

European Commission. (2006). *Economic impact on open source software on innovation and the competitiveness of the Information and Communications Technologies (ICT) sector in the EU*. Retrieved on August 18, 2010, from <http://stuermer.ch/blog/documents/FLOSSImpactOnEU.pdf>

*A brief document that compiles together the key findings of how open-source technology has impacted the technological sector of the European Union (EU), as well as makes some policy recommendations about the future of open-source software. Good for a more in-depth look into open-source. However, it is recommended to have read the paper on open-source by Bessen before reading this one in order to fully grasp the concepts being discussed.*

Falvey, R. and Foster, N. (2006). *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence*. Working Papers of the United Nations Industrial Development Organization. Vienna: UNIDO Strategic Research and Economics Branch.

*These working papers are an excellent resource to help one understand the intricacies of intellectual property protection and its context within the global economy, as well as goes into depth about policies and treaties of WIPO and its connection with the WTO. Also contains numerous graphs and charts that illustrate the rise of patents and trademarks and their importance in the modern day economy.*

Fink, C. (2009). *Enforcing Intellectual Property Rights: an Economic Perspective*. Geneva: The International Centre for Trade and Sustainable Development. Retrieved on August 18, 2010, from <http://ictsd.net/downloads/2009/03/fink-correa-web.pdf>

*This paper provides an excellent insight into the debate concerning the challenges and incentives to the protection of intellectual property in developing nations. It covers and analyzes in-depth many of the complex issues involved, as well as the disadvantages and advantages of both enforcing and relaxing protection in developing nations to accelerate technological and self-sustaining development. A comprehensive read and highly recommended to further explore the intricate links between development and intellectual property.*

Lane, M. (1991). Patenting Life: Responses of Patent Offices in the US and Abroad. *Jurimetrics Journal*, 32, (1), 89-100. Retrieved on August 18, 2010, from

[http://heinonline.org/HOL/Page?handle=hein.journals/juraba32&div=12&g\\_sent=1&collection=journals#101](http://heinonline.org/HOL/Page?handle=hein.journals/juraba32&div=12&g_sent=1&collection=journals#101)

*This article examines the effect of transgenic animals, the beginnings of the issuance of patents concerning animals, and the possible future repercussions of the US granting an animal patent on the future of research and implications into the question of owning life. Good for an overview of the topic from a policy point of view, and a good starting point for further research into patenting life.*

Popp, D. (2005). Lessons from patents: Using patents to measure technological change in environmental models. *Ecological Economics*, 54, 2, 209-226.

*This is an article that examines the effect of patents on innovation and investing in environmental technologies, concentrating specifically on a few nations where most environmental patents are filed. It also explains and uses several economic models used to explain the link between technology and public policy. This article is good for those who are interested in*

*learning gaining a clearer view on the larger economic effects of obtaining patents and how patents can propel further innovation in the environmental technologies industry.*

Stamelos, I. et al. (2002). Code quality analysis in open source software development. *Information Systems Journal*, 12, 1, 3. Retrieved on August 18, 2010, on <http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2575.2002.00117.x/pdf>

*This paper investigates the claim that open-source software is better than software produced through the traditional model through private software firms. The authors found that this was not the case, through testing 100 applications, assessments of software quality, and rating user experience. It is recommended to first read Bessen's article to introduce oneself to the concept of open-source software, as this article may contain many references to concepts and terms commonly used in the software development industry but not everyday life.*

United Nations. (2002). *United Nations Document Repository: Administrative Committee on Coordination*. Retrieved on August 17, 2010 from <http://www.un.org/esa/documents/acc.htm>

*This is the Web site and archives of the UN Administrative Committee on Coordination, known today as the United Nations System Chief Executives Board for Coordination. A resource for official UN reports from the year 2000 or older, should one be in need of policy papers more than a decade old.*

United Nations Conference on Trade and Development. (2007). *The Least Developed Countries Report 2007: Knowledge, Technological Learning and Innovation for Development*. Retrieved on August 18, 2010, from [http://www.unctad.org/en/docs/lcd2007\\_en.pdf](http://www.unctad.org/en/docs/lcd2007_en.pdf)

*A comprehensive report that goes in-depth about the effect, and potential, of technology in aiding development in some of the world's most impoverished countries. Contains a multitude of statistics and graphs that illustrate the clear effect of technology in advancing an economy. Though this can be a long read, it is highly recommended as it provides a great overview on the enormous challenges facing in development and will allow one to draw many connections between the importance of technology in the picture.*

World Intellectual Property Organization. (2010). (n.d.). Retrieved on August 16, 2010 from <http://www.wipo.int/portal/index.html.en>

*This is the website for WIPO, and contains a vast amount of information, from the current issues WIPO is currently working on, to detailed explanations on the technical side of intellectual property. It is also an excellent resource to utilize if one is looking for the original policy documents and treaties produced by WIPO as they are all linked as PDFs to the site. This should be the starting point of any delegate's research into WIPO and its relevance to the UN.*

World Intellectual Property Organization. (1974). *Agreement between the United Nations and the World Intellectual Property Organization*. Retrieved on August 17, 2010 from [http://www.wipo.int/export/sites/www/treaties/en/agreement/pdf/un\\_wipo\\_agreement.pdf](http://www.wipo.int/export/sites/www/treaties/en/agreement/pdf/un_wipo_agreement.pdf)

*This document provides all the details explaining the relationship between the UN and WIPO as a specialized agency of the UN, including all the reciprocal agreements and information-sharing mechanisms available. A good resource for those wishing to fully understand the relationship between UN and WIPO.*

World Intellectual Property Organization. (1886). *Berne Convention for the Protection of Literary and Artistic Works*. Retrieved on August 17, 2010 from [http://www.wipo.int/export/sites/www/treaties/en/ip/berne/pdf/trtdocs\\_wo001.pdf](http://www.wipo.int/export/sites/www/treaties/en/ip/berne/pdf/trtdocs_wo001.pdf)

*This is the treaty that gave protection to literary and artistic works produced to the person filing for protection not only in their own country, but internationally as well. Includes an appendix outlining the special provisions for developing countries. The treaty has been revised eight times since its creation; the most recent update was in 1979. While delegates should be aware of the existence of this document, it is not necessary to know more than the general idea behind the convention for debate.*

World Intellectual Property Organization. (1967). *Convention Establishing the World Intellectual Property Organization*. Retrieved on August 17, 2010 from [http://www.wipo.int/export/sites/www/treaties/en/convention/pdf/trtdocs\\_wo029.pdf](http://www.wipo.int/export/sites/www/treaties/en/convention/pdf/trtdocs_wo029.pdf)

*This is the document that created WIPO, signed in Stockholm, Sweden in 1967 and revised again in 1979. A good source for those who want to fully understand the administrative and procedural workings of WIPO, as well as gain more insight on the decision-making committees previously mentioned in the "Current Structure of WIPO" paragraph in the "History of WIPO" section of this guide.*

World Intellectual Property Organization. (2008). *Financial Regulations and Rules of the World Intellectual Property Organization*. Retrieved on August 18, 2010 from [http://www.wipo.int/about-wipo/en/pdf/wipo\\_financial\\_regulations.pdf](http://www.wipo.int/about-wipo/en/pdf/wipo_financial_regulations.pdf)

*A document that extensively explains the financial workings of WIPO that govern its program budget, country contributions, and other funding sources, as well as the role of the Director-General in preparing and presenting the budget. This document contains a lot of detail and will give one an excellent understanding of the financial framework of WIPO. However, it is not necessary to know this amount of detail pertaining to the financial management of WIPO for debate.*

World Intellectual Property Organization. (1883). *Paris Convention for the Protection of Industrial Property*. Retrieved on August 17, 2010, from [http://www.wipo.int/export/sites/www/treaties/en/ip/paris/pdf/trtdocs\\_wo020.pdf](http://www.wipo.int/export/sites/www/treaties/en/ip/paris/pdf/trtdocs_wo020.pdf)

*This is the document that outlines the creation of the first international body that oversaw the implementation and enforcement of an international patents system. The convention was put on after the World's Exhibition in Vienna, to address fears that many would-be exhibitors had. While delegates should be aware of the existence of this document, it is not necessary to know more than the general idea behind the convention for debate.*

World Intellectual Property Organization. (2009). *World Intellectual Property Indicators*. Retrieved on August 18, 2010, from [http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/wipo\\_pub\\_941.pdf](http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/wipo_pub_941.pdf)

*An extensive document that compiles and presents together all the statistics in regards to WIPO's activities and global protection systems, illustrating and identifying recent trends. It has lots of charts and graphs for those wishing for visuals on trends in intellectual property management. A recommended read for delegates wishing to have concrete statistics to use in any documents created in committee session.*

World Intellectual Property Organization. (2009). *World Intellectual Property Organization: An Overview*. Retrieved on August 17, 2010, from [http://www.wipo.int/export/sites/www/freepublications/en/general/1007/wipo\\_pub\\_1007\\_2009.pdf](http://www.wipo.int/export/sites/www/freepublications/en/general/1007/wipo_pub_1007_2009.pdf)

*An excellent resource that gives a broad overview of WIPO and its inner workings in an easy-to-read format. Contains charts highlighting key statistics compiled; it also concisely explains the Systems that WIPO administers and its relevance in today's world, along with some interesting facts. Also refers some other useful documents for further reading. Highly recommended for all WIPO delegates to read and better understand the purpose and workings of WIPO.*

### ***I. Pharmaceutical patents and the fight against HIV/AIDS in developing nations***

Boseley, Sarah. (2001). *Legal Roadshow Rolls on to Brazil*. Retrieved on Sept. 13, 2010 from <http://www.guardian.co.uk/world/2001/apr/20/aids.sarahboseley>

*This article outlines the case the United States brought against Brazil in 2001 under the WTO's disciplinary tribunal, alleging that provisions under Brazil's industrial code were a breach of TRIPS. While this case was later retracted in response to the TRIPS Declaration on Public Health, the article remarkably exhibits the reaction of the international community to the U.S. case.*



De Beer, Jeremy, ed. (2009). *Implementing WIPO's Development Agenda*. Toronto: Wilfrid Laurier University Press. Retrieved on September 14 from [http://www.idrc.ca/en/ev-141272-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-141272-201-1-DO_TOPIC.html)

*This book details WIPO's development agenda, thus being germane to any delegate wishing to promote this agenda at the conference. The various papers therein outline the opportunities and challenges of WIPO successfully transferring away from an organization purely working toward increasing IPR protection, including the variety of conceptions of the agenda held by various actors, as well as proposing concrete solutions such as implementing a minimum exceptions policy.*

Deere-Birkbeck, Carolyn and Ron Marchant. (2010). *The Technical Assistance Principles of the WIPO Development Agenda and their Practical Implementation*. International Centre for Trade and Sustainable Development, Issue Paper No. 28.

*The International Centre for Trade and Sustainable Development (ICTSD) has a number of useful issue papers, whose perspective will be particularly useful for those delegates representing developing countries. This paper presents an up-to-date overview and critique of the technical assistance provided by WIPO, and lists a series of recommendations meant to improve the delivery of these programs. This is particularly useful given the increased importance of WIPO's technical assistance activities.*

Galvão, J. (2004) *Access to antiretroviral drugs in Brazil*. The Lancet, Volume 360, Issue 9348. Retrieved on September 12, 2010 from <http://image.thelancet.com/extras/01art9038web.pdf>

*This article describes in detail the Brazilian National AIDS Program, including the logistics and national procurement strategies, and the global controversy which ensued after invoking the compulsory licensing provision. The outline makes clear the importance of taking advantage of TRIPS flexibilities to create generic versions of drugs as "the high cost of purchasing antiretrovirals is the factor that, more than any other, could threaten the feasibility and maintenance of [this] program" (p. 2).*

Global Fund. (2010). *Preventing mother-to-child transmission of HIV is critical to achieving Millennium Development Goals in Africa*. Retrieved on September 5, 2010 from [http://www.theglobalfund.org/en/pressreleases/?pr=pr\\_100727](http://www.theglobalfund.org/en/pressreleases/?pr=pr_100727)

*The Global Fund is a very interesting project, which is designed to create an artificial market for vaccines for AIDS, TB, and malaria in order to spur R&D through market mechanisms. The details of the program are worth considering, as this kind of private-public partnership represents an innovative and interesting way to address the issue of market failures in developing country markets for drugs. The website also has many informative articles related to current HIV/AIDS issues. This particular article explains the importance of antiretroviral drugs in terms of preventing mother-to-child transmission.*

Intellectual Property Watch. (2008). *Brazil Declared Patented AIDS Drug of Public Interest, Could Expand Access*. Retrieved on September 13, 2010 from <http://www.ip-watch.org/weblog/2008/04/22/brazil-declares-patented-aids-drug-of-public-interest-could-expand-access/>

*This site has a number of interesting articles and publications relating to IPR, and is also mostly up-to-date with the latest news on IPR. This particular article details the justification and process required for taking advantages of the public health provision flexibility of TRIPS in the case of Brazil, and the advantages to Brazil since making use of these flexibilities.*

International Centre for Trade and Sustainable Development. (2009). *Fight over Generic Drug Seizure Takes Centre Stage at TRIPS Council Meeting*. Intellectual Property Programme, Volume 13, No 9.

Retrieved on October 20, 2010 from <http://ictsd.org/i/news/bridgesweekly/42823/>

*As mentioned above, the ICTSD has a useful website for information relevant to IPR and development. This short news piece clarifies the 2009 case of seizure of generic drugs en route from India to Brazil, including an outline of events as well as reactions of all parties. It also discusses the potential implications of this seizure on the future viability of such South-South cooperative programs.*

Kohler, Jillian et al. (2007). *Canada's implementation of the Paragraph 6 Decision: is it sustainable public policy?* Retrieved September 12, 2010 from <http://www.globalizationandhealth.com/content/3/1/12>

*This paper considers Canada's Access to Medicines Regime (CAMR), i.e. its legislation promoting the "Paragraph 6" allowance for developing countries to import needed drugs produced in developed countries under compulsory licensing. It primarily discusses the shortfalls and challenges of the Canadian experiment, including the political-economic underpinnings of the case, which could be informative in other countries' consideration of similarly taking advantage of the "Paragraph 6" provisions.*

Musungu, Sisele and Graham Dutfield. (2003). *Multilateral agreements and a TRIPS-plus world: the World Intellectual Property Organisation (WIPO)*. TRIPS Issues Papers, 3. Geneva: Quaker United Nations Office.

*This paper thoroughly details the function and history of WIPO and the complex relationship between WIPO and the TRIPS, specifically the international patent regime set up by the organization and its implications on development. It also proposes practical solutions to logistical issues, such as coalition building among developing countries, negotiation tactics, and addressing the issue of industry interests. While it was written before WIPO adopted its development agenda, this also means it provides a useful background leading up to the adoption of the development agenda.*

Okie, Susan. (2006). *Fighting HIV — Lessons from Brazil*. New England Journal of Medicine, 354: May 11. Retrieved on September 5, 2010 from <http://www.nejm.org/doi/full/10.1056/NEJMp068069>

*This article provides a comprehensive overview the Brazilian HIV/AIDS treatment program, including details on the compulsory licensing scheme, technical medical issues, as well as Brazil's role internationally to promote regional cooperation on this issue.*

Rand Corporation. (2010). *Intellectual Property and Developing Countries: A review of the literature*. Technical Study prepared by Emmanuel Hassan, Ohid Yaqub, and Stephanie Diepeveen. Retrieved on August 20, 2010 from [http://www.rand.org/pubs/technical\\_reports/2010/RAND\\_TR804.pdf](http://www.rand.org/pubs/technical_reports/2010/RAND_TR804.pdf)

*This study provides an excellent, balanced overview of the issues surrounding IPRs as they relate to development, and is useful research material for all the topics WIPO will discuss. It also specifically addresses the issue of public health and how it relates to the global IPR regime, providing an insight to the complexities of the theoretical and practical issues around IPR and access HIV/AIDS drugs.*

Rodrik, Dani. (2004). *Industrial Policy for the 21<sup>st</sup> Century*. Prepared for the United Nations Industrial Development Organization.

*This paper is only tangentially related to the topic at hand, but outlines some criticisms of TRIPS based not on a public health standpoint, but on a long-term economic development standpoint. In it the author proposes that TRIPS is one of the most controversial agreements in the WTO's "single-undertaking" as it restricts the use of policies (particularly reverse-engineering and copying) that have been shown in the past to be essential to the ability of a developing country to catch-up economically with other countries. It also outlines why and how developing countries would want to use such provisions as compulsory licensing as a way to boost development through the promotion of domestic industry.*

Third World Network. (2009). *Developing countries attack Dutch seizure of generic medicines*. TWN Info Service on Intellectual Property Issues. Retrieved on September 10, 2010 from

[http://www.twinside.org.sg/title2/intellectual\\_property/info.service/2009/twn.ipr.info.090202.tm](http://www.twinside.org.sg/title2/intellectual_property/info.service/2009/twn.ipr.info.090202.tm)

*Third World Network is a strong collection of voices from the developing world on many issues germane to this topic. Its articles often provide a frank, candid voice of the south, without being cloaked in policy jargon and euphemisms. This article specifically discusses the idea of "extraterritorial" enforcement of IPRs, providing a strong criticism of the recent activities by the Dutch and government related to the seizure of generic medicines.*



United Nations General Assembly. (2006). *Political Declaration on HIV/AIDS (A/RES/60/262)*. Retrieved on September 13, 2010 from <http://www.unaids.org/en/AboutUNAIDS/Goals/2006Declaration/default.asp>

*This resolution emphasizes the intensity of the global HIV/AIDS epidemic, reaffirms the importance of access to medications, particularly in the context of global epidemics, and reaffirms the UN's political commitment to fighting the HIV/AIDS crisis. Within this, it specifically mentions TRIPS, stating that TRIPS should not prevent members from enacting measures to promote health, and resolving to assist developing countries to enable them to employ the flexibilities under the TRIPS agreement and its later modifications.*

United Nations Economic and Social Council. (2001). *Access to medication in the context of pandemics such as HIV/AIDS (E/CN.4/RES/2001/33)*.

*This resolution highlights the import the UN has placed upon the right to access of medicine, and outlines the steps Member States have committed to in order to address the HIV/AIDS crisis.*

World Health Organization. (2006). *Progress on Global Access to HIV Antiretroviral Therapy: A Report on '3x5' and Beyond*. Retrieved on September 15, 2010 from [http://www.who.int/hiv/fullreport\\_en\\_highres.pdf](http://www.who.int/hiv/fullreport_en_highres.pdf)

*The WHO's goal to treat 3 million HIV/AIDS victims by 2005 was an ambitious task indicating the organization's commitment to addressing the HIV/AIDS epidemic. This report presents an excellent overview of the current situation of people being treated for HIV, the work the organization has done so far, as well as future challenges. It highlights the continual issue of access to medication in developing countries as one of the barriers to achieving its goal on antiretroviral therapy treatment.*

World Health Organization. (2003). *World Health Organization says failure to deliver AIDS medicines is a global health emergency*. Retrieved October 20, 2010 from <http://www.who.int/mediacentre/news/releases/2003/pr67/en/>

*The WHO, the leading UN body on international public health issues, declared in 2003 that the failure to deliver antiretroviral drugs to those who need it constitutes a global health emergency, thus reemphasizing their commitment to make treatment of HIV/AIDS part of the comprehensive battle against the HIV/AIDS epidemic. This website contains a lot of important information on the cooperation among the WHO, WIPO, and other organizations, and often specifically addresses this topic of access to HIV/AIDS drugs.*

World Intellectual Property Organization. (2004). *Proposal by Argentina and Brazil for the Establishment of a Development Agenda for WIPO*. Retrieved on September 2010 from [http://www.wipo.int/edocs/mdocs/govbody/en/wo\\_ga\\_31/wo\\_ga\\_31\\_11.pdf](http://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_31/wo_ga_31_11.pdf)

*This is the proposal initiated by Brazil and Argentina for the establishment of a development agenda within WIPO, which later on led to its 2007 adoption of a development agenda. Many of the suggestions are representative of the viewpoint of developing countries. It helps to show the history of the development of this paradigm shift within WIPO.*

United Nations General Assembly. (2007). *The 45 Adopted Recommendations under the WIPO Development Agenda*. Retrieved on September 5, 2010 from <http://www.wipo.int/ip-development/en/agenda/recommendations.html>

*In 2007 at the General Assembly, Member States of WIPO adopted these 45 recommendations which outline WIPO's new Development Agenda. This document forms the foundation of WIPO's mandate, and is particularly related to the issue of access to HIV/AIDS medicines. As the organization is still in the position of determining how to best implement the new agenda, this will be one of the main primary sources for delegates to be familiar with.*

United States Agency for International Development. (2010) *HIV/AIDS: Frequently Asked Questions*. Retrieved on September 13, 2010 from [http://www.usaid.gov/our\\_work/global\\_health/aids/News/aidsfaq.html](http://www.usaid.gov/our_work/global_health/aids/News/aidsfaq.html)

*USAID has a number of useful resources including up-to-date statistics on HIV/AIDS, the latest research on treatment methods, and other information relevant to this topic.*

World Intellectual Property Organization. (2010). *Frequently Asked Questions*. Retrieved on September 5, 2010 from [http://www.wipo.int/patentscope/en/patents\\_faq.html](http://www.wipo.int/patentscope/en/patents_faq.html)

*This is a useful site for very elementary information on patents, particularly their average length of time, and the basic conceptual foundation of their importance in innovation. This section of the WIPO website also includes other more detailed information about the work that WIPO does and its importance.*

World Intellectual Property Organization. (2010) *WHO, WIPO, WTO join forces to put access-to-medicines under the microscope*. Retrieved on September 13, 2010 from [http://www.wto.org/english/news\\_e/news10\\_e/trip\\_16jul10\\_e.htm](http://www.wto.org/english/news_e/news10_e/trip_16jul10_e.htm)

*WIPO regularly conducts meetings and conferences with other inter-governmental organizations and it keeps the information on its cooperative activities on its website. WIPO often cooperates with WTO and WHO officials on public health issues, and this is their most recent effort. It is useful to consider this and other WIPO news items to see in what capacity they are cooperating, and how their roles intertwine.*

World Trade Organization. (2010). *News Items, 2010*. Retrieved on September 13, 2010 from [http://www.wto.org/english/news\\_e/news10\\_e/trip\\_02mar10\\_e.htm](http://www.wto.org/english/news_e/news10_e/trip_02mar10_e.htm)

*The WTO has a lot of useful, up-to-date information on emerging controversies related to IPR, particularly surrounding "Paragraph 6" and the detention of generic drugs in transit. Regularly checking the news items on this site will help delegates check how the WTO and its work is influencing the global IPR regime, including as it relates to access to HIV/AIDS drugs*

World Trade Organization. (2010). *Understanding the WTO: The Organization*. Retrieved on October 20, 2010 from [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm)

*This page includes specific information on every Member State of the WTO, and also provides a general overview of its membership. Note that there were over 150 Member States as of 2008, over 30 states with observer status, and that all states with observer status must begin the accession process within 5 years. This means that the states belonging to the UN and the WTO are nearly the same with the exception of those smaller developing states that are still in the accession process.*

World Trade Organization. (2001). *Declaration on the TRIPS Agreement and Public Health*. Retrieved on September 5, 2010 from [http://www.wto.org/english/thewto\\_e/minist\\_e/min01\\_e/mindecl\\_trips\\_e.htm](http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm)

*This will be one of the main primary documents for this topic as it sets out the specific flexibilities under TRIPS for public health issues. The interpretation of this particular document sets up much of WIPO's discussion on the topic.*

## ***II. Differentiated intellectual property rights for environmental and climate technologies***

Barton, J. (2008). "Patenting and Access to Clean Energy Technologies in Developing Countries." *WIPO Magazine*. Retrieved on August 15, 2010 from [http://www.wipo.int/wipo\\_magazine/en/2009/02/article\\_0005.html](http://www.wipo.int/wipo_magazine/en/2009/02/article_0005.html)

*This article summarizes the conclusions of Professor John Barton's detailed research paper for the ICTSD. It explores whether IPR is a barrier to technology transfer to developing countries in the solar, biofuels and wind energy sectors, focusing on Brazil, China, and India.*

Bowman, J. (2010). "Innovation, the Environment and the Future." *WIPO Magazine*. Retrieved on August 17, 2010 from [http://www.wipo.int/wipo\\_magazine/en/2010/02/article\\_0005.html](http://www.wipo.int/wipo_magazine/en/2010/02/article_0005.html)

*This WIPO publication explores how IP connects the international community in its effort to combat climate change. It effectively highlights both sides of the debate regarding IPR's role in climate technologies. The article looks at the barriers IPR causes to technology transfer, as well*

*as, the effectiveness of patents in developing new climate technologies. The article also looks at the time lag in dissemination and implementation caused by patents, and the need to fast track green technology.*

Burleson, E. (2009). *Energy Policy, Intellectual Property, and Technology Transfer to Address Climate Change*. Climate Change and Human Rights Symposium, Transnational Law & Contemporary Problems, Vol. 18.

*This paper examines the need for a sound energy policy to address climate change, which is contingent on widespread dissemination of environmentally sound technologies. The author argues that working multilaterally is the best means to disburse needed technologies in a reasonable time frame. This paper provides a useful examination of the efforts and difficulties of climate technology transfer in the context of global trade and the current IPR system.*

Cannady, C. (2009) *Access to Climate Change Technology by Developing Countries: A Practical Strategy*. Issue Paper no. 25 of the ICTSD Programme on IPRs and Sustainable Development. Geneva: International Centre for Trade and Sustainable Development. Retrieved on September 11, 2010 from <http://www.iprsonline.org/ictsd/docs/Access%20to%20Climate%20Change%20Technology%20by%20Developing%20Countries-Cannady.pdf>

*This paper provides an excellent analysis of the usefulness of different IPR approaches to providing developing countries access to climate change technologies. Specifically, the paper examines compulsory licensing, patent information databases, patent pools and commons, and structured licensing mechanisms. The paper proposed a two-pronged approach for providing climate change technology to developing countries and outlines recommendations for action.*

Castonguay, S. (2009). "Barefoot College: Teaching Grandmothers to be Solar Engineers." *WIPO Magazine*. Retrieved on September 20, 2010 from [http://www.wipo.int/wipo\\_magazine/en/2009/03/article\\_0002.html](http://www.wipo.int/wipo_magazine/en/2009/03/article_0002.html)

*This article looks at one success stories in preparing rural, poor communities for the impact of climate change through technology transfer. It looks at the Barefoot College, which has trained illiterate women in India and other developing countries, how to make, install, and maintain solar panels.*

Chatham House. (2007). *IPRs and the Innovation and Diffusion of Climate Technologies*. Workshop Report. (Nov 16). Retrieved on August 10, 2010 from [http://www.chathamhouse.org.uk/files/13698\\_161107\\_iprs\\_wrkshopreport.pdf](http://www.chathamhouse.org.uk/files/13698_161107_iprs_wrkshopreport.pdf)

*The Chatham House Report explores the opportunities and barriers for innovating and diffusing climate-friendly technologies, particularly in Europe and China.*

Committee on Development and Intellectual Property (CDIP). (2008). *Initial Working Document for the Committee on Development and Intellectual Property (CDIP): Revised Text in Respect of Recommendations Considered During Informal Consultations on April 16 and 17, 2008*. Second Session. Geneva. Secretariat. CDIP/2/3. Retrieved on August 25, 2010 from [http://www.wipo.int/edocs/mdocs/mdocs/en/cdip\\_2/cdip\\_2\\_3.pdf](http://www.wipo.int/edocs/mdocs/mdocs/en/cdip_2/cdip_2_3.pdf)

*This document, prepared by the WIPO secretariat, is a preliminary implementation report for the Development Agenda Recommendations. It outlines the recent work of WIPO in meeting the Development Agenda Recommendations in Cluster A, Technical Assistance and Capacity Building. It provides 19 recommendations and information on activities for implementation for each recommendation.*

Committee on Development and Intellectual Property (CDIP). (2010). *Report on WIPO's Contributions to the United Nations' Millennium Development Goals (MDGs)*. Fifth Session. Geneva. WIPO Secretariat.

*This report was compiled at the request of the CDIP Member States in regard to their discussion of Development Agenda Recommendation 22. This report provides an overview of WIPO's recent work that contributes to achieving the MDGs.*

Copenhagen Economics and the IPR Company. (2009). *Are IPR a Barrier to the Transfer of Climate Change Technology?* Copenhagen: Copenhagen Economics. Retrieved on August 16, 2010 from [http://trade.ec.europa.eu/doclib/docs/2009/february/tradoc\\_142371.pdf](http://trade.ec.europa.eu/doclib/docs/2009/february/tradoc_142371.pdf)

*This report examines IPR barriers to technology transfer, patents for carbon abatement technology, and barriers to receiving technology. It concludes that IPR, particularly patents, are not a significant barrier to the transfer of carbon abatement technologies from developed countries to low-income developing countries or emerging market economies.*

The Department of Economic and Social Affairs of the United Nations Secretariat. (2009). *World Economic and Social Survey 2009: Promoting Development, Saving the Planet*. New York: United Nations.

*This publication presents the case that the global climate challenge and development challenge are links, and the connections between to two need to be recognized in order to overcome them. Promoting a low-emission, high growth solution, the survey examines the best possible options for countries at varying development levels.*

The Department of Economic and Social Affairs of the United Nations Secretariat. (2009). "Technology Transfer and the Climate Challenge." *World Economic and Social Survey 2009: Promoting Development, Saving the Planet*. New York: United Nations. Retrieved on September 1, 2010 from <http://www.un.org/esa/policy/wess/wess2009files/wess09/chapter5.pdf>

*This chapter of the World Economic and Social Survey looks at the different flows of technology transfer, and the challenges they face in efforts to expedite the process for climate friendly technology. It focuses of North-South transfer, and recommends options for overcoming the challenges for the South.*

Gurry, F. (2009). "Developing IPR is Not a Zero-Sum Scenario." *Business Standard*. Q&A conducted by Mathew, J. New Delhi: *Business Standard*. Retrieved on October 15, 2010 from <http://www.business-standard.com/india/news/developing-ipr-is-notzero-sum-scenario/371721/>

*This article is a Q&A session with WIPO's Director General Francis Gurry in response to India-based civil society groups concerns with the knowledge gap between the developed and developing world and IPR subsequent role. Questions address issues that include the agenda for the 47<sup>th</sup> WIPO General Assembly, the indirect effects of the international normative IP framework, and the role of IP in mitigating climate change.*

Intergovernmental Panel on Climate Change (IPCC). (2007) *Climate Change 2007: Synthesis Report*. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Retrieved on August 4, 2010 from [http://www.ipcc.ch/publications\\_and\\_data/ar4/syr/en/mains1.html#1-1](http://www.ipcc.ch/publications_and_data/ar4/syr/en/mains1.html#1-1)

*The IPCC's report first summarizes observed changes in climate and their effects on both the human and natural world, the causes of the changes, and future projections of climate change. It then assesses future options for adaptation and mitigation. This report gives a useful overview of the scientific and technical details regarding climate change and its impact.*

International Centre for Trade and Sustainable Development (ICTSD). (2008). *Climate Change, Technology Transfer and Intellectual Property Rights*. Background Paper. Copenhagen: Geneva: ICTSD.

*This background paper looks at the challenges facing the transfer of environmental and climate technologies in the context of creating a low-carbon future globally. The paper examines the role of technology transfer has taken on in the UNFCCC negotiations and TRIPS and how IPR fits into the solution.*

International Centre for Trade and Sustainable Development (ICTSD). (2009). *Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries*. Geneva: ICTSD.

*This paper looks at the relationship between technologies to address climate change and intellectual property from the perspective of Least Developed Countries. It also outlines relevant measures that could be pursued in the post-Kyoto Protocol climate regime.*

Mara, K. (2009) "Bangkok Climate Meeting Leaves Political Issues, Compulsory Licenses Unresolved." *Intellectual Property Watch*. Retrieved August 15, 2010 from <http://www.ip-watch.org/weblog/2009/10/12/bangkok-climate-meeting-leaves-political-issues-unresolved-compulsory-licence-debate-rising/>

*Mara's article highlights several issues left unresolved at the close of the Bangkok session of the UNFCCC. It highlights the political contentions that exist between Member States in regard to what role IPR should take on in the low carbon future. It specifically examines the uncompromising, opposing stances of certain Member States on compulsory licensing for environmentally sound technologies.*

March, E. (2008). "Climate Change—The Technology Challenge." *WIPO Magazine*. Retrieved on August 19, 2010 from [http://www.wipo.int/wipo\\_magazine/en/2009/02/article\\_0003.html](http://www.wipo.int/wipo_magazine/en/2009/02/article_0003.html)

*March's article highlights the current challenge to find technological solutions to climate change. It looks at climate technological innovations and hard and soft technologies, and addresses the issue of IPR in providing solutions that are good for the planet, business, and development.*

Maskus, K. (2010) "Differentiated Intellectual Property Regimes for Environmental and Climate Technologies", *OECD Environment Working Papers*, No. 17, OECD Publishing. Retrieved on August 1, 2010 from

<http://www.oecd.org/dataoecd/38/11/45198038.pdf>

*This OECD report analysis the economics behind the differing views of developed and developing countries in regard to IPRs for environmentally sound technologies. It looks at the policy options to address the complex relationship between IPRs, international technology transfer, innovation, and local adaptation. The report examines the benefits of differentiated IPRs as a component of broader policy solutions.*

Okediji, R. (2009) "Intellectual Property Rights and the Transfer of Environmentally Sound Technologies" *Trade Hot Topics*. The Commonwealth. Issue 67. Retrieved on August 1, 2010 from <http://www.thecommonwealth.org/files/217899/FileName/THT67.pdf>

*This Commonwealth publication examines the affect IPR has on the transfer of environmental technologies from the Global North to the Global South. It outlines several effects of climate change, as well as reactive and proactive measures and possible technology solutions for developing countries by sector. The article argues that a differentiated policy approach to IPR is required in order to advance the transfer of environmentally sound technologies to the developing world.*

Provisional Committee on Proposals Related to a WIPO Development Agenda (PCDA). (2007). *The 45 Adopted Recommendations Under the WIPO Development Agenda*. 2007 WIPO General Assembly. Retrieved August 10, 2010 from <http://www.wipo.int/export/sites/www/ip-development/en/agenda/recommendations.pdf>

*This publication lists the 45 recommendations under the WIPO Development Agenda adopted by the 2007 WIPO General Assembly meeting. The recommendations range from development-oriented projects to principles and objectives to guild the work of WIPO. The recommendations are to be integrated into all substantive work of the body. The recommendations are organized into the following six sections: technical assistance and capacity building; norm-settings, flexibilities, public policy and public domain; technology transfer, information and communication technologies (ICT) and access to knowledge; assessment, evaluation, and impact studies; institutional matters including mandate and governance; and other issues.*

Srinivas, R. (2009). *Climate Change, Technology Transfer and Intellectual Property Rights*. Research and Information System for Developing Countries (RIS) Discussion Papers. New Delhi: RIS. Retrieved August 5, 2010 from <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan037297.pdf>

*This paper examines the historical implications of strong IPRs in technology transfer and applies it to the current debate surrounding climate change. Srinivas argues that technology transfer under UNFCCC has been inadequate in meeting the needs of developing countries.*



't Hoen, E. (2009). *The Global Politics of Pharmaceutical Monopoly Power: Drug patents, access, innovation and the application of the WTO Doha Declaration on TRIPS and Public Health*. Diemen, the Netherlands: AMB Publishers.

*This book examines the significant IPR issues in accessing essential medicines, as well as the history of IPR and pharmaceuticals. The majority of the book focuses on the Doha Declaration and the evolution of differentiated IPR under TRIPS. The book is useful to the topic at hand, because it highlights the difficulties developing countries have encountered when invoking compulsory licensing under TRIPS.*

Tanunchaiwatana, W. (2009). *Role of Patents in Green Technology Transfer in the Context of Climate Change*. United Nations Climate Change Secretariat. WIPO conference on Intellectual Property and Public Policy Issues. (July 13). Geneva.

*This presentation outlines the use of technology in multilateral cooperation to combat climate change. It discusses the complexity and possible future uses of IPR and patents in an international context.*

Taubman, A. (2009). "IP and Climate Change Negotiations: From Bali to Copenhagen, Via Poznań." *WIPO Magazine*. Retrieved on August 5, 2010 from

[http://www.wipo.int/wipo\\_magazine/en/2009/02/article\\_0001.html](http://www.wipo.int/wipo_magazine/en/2009/02/article_0001.html)

*This article provides a brief overview of IP in UNFCCC negotiations, highlighting the increased prevalence of IP at the negotiations in Poznań. It looks at the IP debates in Poznań and the side-event on technology transfer, the IP system, and climate change.*

United Nations System Chief Executives Board for Coordination (CEB). (2008). *Acting on Climate Change: The UN System Delivering as One*. New York: United Nations. Retrieved on August 9, 2010 from <http://www.un.org/climatechange/pdfs/Acting%20on%20Climate%20Change.pdf>

*This publication outlines the second phases of the CEB climate action framework for the purpose of being presented to the Conference of the Parties (COP) 15 in Copenhagen. It provides an overview of ongoing UN system actions in areas related to climate change. The framework is a means to bring together all UN agencies for collective action in combating climate change.*

United Nations Framework Convention on Climate Change Conference of the Parties. (2007). Report of the Conference of the Parties on its thirteenth session, *Addendum, Part Two: Action taken by the Conference of the Parties at its thirteenth session*. Bali. Retrieved on August 1, 2010 from

<http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3>

*This report is a publication of all of the decisions made by the Conference of the Parties at the UNFCCC negotiations in Bali. It includes the text of the Bali Action Plan, providing information on the progress of UNFCCC regarding the transfer of environmental and climate technologies.*

World Intellectual Property Organization. (2007). *IP Services: PatentScope*. Retrieved on September 10, 2010 from <http://www.wipo.int/patentscope/en/patents/>

*The patent scope section of WIPO's website is a useful resource. It provides an overview of patents and relevant information regarding the use of patents, as well as provides an overview of WIPO's PatentScope database.*

World Intellectual Property Organization. (2007). *Overview of the Development Agenda*. Retrieved on September 10, 2010 from <http://www.wipo.int/ip-development/en/agenda/overview.html>

*The Overview of the Development Agenda page on the WIPO website provides a brief overview of WIPO's Development Agenda. It includes information of its creation, the mandate behind the Agenda, and the six main categories of the Agenda.*

World Intellectual Property Organization. (2008). *Climate Change and the Intellectual Property System: what Challenges, what options, what solutions?* Geneva: WIPO. Retrieved on October 5, 2010 from [http://www.wipo.int/export/sites/www/patentscope/en/lifesciences/pdf/ip\\_climate.pdf](http://www.wipo.int/export/sites/www/patentscope/en/lifesciences/pdf/ip_climate.pdf)

*This WIPO issue paper is an excellent source for information on intellectual property and climate change. It outlines the key issues facing intellectual property in the context of climate change, the*

*global dynamics concerning the debate, and the different types of IPR that are pertinent in addressing environmental and climate technologies.*

World Intellectual Property Organization. (2004). *WIPO Intellectual Property Handbook: Policy, Law and Use*. 2<sup>nd</sup> Ed. Publication No. 489. Geneva. Retrieved September 1, 2010 on from <http://www.wipo.int/about-ip/en/iprm/>

*This publication by WIPO is an introductory guide to policy, law, and the use of IP for non-specialists. The publication expounds on what IP is and the reasoning for laws to protect it, as well as goes into detail about the different types of IPR that exist and what they are used for. It is a useful introduction to the legal and policy aspects of IPR and the role of IPR in development.*

World Intellectual Property Organization. (2007). WIPO's Contribution to Meeting the Challenges of Climate Change. About WIPO. Geneva. Retrieved on September 10, 2010 from [http://www.wipo.int/export/sites/www/about-wipo/en/pdf/climate\\_change\\_conf.pdf](http://www.wipo.int/export/sites/www/about-wipo/en/pdf/climate_change_conf.pdf)

*This document provides a useful overview of how the IP system can be used to facilitate practical solutions to the global climate challenge. It also outlines the main areas WIPO can be a positive force in the global effort to disseminate environmental and climate technologies globally to combat the current threat caused by climate change.*

*WIPO Magazine*. (2010). "Water from air: A life-changing innovation." *WIPO Magazine*. Retrieved September 3, 2010 from [http://www.wipo.int/wipo\\_magazine/en/2010/04/article\\_0005.html](http://www.wipo.int/wipo_magazine/en/2010/04/article_0005.html)

*This article looked at Marc Parent, a French inventor and entrepreneur, who discovered a way to harvest humidity through wind technology. The article looks at the process Parent went through to patent this technology and significance the patent has in efforts to commercialize and produce the innovation. This article highlights the importance of IPR produce innovations in order for such technologies to viably be used for the public good.*

World Intellectual Property Organization. Program and Budget Committee. (2009). *Proposed Program and Budget for the 2010/11 Biennium*. Assemblies of the Member States of WIPO. A/47/3. Forty-Seventh Series of Meetings: Geneva, September 22 to October 1. [http://www.wipo.int/edocs/mdocs/govbody/en/a\\_47/a\\_47\\_3.pdf](http://www.wipo.int/edocs/mdocs/govbody/en/a_47/a_47_3.pdf)

*The Director General of WIPO presented this document, prepared by the Program and Budget Committee, to the WIPO Member States to approve the budget and programs for the proceeding two years. It entails comprehensive proposals for each program, including the strategic goal, expected results, and performance indicators and targets. It is a useful overview of the current undertakings and intended goals of WIPO.*

### **III. Patenting life: Intellectual property and complex structures**

Bobrow, M. & Thomas, S. (2001, February 15). Patents in a Genetic Age. *Nature*, 409, 763-764. Retrieved October 4, 2010 from <http://www.nature.com/nature/journal/v409/n6822/full/409763a0.html>.

*This short commentary is an enlightening piece about the international battle of patenting genetics. The authors make arguments on both sides of the debate and focus on the background of genetics and how patenting would change the science community. The commentary also poses some brief similarities and differences between the United States and European patent systems. It also addresses the patent system in the United States and how DNA technology patents are linked together.*

Brody, B. (2007). Intellectual Property and Biotechnology: The European Debate. *Kennedy Institute of Ethics Journal*. 17, 2, 69-110.

*There is a continuous debate in the European Union regarding the legality and morality of patenting genetic material. There is also a religious underlining in Europe, but mainly the debate revolves around moral reasons. Brody does a good job of analyzing the European debate. The main concern of this article is the moral reasons and the patenting process of Europe as well as the debates that continue. This is an important article especially for European representatives.*

Cullet, P. (2007). Human Rights and Intellectual Property Protection in the TRIPS Era. *Human Rights Quarterly*. 29, 403-430.

*Cullet explores the problems between intellectual property and human rights. The main focus of his article is on medication; however, this is an important concept when it comes to intellectual property. There is a link between human rights and genetic materials, which is addressed by Cullet. The main question of this article is whether or not intellectual property laws should be determined by human rights practices. Another concern is contribution of knowledge, which is one of the minor concerns of developing nations because it links to the debate over credit for raw materials.*

Cullet, P. & Raja, J. (2004). Intellectual Property Rights and Biodiversity Management: The Case of India. *Global Environmental Politics*, 4, 1, 97-114.

*This journal article examines the relationship between biodiversity and intellectual property law in India. Cullet also does a good job of outlining international rules when it comes to documentation and a brief background on applicable laws to intellectual property and biodiversity. It takes a specific approach to India's laws and regulations regarding patenting genetic material, which can be used in the international community.*

Drahos, P. (2002) Developing Countries and International Intellectual Property Standard-Setting. *The Journal of World Intellectual Property*, 5, 5, 765-789.

*This journal article deals with the study of intellectual property and how TRIPS and other international documents disadvantage developing countries in the patenting process. Developed nations control the world of patents because they have more monetary sources as advanced technology. There are also suggestions for updating TRIPS in an effort to make it friendlier to developing nations. There is also a good section regarding the role of WIPO in the international community.*

European Patent Office. (2010). *European Patent Office – Patents*. <http://www.epo.org/patents.html>.

*This website is operated by the European Patent Office, which goes over how to apply and obtain a patent under European law. It also gives a good history and overview of the patent process. This site includes a link to filing an application for a patent under European law. It also goes over the appeal process and how to effectively file all of the documentation and fees.*

Gitter, D. (2001). International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: An Argument for Compulsory Licensing and a Fair-Use Exemption. *New York University Law Review*, 76, 6, 1623-1691.

*Gitter takes a very close look at intellectual property rights as they apply to genetics and compares the laws of the United States and the European Union. The main difference between European and United States laws is that morality is a prime concern in Europe, but not in the United States. The legal history of genetic patents and current patent processes are explained for the United States and European Union in this article. There is a lot of research that can be utilized in this article about genetics.*

Gulati, C. (2001). The 'Tragedy of Commons' in Plant Genetic Resources: The Need for a New International Regime Centered Around an International Biotechnology Patent Office. *Yale Human Rights & Development Law Journal*, 63-107.

*This article deals specifically with plant genetic resources. Plant genetics are included in the classification of living genetic materials. Plant genetics must be remembered in this debate, even though they can be classified as non-human genetics. This article looks closely at the relationship between developing and developed countries and how the laws positively and negatively affect both sides. This concept is important because it is one of the prime concerns of this topic. There are a lot of questions over who owns rights to plant genes, which the author does a good job of answering. Delegates should remember that plants have a genetic code that is also of concern to this topic.*



Helfer, L. (2004). Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking. *The Yale Journal of International Law*, 29, 1, 1-83.

*This analysis of international law as it related to TRIPS is an important piece to the genetic law puzzle because it specifically discusses different areas of intellectual property including biodiversity and health. The author also analyses the evolution of intellectual property and how it was molded into the current debate. There is also an important section on how TRIPS plays into international law and its enforcement. The third section is really important because it pertains directly to biodiversity and the question of intellectual property and genetics.*

Ivanauskienė, E. (2010, February 15). Patent Law Treaty Reforms Due for Approval. *International Law Office*. <http://www.internationallawoffice.com/newsletters/detail.aspx?g=dc72cb6a-e4e8-4dce-abf1-3c9d042918b7>.

*This news article deals with the Patent Law Treaty and the updates that were due for approval in early 2010. It specifically deals with how the Patent Law Treaty will apply to Lithuanian law. The article was written from the point of view as to how the updates would apply to Lithuania and the patent process that would be required for the European Union. It also goes over fees and the process for patent applications.*

Johnston, J. & Wasunna, A. (2007). Patents, Biomedical Research, and Treatments: Examining Concerns, Canvassing Solutions. *Hastings Center Reports*, 37, 1, s1-s36.

*This article is a general overview of the patent process as it applies to genetics. It is written from an international standpoint and discusses how patents are affected by TRIPS and other international documents. The authors cover the ethical concerns as well as the legal concerns about genetic patenting. There is a good section regarding stem cells and patenting. One of the points is that TRIPS is not legally binding and is only applicable in the World Trade Organization.*

Juma, C. (1999). Intellectual Property Rights and Globalization: Implications for Developing Countries. *Science Technology and Innovation Discussion Paper*, 1-22.

*This article is an overview of intellectual property laws as applied by TRIPS. The article applies to general intellectual property laws and not necessarily on genetic patents. It is a good interpretation of TRIPS and how it is applied internationally. It also covers the Patent Cooperation Treaty and how it compares to TRIPS. The article also demonstrates the differences between the developed and developing world in terms of patent applications. Juma looks closely at this debate as well as the similarities and differences between the United States and European systems.*

Organisation for Economic Co-operation and Development. (2002). *Genetic Inventions, Intellectual Property Rights and Licensing Practices*. Retrieved October 4, 2010 from <http://www.oecd.org/dataoecd/42/21/2491084.pdf>.

*The OECD is also concerned with the patenting of genetic materials. This document deals with definitions of a patentable genetic material as well as the economic results of genetic patents. It also gives an overview of the benefits and affects of patenting genes. The genetic patent section is of particular importance because it deals with terms of patents and other specific details. IT also gives a legal overview of how genetics fit into intellectual property laws.*

Organization of African Unity. (2000). *African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources*. Retrieved October 4, 2010 from [http://www.grain.org/brl\\_files/oau-model-law-en.pdf](http://www.grain.org/brl_files/oau-model-law-en.pdf).

*This legislation applies specifically to the Organization of African Unity, presently known as the African Union. The African Union is where most raw genetic materials come from, yet the Member States are usually not recognized, which leaves them out of profit sharing of any commercial success. This document also deals with farmers' rights under raw material trades since genetic material deals with plant cells as well. This is an important source for African nations because it looks at a lot of outstanding issues regarding TRIPS and other patent laws.*

Resnik, D. (1997). The Morality of Human Gene Patents. *Kennedy Institute of Ethics Journal*, 7, 1, 43-61.

*This article is an in-depth look at the patent laws of the United States. The author touches upon intellectual property relations with other developed nations as they relate to current United States*

laws. *There is a close look at the moral issue of patenting genetic materials and the argument or proponents and opponents of the current laws. This is an excellent article to understand the consequences of genetic patenting in general terms.*

Safrin, S. (2004) Hyperownership in a Time of Biotechnological Promise: The International Conflict to Control the Building Blocks of Life. *Rutgers Law School Faculty Papers*, Paper 15, 638-686.

*This article is important in this debate because it is a good overview of the current international patent system and what should be changed. Safrin also brings close attention to the concept of raw materials and their origin in developing nations. These raw materials are used in patent applications in developed nations with crediting the source. Safrin also proposes a solution for this problem.*

United Nations. (1948). *Universal Declaration of Human Rights*.

*The Universal Declaration of Human Rights is the primary document that deals with any and all human rights questions. The purpose of this Declaration is to set forth a set of rights and laws for all nations to follow. It gives humans the right to live without fear for their lives and many other important rights for women, children, and the general international population.*

United Nations Environmental Program. (1992). *Convention on Biological Diversity*, Retrieved October 4, 2010 from <http://www.cbd.int/>.

*This convention is also vital in the understanding of how intellectual property is applied to genetic materials. It also contains a list of definitions that are extremely beneficial throughout the research process because a lot of other authors and United Nations documents share that language. It is also considered the basis for the genetic portion of TRIPS.*

WIPO Moves Towards 'World' Patent System. (2002). *Third World Network*, Retrieved August 14, 2010, from <http://www.twinside.org.sg/title/twe285g.htm>.

*This news article discusses the pros and cons regarding the Patent Law Treaty (PLT) and how it would affect developing and developed nations. The article discusses the three building blocks for an international patent system, which includes a uniform set of procedures, a single international search tool, and a uniform patent law. The PLT has not been enacted because of lack of ratification. The article also discussed how the SPLT applies to developing nations, even though it has not been enacted into law.*

World Intellectual Property Organization. (2005). *Disclosure of Origin or Source of Genetic Resources and Associated Traditional Knowledge in Patent Applications*.

*This is a document submitted to WIPO from the European Community. Its primary concern is to protect the rights of raw material producers. TRIPS does not recognize the raw producers as being a part of the patent application process; however, the European Union believes that this information should be required to complete a patent application.*

World Intellectual Property Organization. (2002). *Patent Agenda*. Document A/37/6. Retrieved October 4, 2010 from [http://www.wipo.int/edocs/mdocs/govbody/en/a\\_37/a\\_37\\_6.pdf](http://www.wipo.int/edocs/mdocs/govbody/en/a_37/a_37_6.pdf)

*The Patent Agenda discussed some of the concerns of developing nations over recognition for raw materials. It also points out how patent applications are handled and that this issue must be addressed because of the public and private sectors of patent applications. The Agenda does not change any previous documents (TRIPS, etc.), but attempts to deal with new problems. Chapter VII deals with the genetic patent question since genetics fall under problem issues. The agenda is an expansion and modernized version of TRIPS as it applies intellectual property laws.*

World Intellectual Property Organization. (2000). *Patent Law Treaty*. Retrieved October 4, 2010 from [http://www.wipo.int/treaties/en/ip/plt/trtdocs\\_wo038.html](http://www.wipo.int/treaties/en/ip/plt/trtdocs_wo038.html).

*The Patent Law Treaty (PLT) is a WIPO-based treaty. Its main purpose is to deal with the patent process as it applies to new patent applications, filing fees, and time limits to file and/or respond. It does not deal directly with genetic material, but sets forth a set of guidelines for different applications. These applications could be applied to genetic material if the committee finds them*

*to be relevant. The first section of this treaty has a lot of definitions that are important to understanding the international intellectual property language.*

World Intellectual Property Organization. (2010). *World Intellectual Property Indicators 2010*. Retrieved October 4, 2010 from <http://www.wipo.int/ipstats/en/statistics/patents/>.

*WIPO published this statistical review in September 2010. Links on this website will lead to the total number of patent applications from 1985-2008 worldwide as well as the total number of applications filed by each country. These applications are filed under the Patent Cooperation Treaty. The approved patent chart by country will show that developing nations do not file an equal number of applications as developed countries do. These numbers are general numbers for all patent applications.*

World Trade Organization. (1994). *Agreement on Trade-Related Aspects of Intellectual Property Rights*, Retrieved October 4, 2010 from [http://www.wto.org/english/tratop\\_e/trips\\_e/trips\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/trips_e.htm).

*Abbreviated TRIPS, this is an important document to WIPO because it sets forth a list of rules, policies, and procedures in terms of intellectual property. There are debates over some TRIPS provisions and it is argued some are not specific enough and some are too specific. As far as genetic materials, Article 27 is the primary concern of WIPO members.*

World Trade Organization. (2010). *Understanding the WTO: the Agreements*. Retrieved October 4, 2010 from [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/agrm7\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm).

*This website gives an overview of how TRIPS works and the history of the negotiations behind it. TRIPS was created to give the international community a standard set of guidelines for intellectual property laws. TRIPS is used as a backbone when it comes to intellectual property and genetics. Other international and regional documents have been passed setting their own laws specifically to genetics; however, this website gives an overview of TRIPS as it applies in general terms.*

Zerbe, N. (2007). Contesting Privatization: NGOs and Farmers' Rights in the African Model Law. *Global Environmental Politics*, 7, 1, 97-119.

*African farmers are very rarely given any credit or profit for creating and raising plants that are used in later genetic patents. The majority of developed nations and industry representatives rarely acknowledge the origin of genetic resources, especially when it comes to plants. This article draws attention to the issue and question as to whether or not the patent process should include a requirement to disclose the origin of genetic material on all genetic material.*

# **Rules of Procedure**

## **World Intellectual Property Organization**

### ***Introduction***

1. These rules shall be the only rules which apply to the World Intellectual Property Organization Conference (hereinafter referred to as “the Conference”) and shall be considered adopted by the Commission prior to its first meeting.
2. For purposes of these rules, the Plenary Director, the Assistant Director(s), the Under-Secretaries-General, and the Assistant Secretaries-General, are designates and agents of the Secretary-General and Director-General, and are collectively referred to as the “Secretariat.”
3. Interpretation of the rules shall be reserved exclusively to the Director-General or her or his designate. Such interpretation shall be in accordance with the philosophy and principles of the National Model United Nations and in furtherance of the educational mission of that organization.
4. For the purposes of these rules, “President” shall refer to the chairperson or acting chairperson of the conference.

### **I. SESSIONS**

#### **Rule 1 - *Dates of convening and adjournment***

The conference shall meet every year in regular session, commencing and closing on the dates designated by the Secretary-General.

#### **Rule 2 - *Place of sessions***

The Conference shall meet at a location designated by the Secretary-General.

### **II. AGENDA**

#### **Rule 3 - *Provisional agenda***

The provisional agenda shall be drawn up by the Secretary-General and communicated to the Members of the Conference at least sixty days before the opening of the session.

#### **Rule 4 - *Adoption of the agenda***

The agenda provided by the Secretary-General shall be considered adopted as of the beginning of the session. The order of the agenda items shall be determined by a majority vote of those present and voting. Items on the agenda may be amended or deleted by the Conference by a two-thirds majority of the members present and voting.

*The vote described in this rule is a procedural vote and, as such, observers are permitted to cast a vote. For purposes of this rule, —those present and voting<sup>1</sup> means those delegates, including observers, in attendance at the meeting during which this motion comes to a vote.*

#### **Rule 5 - *Revision of the agenda***

During a session, the Conference may revise the agenda by adding, deleting, deferring or amending items. Only important and urgent items shall be added to the agenda during a session. Permission to speak on a motion to revise the agenda shall be accorded only to three representatives in favor of, and three opposed to, the revision. Additional items of an important and urgent character, proposed for inclusion in the agenda less than thirty days before the opening of a session, may be placed on the agenda if the Conference so decides by a two-thirds majority of the members present and voting. No additional item may, unless the Conference decides otherwise by a two-thirds majority of the members present and voting, be considered until a committee has reported on the question concerned.

*For purposes of this rule, the determination of an item of an —important and urgent character<sup>1</sup> is subject to the discretion of the Secretariat, and any such determination is final. If an item is determined to be of such a character, then it requires a two-thirds vote of the Conference to be placed on the agenda. It will, however, not be considered by the Conference until a committee has reported on the question. The votes described in this rule are substantive vote, and, as such, observers are not permitted to cast a vote. For purposes of this rule, —the members present and*

*voting — means members (not including observers) in attendance at the session during which this motion comes to vote.*

***Rule 6 - Explanatory memorandum***

Any item proposed for inclusion in the agenda shall be accompanied by an explanatory memorandum and, if possible, by basic documents.

III. SECRETARIAT

***Rule 7 - Duties of the Secretary-General***

1. The Secretary-General or her/his designate shall act in this capacity in all meetings of the Conference.
2. The Secretary-General shall provide and direct the staff required by the Conference and be responsible for all the arrangements that may be necessary for its meetings.

***Rule 8 - Duties of the Secretariat***

The Secretariat shall receive, print, and distribute documents, reports, and resolutions of the Conference, and shall distribute documents of the Conference to the Members, and generally perform all other work which the Conference may require.

***Rule 9 - Statements by the Secretariat***

The Secretary-General, or her/his representative, may make oral as well as written statements to the Conference concerning any question under consideration.

***Rule 10 - Selection of the President*** The Secretary-General or her/his designate shall appoint, from applications received by the Secretariat, a President who shall hold office and, *inter alia*, chair the Conference for the duration of the session, unless otherwise decided by the Secretary-General.

***Rule 11 - Replacement of the President*** If the President is unable to perform her/his functions, a new President shall be appointed for the unexpired term at the discretion of the Secretary-General.

IV. LANGUAGE

***Rule 12 - Official and working language***

English shall be the official and working language of the Conference.

***Rule 13 - Interpretation (oral) or translation (written)***

Any representative wishing to address any body or submit a document in a language other than English shall provide interpretation or translation into English.

*This rule does not affect the total speaking time allotted to those representatives wishing to address the body in a language other than English. As such, both the speech and the interpretation must be within the set time limit.*

V. CONDUCT OF BUSINESS

***Rule 14 – Quorum***

The President may declare a meeting open and permit debate to proceed when representatives of at least one third of the members of the Conference are present. The presence of representatives of a majority of the members of the Conference shall be required for any decision to be taken.

*For purposes of this rule, —members of the Conference means the total number of members (not including observers) in attendance at the first night's meeting.*

***Rule 15 - General powers of the President***

In addition to exercising the powers conferred upon him or her elsewhere by these rules, the President shall declare

the opening and closing of each meeting of the Conference, direct the discussions, ensure observance of these rules, accord the right to speak, put questions to the vote and announce decisions. The President, subject to these rules, shall have complete control of the proceedings of the Conference and over the maintenance of order at its meetings. He or she shall rule on points of order. He or she may propose to the Conference the closure of the list of speakers, a limitation on the time to be allowed to speakers and on the number of times the representative of each member may speak on an item, the adjournment or closure of the debate, and the suspension or adjournment of a meeting.

*Included in these enumerated powers is the President's power to assign speaking times for all speeches incidental to motions and amendment. Further, the President is to use her/his discretion, upon the advice and at the consent of the Secretariat, to determine whether to entertain a particular motion based on the philosophy and principles of the NMUN. Such discretion should be used on a limited basis and only under circumstances where it is necessary to advance the educational mission of the Conference. For purposes of this rule, the President's power to —propose to the Conference entails her/his power to —entertain motions, and not to move the body on his or her own motion.*

#### **Rule 16**

The President, in the exercise of her or his functions, remains under the authority of the Conference.

#### **Rule 17 - Points of order**

During the discussion of any matter, a representative may rise to a point of order, which shall be decided immediately by the President. Any appeal of the decision of the President shall be immediately put to a vote, and the ruling of the President shall stand unless overruled by a majority of the members present and voting.

*Such points of order should not under any circumstances interrupt the speech of a fellow representative. Any questions on order arising during a speech made by a representative should be raised at the conclusion of the speech, or can be addressed by the President, sua sponte, during the speech. For purposes of this rule, —the members present and voting mean those members (not including observers) in attendance at the meeting during which this motion comes to vote.*

#### **Rule 18**

A representative may not, in rising to a point of order, speak on the substance of the matter under discussion.

#### **Rule 19 - Speeches**

1. No one may address the Conference without having previously obtained the permission of the President. The President shall call upon speakers in the order in which they signify their desire to speak.
2. Debate shall be confined to the question before the Conference, and the President may call a speaker to order if her/his remarks are not relevant to the subject under discussion.
3. The Conference may limit the time allowed to speakers and all representatives may speak on any question. Permission to speak on a motion to set such limits shall be accorded only to two representatives favoring and two opposing such limits, after which the motion shall be put to the vote immediately. When debate is limited and a speaker exceeds the allotted time, the President shall call her or him to order without delay.

*In line with the philosophy and principles of the NMUN, in furtherance of its educational mission, and for the purpose of facilitating debate, if the President determines that the Conference in large part does not want to deviate from the limits to the speaker's time as it is then set, and that any additional motions will not be well received by the body, the President, in her/his discretion, and on the advice and consent of the Secretariat, may rule as dilatory any additional motions to change the limits of the speaker's time.*

#### **Rule 20 - Closing of list of speakers**

Members may only be on the list of speakers once but may be added again after having spoken. During the course of a debate the President may announce the list of speakers and, with the consent of the Conference, declare the list closed. When there are no more speakers, the President shall declare the debate closed. Such closure shall have the same effect as closure by decision of the Conference.

*The decision to announce the list of speakers is within the discretion of the President and should not be the subject*

*of a motion by the Conference. A motion to close the speakers list is within the purview of the Conference and the President should not act on her/his own motion.*

***Rule 21 - Right of reply***

If a remark impugns the integrity of a representative's State, the President may permit that representative to exercise her/his right of reply following the conclusion of the controversial speech, and shall determine an appropriate time limit for the reply. No ruling on this question shall be subject to appeal.

*For purposes of this rule, a remark that —impugns the integrity of a representative's State is one directed at the governing authority of that State and/or one that puts into question that State's sovereignty or a portion thereof. All interventions in the exercise of the right of reply shall be addressed in writing to the Secretariat and shall not be raised as a point of order or motion. The reply shall be read to the Conference by the representative only upon approval of the Secretariat, and in no case after voting has concluded on all matters relating to the agenda topic, during the discussion of which, the right arose.*

***Rule 22 - Suspension of the meeting***

During the discussion of any matter, a representative may move the suspension of the meeting, specifying a time for reconvening. Such motions shall not be debated but shall be put to a vote immediately, requiring the support of a majority of the members present and voting to pass.

***Rule 23 - Adjournment of the meeting***

During the discussion of any matter, a representative may move the adjournment of the meeting. Such motions shall not be debated but shall be put to the vote immediately, requiring the support of a majority of the members present and voting to pass. After adjournment, the Conference shall reconvene at its next regularly scheduled meeting time.

*As this motion, if successful, would end the meeting until the Conference's next regularly scheduled session the following year, and in accordance with the philosophy and principles of the NMUN and in furtherance of its educational mission, the President will not entertain such a motion until the end of the last meeting of the Conference.*

***Rule 24 - Adjournment of debate***

A representative may at any time move the adjournment of debate on the topic under discussion. Permission to speak on the motion shall be accorded to two representatives favoring and two opposing adjournment, after which the motion shall be put to a vote immediately, requiring the support of a majority of the members present and voting to pass. If a motion for adjournment passes, the topic is considered dismissed and no action will be taken on it.

***Rule 25 - Closure of debate***

A representative may at any time move the closure of debate on the item under discussion, whether or not any other representative has signified her/his wish to speak. Permission to speak on the motion shall be accorded only to two representatives opposing the closure, after which the motion shall be put to the vote immediately. Closure of debate shall require a two-thirds majority of the members present and voting. If the Conference favors the closure of debate, the Conference shall immediately move to vote on all proposals introduced under that agenda item.

***Rule 26 - Order of motions*** Subject to rule 23, the motions indicated below shall have precedence in the following order over all proposals or other motions before the meeting:

- a) To suspend the meeting;
- b) To adjourn the meeting;
- c) To adjourn the debate on the item under discussion;
- d) To close the debate on the item under discussion.

***Rule 27 - Proposals and amendments***

Proposals and substantive amendments shall normally be submitted in writing to the Secretariat, with the names of twenty percent of the members of the Conference would like the Conference to consider the proposal or amendment. The Secretariat may, at its discretion, approve the proposal or amendment for circulation among the delegations. As a general rule, no proposal shall be put to the vote at any meeting of the Conference unless copies of it have been circulated to all delegations. The President may, however, permit the discussion and consideration of amendments or

of motions as to procedure, even though such amendments and motions have not been circulated. If the sponsors agree to the adoption of a proposed amendment, the proposal shall be modified accordingly and no vote shall be taken on the proposed amendment. A document modified in this manner shall be considered as the proposal pending before the Conference for all purposes, including subsequent amendments.

*For purposes of this rule, all —proposals shall be in the form of working papers prior to their approval by the Secretariat. Working papers will not be copied, or in any other way distributed, to the Conference by the Secretariat. The distribution of such working papers is solely the responsibility of the sponsors of the working papers. Along these lines, and in furtherance of the philosophy and principles of the NMUN and for the purpose of advancing its educational mission, representatives should not directly refer to the substance of a working paper that has not yet been accepted as a draft resolution. After approval of a working paper, the proposal becomes a draft resolution and will be copied by the Secretariat for distribution to the Conference. These draft resolutions are the collective property of the Conference and, as such, the names of the original sponsors will be removed. The copying and distribution of amendments is at the discretion of the Secretariat, but the substance of all such amendments will be made available to all representatives in some form.*

**Rule 28 - Withdrawal of motions**

A proposal or a motion may be withdrawn by its sponsor at any time before voting has commenced, provided that it has not been amended. A motion thus withdrawn may be reintroduced by any representative.

**Rule 29 - Reconsideration of a topic**

When a topic has been adjourned, it may not be reconsidered at the same session unless the Conference, by a two-thirds majority of those present and voting, so decides. Reconsideration can only be moved by a representative who voted on the prevailing side of the original motion to adjourn. Permission to speak on a motion to reconsider shall be accorded only to two speakers opposing the motion, after which it shall be put to the vote immediately.

*For purposes of this rule, —those present and voting means those representatives, including observers, in attendance at the meeting during which this motion is voted upon by the body.*

## VI. VOTING

**Rule 30 - Voting rights**

Each member of the Conference shall have one vote.

*This rule applies to substantive voting on amendments, draft resolutions, and portions of draft resolutions divided out by motion. As such, all references to —member(s) do not include observers, who are not permitted to cast votes on substantive matters.*

**Rule 31 - Request for a vote**

A proposal or motion before the Conference for decision shall be voted upon if any member so requests. Where no member requests a vote, the Conference may adopt proposals or motions without a vote.

*For purposes of this rule, —proposal means any draft resolution, an amendment thereto, or a portion of a draft resolution divided out by motion. Just prior to a vote on a particular proposal or motion, the President may ask if there are any objections to passing the proposal or motion by acclamation, or a member may move to accept the proposal or motion by acclamation. If there are no objections to the proposal or motion, then it is adopted without a vote.*

**Rule 32 – Majority required**

1. Unless specified otherwise in these rules, decisions of the Conference shall be made by a simple majority of the members present and voting.
2. For the purpose of tabulation, the phrase “members present and voting” means members casting an affirmative or negative vote. Members which abstain from voting are considered as not voting.

*All members declaring their representative States as “present and voting” during the attendance role call for the meeting during which the substantive voting occurs, must cast an affirmative or negative vote, and cannot abstain.*



**Rule 33 - Method of voting**

1. The Conference shall normally vote by a show of placards, except that a representative may request a roll call, which shall be taken in the English alphabetical order of the names of the members, beginning with the member whose name is randomly selected by the President. The name of each present member shall be called in any roll call, and one of its representatives shall reply “yes,” “no,” “abstention,” or “pass.”

*Only those members who designate themselves as —present‖ or —present and voting‖ during the attendance roll call, or in some other manner communicate their attendance to the President and/or Secretariat, are permitted to vote and, as such, no others will be called during a roll-call vote. Any representatives replying —pass,‖ must, on the second time through, respond with either —yes‖ or —no.‖ A —pass‖ cannot be followed by a second —pass‖ for the same proposal or amendment, nor can it be followed by an abstention on that same proposal or amendment.*

2. When the Conference votes by mechanical means, a non-recorded vote shall replace a vote by show of placards and a recorded vote shall replace a roll-call vote. A representative may request a recorded vote. In the case of a recorded vote, the Conference shall dispense with the procedure of calling out the names of the members.
3. The vote of each member participating in a roll call or a recorded vote shall be inserted in the record.

**Rule 34 - Explanations of vote**

Representatives may make brief statements consisting solely of explanation of their votes after the voting has been completed. The representatives of a member sponsoring a proposal or motion shall not speak in explanation of vote thereon, except if it has been amended, and the member has voted against the proposal or motion.

*All explanations of vote must be submitted to the President in writing before debate on the topic is closed, except where the representative is of a member sponsoring the proposal, as described in the second clause, in which case the explanation of vote must be submitted to the President in writing immediately after voting on the topic ends.*

**Rule 35 - Conduct during voting**

After the President has announced the commencement of voting, no representatives shall interrupt the voting except on a point of order in connection with the actual process of voting.

**Rule 36 - Division of proposals and amendments**

Immediately before a proposal or amendment comes to a vote, a representative may move that parts of a proposal or of an amendment should be voted on separately. If there are calls for multiple divisions, those shall be voted upon in an order to be set by the President where the most radical division will be voted upon first. If objection is made to the motion for division, the request for division shall be voted upon, requiring the support of a majority of those present and voting to pass. Permission to speak on the motion for division shall be given only to two speakers in favor and two speakers against. If the motion for division is carried, those parts of the proposal or of the amendment which are involved shall then be put to a vote. If all operative parts of the proposal or of the amendment have been rejected, the proposal or the amendment shall be considered to have been rejected as a whole.

*For purposes of this rule, —most radical division‖ means the division that will remove the greatest substance from the draft resolution, but not necessarily the one that will remove the most words or clauses. The determination of which division is —most radical‖ is subject to the discretion of the Secretariat, and any such determination is final.*

**Rule 37 - Amendments**

An amendment is a proposal that does no more than add to, delete from, or revise part of another proposal.

*An amendment can add, amend, or delete operative clauses, but cannot in any manner add, amend, delete, or otherwise affect perambulatory clauses.*

**Rule 38 - Order of voting on amendments**

When an amendment is moved to a proposal, the amendment shall be voted on first. When two or more amendments are moved to a proposal, the amendment furthest removed in substance from the original proposal shall be voted on first and then the amendment next furthest removed there from, and so on until all the amendments have been put to the vote. Where, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted on.

*For purposes of this rule, —furthest removed in substance means the amendment that will have the most significant impact on the draft resolution. The determination of which amendment is —furthest removed in substance is subject to the discretion of the Secretariat, and any such determination is final.*

**Rule 39 - Order of voting on proposals**

If two or more proposals, other than amendments, relate to the same question, they shall, unless the Conference decides otherwise, be voted on in the order in which they were submitted.

**Rule 40 - The President shall not vote**

The President shall not vote but may designate another member of her/his delegation to vote in her/his place.

VII. CREDENTIALS

**Rule 41 - Credentials**

The credentials of representatives and the names of members of a delegation shall be submitted to the Secretary-General prior to the opening of a session.

**Rule 42**

The Commission shall be bound by the actions of the General Assembly in all credentials matters and shall take no action regarding the credentials of any member.

VII. PARTICIPATION OF NON-MEMBERS OF THE COMMISSION

**Rule 43 - Participation of non-Member States**

1. The Commission shall invite any Member of the United Nations that is not a member of the Commission and any other State, to participate in its deliberations on any matter of particular concern to that State.
2. A committee or sessional body of the Commission shall invite any State that is not one of its own members to participate in its deliberations on any matter of particular concern to that State.
3. A State thus invited shall not have the right to vote, but may submit proposals which may be put to the vote on request of any member of the body concerned.

*If the Commission considers that the presence of a Member invited according to this rule is no longer necessary, it may withdraw the invitation again. Delegates invited to the Commission according to this rule should also keep in mind their role and obligations in the committee that they were originally assigned to. For educational purposes of the NMUN Conference, the Secretariat may thus ask a delegate to return to his or her committee when his or her presence in the Commission is no longer required.*

**Rule 45 - Participation of national liberation movements**

The Commission may invite any national liberation movement recognized by the General Assembly to participate, without the right to vote, in its deliberations on any matter of particular concern to that movement.

**Rule 46 - Participation of and consultation with specialized agencies**

In accordance with the agreements concluded between the United Nations and the specialized agencies, the specialized agencies shall be entitled: a) To be represented at meetings of the Commission and its subsidiary organs; b) To participate, without the right to vote, through their representatives, in deliberations with respect to items of concern to them and to submit proposals regarding such items, which may be put to the vote at the request of any member of the Commission or of the subsidiary organ concerned.

***Rule 47 - Participation of non-governmental organization and intergovernmental organizations***

Representatives of non-governmental organizations/intergovernmental organizations accorded consultative observer status by the General Assembly and other non-governmental organizations/intergovernmental organizations designated on an ad hoc or a continuing basis by the Commission on the recommendation of the Bureau, may participate, with the procedural right to vote, but not the substantive right to vote, in the deliberations of the Commission on questions within the scope of the activities of the organizations.