



WIPO-WTO COLLOQUIUM PAPERS

RESEARCH PAPERS FROM THE WIPO-WTO COLLOQUIUM
FOR TEACHERS OF INTELLECTUAL PROPERTY LAW 2012



WTO OMC





**WIPO-WTO COLLOQUIUM FOR TEACHERS OF INTELLECTUAL PROPERTY
(2012)**

**WIPO-WTO COLLOQUIUM FOR TEACHERS OF INTELLECTUAL PROPERTY
(2012)**

Organized by

The World Intellectual Property Organization (WIPO) and

The World Trade Organization (WTO)

Geneva, 11-22 June 2012

**RESEARCH PAPERS FROM THE WIPO-WTO COLLOQUIUM FOR TEACHERS
OF INTELLECTUAL PROPERTY (2012)**

Compiled by the WIPO Academy and the WTO Intellectual Property Division

DISCLAIMER

The views and opinions expressed in the collection of papers from the WIPO-WTO Colloquium of Teachers of Intellectual Property (2012) are those of the authors. They do not necessarily reflect the positions of the organizations cooperating on this project. In particular, no views or legal analysis included in these papers should be attributed to WIPO or the WTO, or to their respective Secretariats.

<http://www.wto.org/index.htm> © 2013. Copyright in this compilation is jointly owned by the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO). The contributing authors retain copyright in their individual works.

ISBN 978-92-870-3898-2

Editors

Maegan McCann
Karla Brepsant (copy-editor)

Editorial Board

Mr Frederick M. Abbott

Professor
College of Law
Florida State University
Damon House, Room 203
600 W. College Avenue
Tallahassee, FL 32306
United States of America

Mrs Sarah Driver

Senior Lecturer
Faculty of Law
Rhodes University
P.O. Box 94
Grahamstown, 6140
South Africa

Mr Denis Borges Barbosa

Professor of Intellectual Property Law
Head of Academic Division
Catholic University of Rio de Janeiro
and Rio Grande do Sul
Rua do Ouvidor 121/6, 20040030
Rio de Janeiro
Brazil

Mr Daniel J. Gervais

Professor
FedEx Research Professor of Law
Co-Director of Vanderbilt Intellectual Property
Programme
Vanderbilt Law School
2201 West End Ave.
Nashville, TN 37235
United States of America

Mr Carlos Correa

Professor and Director
The Centre for Interdisciplinary Studies
on Industrial Property and Economics Law
University of Buenos Aires
430, Viamonte St.
Buenos Aires
Argentina

Dr N. S. Gopalakrishnan

Professor of HRD Chair on IPRs
School of Legal Studies
Cochin University of Science and Technology
Pin-682022, Cochin, Kerala
India

Mr Antony Taubman

Director
Intellectual Property Division
World Trade Organization
154 rue de Lausanne
1211 Geneva 21
Switzerland

Mr Marcelo Di Pietro

Director
WIPO Academy
World Intellectual Property Organization
34, chemin des Colombettes
1211 Geneva 20
Switzerland

Mrs Jayashree Watal
Counsellor
Intellectual Property Division
World Trade Organization
154 rue de Lausanne
1211 Geneva 21
Switzerland

Mrs Karen Lee Rata
Head
Academic Institutions and Executive Programme
WIPO Academy
World Intellectual Property Organization
34, chemin des Colombettes
1211 Geneva 20
Switzerland

Mrs Xiaoping Wu
Counsellor
Intellectual Property Division
World Trade Organization
154 rue de Lausanne
1211 Geneva 21
Switzerland

Mrs Martha Chikowore
Training Officer
Academic Institutions Programmes
WIPO Academy
World Intellectual Property Organization
34, chemin des Colombettes
1211 Geneva 20
Switzerland

FOREWORD BY THE DIRECTORS-GENERAL OF WIPO AND THE WTO



Mr Francis Gurry



Mr Roberto Azevêdo

This volume is the third in a series of annual publications from the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO). Prepared by the WIPO-WTO Colloquium for Teachers of Intellectual Property, this collection of academic papers represents an important contribution to international scholarship in the field of intellectual property (IP). Today we witness ever increasing, more diverse forms of international interaction on IP, yet equally we see growing attention to differing national policy needs and social and developmental priorities in this field. The *Colloquium Papers* series highlights the importance of fostering scholarship in emerging IP jurisdictions, harvesting the insights from policy and academic debates from across the globe, and promoting mutual learning through the sharing of research and scholarship on a broader geographical base.

For over a decade, the annual WIPO-WTO Colloquium itself has played a central role in the joint capacity building programmes of WIPO and the WTO. This cooperation seeks to enrich dialogue on IP issues and to address the developmental and wider policy considerations that form an integral part of IP law and policy today. The Colloquium responds to the recognition that developmental benefits from the IP system can only be reaped through skilled adaptation to national circumstances and judicious use by informed practitioners. Equally, effective policy development at the national level needs increasingly to draw upon skilled, informed and sophisticated policy analysis. The Colloquium bolsters the capacity of those best placed to ensure truly sustainable, long-term benefits from the adept use of the IP system – those who teach the IP practitioners of the future, and those who conduct research on IP law and policy.

The programme has produced more than 220 alumni. This is a diverse and active network of highly engaged teachers and researchers, which reaches across the developing world. Whilst this network is the principal focus of the programme, it also includes a number of developed countries. It is heartening to see the contributions of these scholars in many avenues – through their academic publications, through their active participation in national and international policy debates, through their own teaching and through their contribution to capacity building in the developing world.

We see the *Colloquium Papers* – an edited, peer-reviewed academic journal – as epitomizing the trend towards more diverse and yet more rigorous capacity building in IP law and policy. The three publications issued since 2010 draw together the participants' original insights into current IP issues in their countries, and give greater substance to the network of mutual learning and intellectual exchanges that characterize the Colloquium programme.

The latest publication, a selection of papers from the 2012 Colloquium, covers an impressive range of IP subject matter, including patents, trademarks, geographical indications, copyright, IP enforcement, and Internet domain names. The papers discuss policy issues including food security, access to pharmaceutical products, transfer of technology, the interaction between domestic and international IP laws, and Internet governance, all of which are vital to the development of IP systems in developing countries. This publication series may now be presented as a significant new academic journal with unique coverage of IP law and policy focused on emerging IP jurisdictions.

In today's changing global economy, IP significantly influences the everyday lives of all citizens around the world. An international IP system that can adjust to the shifting global economic landscape, while also stimulating innovation and furthering development, demands the understanding, participation and cooperation of all peoples across the societal spectrum. Initiatives such as the Colloquium play an important role in building capacity, raising awareness, and engaging all societies that are affected by the evolution of the international IP system.

We congratulate the contributing scholars for their first rate research, and we thank the Editorial Board – a highly distinguished group of senior IP scholars – for their invaluable support and engagement, which has helped establish the *Papers* as a credible academic publication. We should also record our appreciation for the work of our colleagues in the WIPO Academy and the WTO IP Division in organizing the Colloquium and facilitating the publication. Finally, we commend the *Colloquium Papers* as an important emerging source for academic research to what we trust will be a wide and ever more diverse readership.

Francis Gurry



**Director General
World Intellectual Property Organization**

Roberto Azevêdo



**Director-General
World Trade Organization**

PREFACE

This volume – the third in the series of academic papers resulting from the WIPO-WTO Colloquium – encapsulates much that is challenging, significant and fascinating in the field of intellectual property (IP) today. Always with a strong international dimension, the IP system is undergoing an unprecedented phase of globalization and a building of international institutions, bringing with it a deepened understanding of the centrality of a balanced and effective IP system in economic and social development. Yet this same period has precipitated an intensive, wide-ranging process of inquiry about how to adapt and apply IP principles to ensure economic growth, sound public policy, and sustainable development in diverse settings across the globe, recognizing the diversity of economic, social and technological settings, national developmental priorities, and legal and commercial systems.

Intellectual property is seemingly ubiquitous in contemporary life, but its role and impact are both highly diverse and in need of careful analysis and informed debate. An IP dimension is present in many challenging public policy issues today. For instance, we see growing attention to its role in promoting public health, addressing climate change, and achieving food security, as well as its interaction with human rights and social and economic development. Intellectual property has been the subject of complex, multifaceted debates at the multilateral, regional and national levels over the rights of indigenous people, the conservation of biodiversity, the ethics and use of genetic resources, Internet governance, climate change technology, and access to education and medicine. And behind these debates lies an essential question: how to come to grips with the significant responsibility of IP systems in the current world economy, in international trade, and in national policy environment: how should IP systems be designed or adapted to promote economic development, stimulate innovation, and disseminate knowledge in a manner that balances the rights of all stakeholders?

The contemporary field of IP is therefore characterized by profound and searching debates on questions of essential public policy; an approach to policy-making that emphasizes empirical research, theoretical clarity, and achieves coherence with other areas of law; and the harvesting of practical experience from an ever widening base of national IP systems and participants in the policy and practice of IP. It is, therefore, a field in need of a deeper and wider research effort; sophisticated, informed and carefully tailored approaches to education and practical capacity building; and, above all, dialogue and debate founded on a richer base of information, theoretical understanding, practical experience, and knowledge of its implications in other areas of law and policy.

Both WIPO and the WTO have been called upon to play a role in strengthening capacity to deal with the intellectual challenges of these policy debates. This increasing diversity of demand for capacity-building support has had a profound impact on programme design and delivery. The WIPO Academy has developed a wide range of specialist courses and training activities to respond to this evolving pattern of demand, and to reach out to and support an ever widening range of stakeholders.

The WTO IP Division continues to broaden and tailor its technical cooperation and policy support activities, developing a wider engagement with current international issues and with a broader base of stakeholders, exemplified by work on public health issues. But none of these outcomes can be possible without partnerships – the sharing of ideas, pooling of resources, and coordination of practical activities – so that the necessary wide range of experience and expertise can be drawn on to meet diverse needs.

Both the WIPO Academy and the WTO Intellectual Property Division therefore enjoy many valuable partnerships as a central strategy in ensuring programme delivery. The Colloquium has exemplified and promoted current trends in technical assistance and capacity building: it builds upon and extends an existing partnership between WIPO and the WTO; it responds to the need for stronger, broader dialogue and a greater involvement of voices from all perspectives in contemporary debates; it recognizes the central role of indigenous capacity building and of the key contribution of IP teachers and researchers as the mainstay of sustainable development of the necessary IP expertise in developing countries; it transcends traditional boundaries between regions and between 'north' and 'south' to allow fruitful discourse on the future of IP systems. Most importantly, it recognizes the importance of extending beyond an educational function to one of bringing together a diverse group with the aim of reviving and refreshing dialogues on IP and its cognate fields.

The Colloquium has, in particular, laid emphasis on the role of participants as active players, as informed, stimulating teachers and researchers who bring to the two-week dialogue as much as they take away from it. Past feedback from participants stressed the need to capture, in more permanent form, the many insights gleaned from these few days of intensive, vigorous discussion. Participating teachers and researchers expressed important new ideas and insights to global debates that could enrich and inform the exchange among policymakers, the academic community, and the public at large.

These thoughts, guided very much by the participating teachers and researchers themselves, are what gave rise to the present publication, which is in a way a tribute to the intellectual energy and curiosity of the many alumni of the past Colloquia, with whom we continue to enjoy a range of partnerships and dialogue.

WIPO and the WTO both host numerous meetings every year, in Geneva and in many locations elsewhere, and under numerous headings: committees, seminars, workshops, roundtables, symposia, and so on. But amidst all this activity, the idea of a 'colloquium' has a special ring to it – for the WIPO-WTO Colloquium, it connotes a spirit of academic enquiry, a search for new ideas and new ways of analysing IP and related fields, through open debate, rigorous research, and new ways of communicating the complexities of IP law, practice and policy. We trust that this publication will bring to a wider community of researchers, policymakers and teachers some of the colloquium spirit that we have valued so much in this unique programme.

All of us who have participated in the Colloquium have benefited from the hard work and dedication of many colleagues within WIPO and the WTO Secretariat – notably, the WIPO Academy and the WTO Intellectual Property Division. All have contributed valuably to the design and delivery of this programme, and their spirit of collegiality makes a demanding programme also a pleasurable one.

We owe a particular debt of gratitude to the Editorial Board and the student Editors of the *Colloquium Papers*: they have been indispensable in ensuring that the Papers can be used as a trusted, academically sound and readable source of cutting edge IP scholarship from an impressive group of emerging scholars from across the developing world. Finally, we record our deep appreciation for the contributions made by individual scholars to this, and the preceding, volumes – we have come to know and respect their contributions to policy and legal scholarship, and we are sure that this active, informed and thoughtful participation in many of the key public policy debates of today will continue, exemplifying the important public service role performed by the scholarly community today.

Marcelo di Pietro



**Director
WIPO Academy
World Intellectual Property Organization**

Antony Taubman



**Director
Intellectual Property Division
World Trade Organization**

ACKNOWLEDGEMENTS

Special thanks to Marcelo di Pietro Peralta (Director of the WIPO Academy) and Antony Taubman (Director of the WTO Intellectual Property Division) for their strong support of the project; to Maegan McCann (editor) and Karla Brepsant (copy-editor) for conducting the editorial work; to Martha Chikowore and Xiaoping Wu for their work in organizing the 2010, 2011 and 2012 Colloquiums and coordinating this publication. Gao Hang and Jayashree Watal played a key role in the conception and development of the Colloquium initiative. We extend strong appreciation to all for their contributions, and to many other colleagues not mentioned here, who have done so much to make the Colloquium initiative a success.

CONTENTS

1 Domain Name Dispute Resolution and the WTO Agreement on Trade-Related Intellectual Property Rights	1
CELIA LERMAN (ARGENTINA)	
2 Linking Intellectual Property Rights with Plant Genetic Resources: Myths and Realities for Food Security in Least Developed Countries Such as Bangladesh	11
DR MOHAMMAD TOWHIDUL ISLAM (BANGLADESH)	
3 A Brief Note Concerning Pipeline Patents in Brazil	31
PEDRO MARCOS NUNES BARBOSA (BRAZIL)	
4 Copyright Law: Impacts on Urban Shaping	45
DR PLAMENA POPOVA (BULGARIA)	
5 The Indonesian Plant Varieties Protection Act: the Dilemma of Meeting International and Bilateral Obligations and Protecting Traditional Farmers	59
DR NURUL BARIZAH (INDONESIA)	
6 Enforcing Intellectual Property Rights in Mexico: a Dichotomy between Promoting Competitiveness and the Rule of Law	79
LUIS RICARDO RODRIGUEZ MENESES (MEXICO)	
7 Combating Piracy through Effective Regulation of the Printing Industry in Nigeria: Prospects and Challenges	87
DR ABDULWASIU OJO AKOREDE YUSUFF (NIGERIA)	
8 Patent Rights and their Economic Impacts: the Case of the Turkish Pharmaceutical Industry	103
DR UMMUHAN GÖKOVALI (TURKEY)	
9 The America Invents Act of 2011 and the Emerging Public Infostructure of Patents	121
KALI MURRAY (UNITED STATES)	
10 Protection Regime for Well-Known Local Products in Viet Nam	129
DR LE THI THU HA (VIET NAM)	

ANNEXES

WIPO-WTO Colloquium for Teachers of Intellectual Property: Programme Schedule.....	147
WIPO-WTO Colloquium for Teachers of Intellectual Property: List of Participants	163
CONTACT PERSONS	169

WIPO - WTO COLLOQUIUM FOR TEACHERS OF INTELLECTUAL PROPERTY

Class of 2012



© WIPO 2013. Photo: Berrod

Participants of the WIPO-WTO Colloquium for Teachers of Intellectual Property (2012) with Mr Francis Gurry, Director General of the World Intellectual Property Organization (centre left,), Mrs Carlotta Graffigna, Executive Director of the WIPO Academy and IP Human Capital Development (right-hand side of the Director General) and Mr Marcelo di Pietro, Director of the WIPO Academy (centre right). Also pictured are Mrs Martha Chikowore of the WIPO Academy and Mrs Xiaoping Wu of the WTO Intellectual Property Division.

1 DOMAIN NAME DISPUTE RESOLUTION AND THE WTO AGREEMENT ON TRADE-RELATED INTELLECTUAL PROPERTY RIGHTS

* Celia Lerman

ABSTRACT

Despite the close relationship between domain names, intellectual property and trade, domain names are intangible rights that are not expressly protected under the World Trade Organization (WTO) Agreement on Trade-Related Intellectual Property Rights (TRIPS). Nevertheless, domain names have been raising trade concerns for WTO Members, as reflected by over 17 free trade agreements that establish provisions on domain name dispute resolution and policy. The purpose of this paper is to explore to what extent the WTO TRIPS system has influenced country-code top-level domain (ccTLD) name policies. To that end, the paper examines the regulation of ccTLDs in the context of the global trade agreement network that has emerged post-TRIPS, along with the international practice in domain name dispute resolution. It argues that a new standard of domain name dispute resolution is taking shape. This standard is compatible with the framework of TRIPS Article 41. The impact of this rising standard, however, deserves further examination.

Keywords: *domain names, TRIPS Agreement, alternative dispute resolution, ccTLDs, free trade agreements*

I. INTRODUCTION

Domain names are intangible rights that are becoming increasingly important in international trade. With the global expansion of the Internet, and as new domain name extensions are created, domain names pose new challenges for trade in the digital world.

Despite the close relationship between domain names, intellectual property and trade, domain names are intangible rights that are not expressly protected under the TRIPS Agreement. Nevertheless, domain names have been raising trade concerns for WTO Members, as reflected by over 17 free trade agreements that establish provisions on domain name dispute resolution and domain name privacy rules. Examples of these treaties include the free-trade agreement network of the United States and bilateral agreements between China and Nicaragua.¹

The purpose of this paper is to explore to what extent the WTO TRIPS system has influenced country code top level domain (ccTLD) name policies. Given the limited scope of

* **Ms Celia Lerman** (Argentina), Lawyer (Universidad Torcuato Di Tella, Buenos Aires, Argentina, 2008, Valedictorian Award) and Intellectual Property LL.M (Universidad Austral, Buenos Aires 2010), is currently an intellectual property professor and researcher at the Universidad Torcuato Di Tella law school and coordinator of the Internet Governance and Online Dispute Resolution initiatives at the Latin American E-Commerce Institute (eInstituto). Her areas of research and teaching are intellectual property, Internet governance and private international law. Previously, she was an associate lawyer in the intellectual property department of Mitrani, Caballero, Rosso Alba, Francia, Ojám y Ruiz Moreno Abogados (2008-2010). Recently, she was Visiting Intellectual Property Scholar of the Kernochan Centre for Law, Media and the Arts at Columbia University (New York, 2012) and a fellow of the Internet Corporation for Assigned Names and Numbers - ICANN (Senegal and Costa Rica, 2011-2012). She won the Fulbright Foreign Award to pursue her doctoral studies in the United States (2013-2014).

¹ See Section II.

this paper, it will focus only on whether the TRIPS system has influenced domain name dispute resolution policies in countries.

To that end, this paper examines the regulation of ccTLDs in the context of the global trade agreement network that has emerged post-TRIPS, along with international practice in domain name dispute resolution. It suggests that a new standard of domain name dispute resolution is taking shape. This standard is compatible with the framework of TRIPS Article 41; the adoption of alternative dispute resolution mechanisms could be interpreted as a measure to ensure that enforcement procedures are available under Members' laws, permitting effective action against any act of trademark infringement (as required under TRIPS Article 41.1).

The impact of this emerging standard, however, deserves careful examination. Since WTO Members are not obliged to put in place a judicial system for the enforcement of intellectual property rights (TRIPS Article 41.5), this new standard does not create any obligation to adopt the rising standard describe here. Nevertheless, the current context suggests that most countries, including developing countries, will converge towards the adoption of this new standard.

II. DOMAIN NAMES IN TRADE

The importance of domain names in trade is constantly increasing. Both developing and developed country markets are experiencing an unprecedented growth of e-commerce and Internet penetration. In developing regions such as Latin America, Africa and the Middle East alone, Internet penetration has significantly risen in the past ten years.² In 2011 alone, Latin America was the region with the highest Internet growth in the world: Internet users grew by 16 per cent, and Internet penetration rose by 30 per cent.³ Internet usage in all regions is developing swiftly, and simultaneously domain name registration is rising rapidly.

There are over 142 million registered generic top-level domain (gTLDs) names⁴, and over 100 million ccTLD names worldwide.⁵ In Latin America alone, there are over eight million ccTLDs, approximately a third of which is represented by Argentinian domain names ('.ar', approximately 2.47 million), another third by Brazilian domain names ('.br', approximately 2.79 million), a sixth by Colombian domain names ('.co', approximately 1.2 million), followed by Mexican domain names ('.mx', 508 thousand), Chilean domain names ('.cl', 370 thousand),

² According to the Internet World Stats Index, based on information from the International Telecommunications Union among others, Internet penetration since 2000 has increased 1,310.8 per cent in Latin America and the Caribbean in the period 2000-2012, 3,606.7 per cent in Africa and 2,639.9 per cent in the Middle East, available online at: <<http://www.internetworldstats.com/stats.htm>>

³ See ComScore studies 'Estado de Internet en Argentina' (May 2011) and 'Futuro Digital Latinoamérica 2012' (March 2012).

⁴ See 'Domain Counts and Internet Statistics', available online at: <<http://www.whois.sc/internet-statistics/>>

⁵ Verisign, 'The Domain Name Industry Brief' (October 2012), available online at: <<http://www.verisigninc.com/assets/domain-name-brief-oct2012.pdf>>

Venezuelan domain names ('.ve', 214 thousand), Peruvian domain names ('.pe', 59 thousand) and other ccTLD names.⁶

With the rise in Internet penetration, domain name piracy is becoming a constant challenge for trademark owners. Domain names may act as barriers to commerce when they are registered or used in bad faith to violate third-party rights, including intellectual property rights.

Despite the cybersquatting menace, domain names have not been included in the TRIPS Agreement. Historically, this is due to the fact that the Internet was not yet a pressing source of intellectual property infringements when the TRIPS Agreement was drafted. Moreover, since domain names are not intellectual property rights *per se*, it is still a sensible decision not to regulate them under the TRIPS Agreement. Instead of autonomous protection, the intellectual property that rests in a domain name is protected under the trademark provisions of Section 2 of the TRIPS Agreement.

Despite their absence from the TRIPS Agreement, domain names feature increasingly in the intellectual property sections of free trade agreements. These trade agreements include, as a bilateral covenant, the obligation to establish an appropriate procedure for the settlement of ccTLD disputes based on ICANN's Uniform Domain-Name Dispute-Resolution Policy (UDRP) and to grant online public access to the ccTLD WHOIS database, based on the following guidelines:

(1) In order to address trademark cyber-piracy, each Party shall require that the management of its country-code top-level domain (ccTLD) provide an appropriate procedure for the settlement of disputes, based on the principles established in the Uniform Domain-Name Dispute-Resolution Policy.

(2) Each Party shall require that the management of its ccTLD provide online public access to a reliable and accurate database of contact information for domain-name registrants.⁷

There are 34 reported free trade agreements that include provisions on domain name dispute resolution: three were signed between 1995 and 1999, nine were signed between 2000 and 2004, and 22 were signed since 2005.⁸

⁶ Latinoamericann, Statistics for Domain Name Registrations in Latin America (28 September 2011). On the growing tendency, see also Pablo Ruiz-Tagle, 'Trademarks, the Internet and Domain Names in Latin America' [2007] 97 Trademark Rep 974.

⁷ These treaties include the following free trade agreements: United States - Australia (Article 17), United States - Bahrain (Article 14.3), United States - CAFTA (Article 15.4), United States - Chile (Article 17.3), United States - Colombia (Article 16.4), United States - Korea (Article 18.3), United States - Morocco (Article 15.4), United States - Oman (Article 15.3), United States - Panama (Article 15.4), United States - Peru (Article 16.4), United States - Singapore (Article 16.3), CN (Taiwan) - Nicaragua (Article 17.2). The United States - CAFTA, Chile and Panama agreements also specify that local privacy laws will be taken into account when providing WHOIS information.

⁸ See Raymundo Valdés and Runyowa Tavengwa, 'Intellectual Property Provisions in Regional Trade Agreements', WTO working paper (2012), 22.

Further to these covenants, the International Trademark Association (INTA) 2011 Model Free Trade Agreement included domain name dispute resolution as a trade concern in even broader terms, referring to the assignment of domain names and their relationship with trademark rights, and adding other measures against cybersquatting.⁹ With the rising value of an Internet presence, countries are increasingly treating domain name matters as trade matters.

III. COUNTRY-CODE TOP-LEVEL DOMAINS: ORIGINS AND GOVERNANCE

Since 1985, ccTLDs have been granted to governments and other entities representing countries and territories.¹⁰ Country code top level domains have always been subject to the laws of their governments; accordingly, governments establish the policies for the assignment, maintenance and use of these domain names.¹¹

In 1999, WIPO issued the 'Report of the first Internet Domain Name Process', a seminal report on domain names and intellectual property rights.¹² The report examined the regulation of both gTLDs and ccTLDs. On the latter, it included a questionnaire to the administering authorities for 35 representative ccTLDs.¹³ At the time, the questionnaire 'revealed that there [was] no coherent approach to dispute resolution among ccTLD administrators, although an informal conciliation role is often assumed in an effort to prevent disputes from escalating into litigation'.¹⁴ Further, the questionnaire showed that 46 per cent of ccTLDs had an established policy for the resolution of domain-name disputes and that only 21 per cent required applicants, in the registration agreement, to submit the dispute to any alternative dispute resolution (ADR) procedure.¹⁵ Finally, the report made a recommendation to ccTLDs administrators for submitting disputes to the jurisdiction of particular courts and to alternative dispute resolution procedures, such as those for gTLDs.¹⁶

Furthermore, in 2001, as part of its ccTLD program, WIPO released a 'best practices' document regarding ccTLD disputes. The document was intended 'as a flexible framework built around a number of basic elements that [were] deemed critical from an IP perspective' for open

⁹ INTA Model Free Trade Agreement (30 May 2011), Section III.

¹⁰ See Elisabeth Porteneuve, 'Country code Top Level Domain-names - ccTLD - History in the Making', available online at: <<http://www.wwtld.org/meetings/cctld/20010219.ccTLD-history-in-the-making-EP.html>>

¹¹ As stated by the United States Government, 'national governments now have, and will continue to have, authority to manage or establish policy for their own ccTLDs'. See National Telecommunications and Information Administration, 'Statement of Policy on the Management of Internet Names and Addresses' of 1998 (also known as the 'White Paper'), available online at: <<http://www.ntia.doc.gov/federal-register-notice/1998/statement-policy-management-internet-names-and-addresses>>

¹² WIPO, 'Report of the First Internet Domain Name Process' [1999], available online at: <<http://www.wipo.int/amc/en/processes/process1/report/finalreport.html>>

¹³ The participating countries included Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Czech Republic, Denmark, Egypt, France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Niue, Norway, Senegal, Singapore, South Africa, Spain, Sweden, Switzerland, United Arab Emirates and the United Kingdom.

¹⁴ See n 12, 339.

¹⁵ *ibid* Annex XIX, 'Dispute Resolution', questions 1 and 7.

¹⁶ *ibid* 111 and Annex XVIII, 'Application of Recommendations to ccTLDs'.

ccTLDs. In the document, it was stated: 'the prevailing view now is that ADR is the most appropriate method of dealing with IP infringements in the DNS' [Domain Name System].¹⁷

Precise characteristics were suggested for such dispute resolution mechanisms: (a) mandatory character (incorporating it into the Registration Agreement); (b) decisions based on all facts and circumstances; (c) blocking of transfers pending the proceedings; (d) direct enforcement; (e) quick results; (f) moderate costs; (g) the relationship with ccTLD administrators (should shield it from legal liability and extricate it from the dispute); (h) the relationship with court proceedings (should not replace them, only constitute an additional option); and (i) the scope of procedure (cover not only clear cases of abuse, but also disputes with more or less equivalent rights as is the case with the UDRP).

Over a decade after WIPO's report, as can be seen below, their suggestions were widely incorporated by ccTLDs administrators internationally.

IV. ALTERNATIVE DISPUTE RESOLUTION AS AN INTERNATIONAL STANDARD IN DOMAIN NAME DISPUTE RESOLUTION

The ccTLD dispute resolution situation has radically changed since WIPO's last report. As the table below shows, virtually all countries from the original questionnaire have adopted some form of ADR and most of them have adopted processes in the form of expert panels.

Table 1.1 Domain Name Dispute Resolution in Countries Featured in WIPO's 1999 Final Report of the Internet Domain Name Process

ccTLD	ADR Panel Dispute Resolution (2001)	ADR Panel Dispute Resolution (2012)
.AE	No	Yes
.AR	No	No (but allows for domain revocation for rights-violations)
.AT	No	Yes
.AU	No	Yes
.BE	Yes	Yes
.BG	No	Yes
.BR	No	Yes
.CA	No	Yes
.CH	No	Yes
.CL	Yes	Yes
.CN	Yes	Yes
.CZ	No	Yes
.DE	No	No (but locking procedures are established to avoid domain transfer)

¹⁷ WIPO 'ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes', available online at: <<http://www.wipo.int/amc/en/domains/bestpractices/bestpractices.html>>

ccTLD	ADR Panel Dispute Resolution (2001)	ADR Panel Dispute Resolution (2012)
.DK	No (but conciliation was encouraged)	Yes
.EG	No	No
.ES	No	Yes
.FR	No	Yes
.HU	No	Yes
.IE	No	Yes
.IL	Yes	Yes
.IN	No	Yes
.IT	Yes	Yes
.JP	No	Yes
.MX	No (although disputes were sent to the local Patent and Trademark Office)	Yes
.MY	No	Yes
.NL	No	Yes
.NO	No	Yes
.NU	Yes	Yes
.NZ	No	Yes
.SE	Yes	Yes
.SG	No	Yes
.SN	No	No (but conciliation is provided)
.UK	Yes (voluntary)	Yes
.VE	Yes	Yes
.ZA	No	Yes

In 2001, when WIPO's ccTLD Best Practices report was issued, only nine out of 35 countries provided for alternative ADR mechanisms. In 2012, however, 31 out of 35 countries provided for ADR for domain names in the form of a panel, and three other countries provided some type of extra-judicial mechanism for facilitating the resolution of such disputes. Moreover, currently, at least 123 of the 256 ccTLD administrators provide for some type of ADR mechanism, generally in the form of an expert panel resolution.¹⁸

These numbers reflect the standard for domain name regulation now taking shape.

V. DOMAIN NAMES UNDER ARTICLE 41 OF TRIPS

Under the TRIPS Agreement, Members need to ensure that enforcement procedures are available under their law in order to permit effective action against any act of trademark

¹⁸ Pursuant to WIPO's Arbitration and Mediation Centre ccTLD Database, available online at: http://www.wipo.int/amc/en/domains/cctld_db/output.html

infringement, including expeditious remedies to prevent infringements and remedies constituting a deterrent to further infringements (Article 41.1 of the TRIPS Agreement). However, Members are not obliged to put in place a judicial system for the enforcement of intellectual property rights distinct from that for the enforcement of law in general, and likewise they are not obliged with respect to the distribution of resources as between the enforcement of intellectual property rights and the enforcement of law in general (Article 41.5 of the TRIPS Agreement).

The impact of this rising standard, therefore, deserves careful examination. Since WTO Members are not obliged to put in place a judicial system for the enforcement of intellectual property rights, this new standard does not obligate Members to adopt enforcement or dispute resolution procedures for domain names. Creating such mechanisms would arguably require the allocation of special resources for their creation and maintenance. These mechanisms could be beneficial, but are not strictly mandated under the TRIPS Agreement.

Nevertheless, the current context suggests that most countries, including developing countries, will converge towards this new standard.

Firstly, the adoption of ADR mechanisms is, all things considered, not unreasonably expensive for any country. If a country does not wish to create an alternative mechanism of its own, it may revert to WIPO's extended ccTLD system. Although this solution may not be ideal¹⁹, it could incorporate in its local domain system a mechanism, which is highly sought by developed countries under the TRIPS Agreement framework. Adopting ADRs for ccTLDs may allow a country to grant a concession on domain name matters, in order to obtain advantageous concessions on other intellectual matters in exchange. This has been the experience of China, an emerging country, that has incorporated ADR mechanisms for the '.cn' as signalling the opening of its economy and related policies simultaneously with their accession to the WTO.²⁰

Secondly, it should be kept in mind that Article 41 of the TRIPS Agreement could be interpreted in light of the international practice in domain name dispute resolution that has emerged post-TRIPS. As provided by Article 31.3 of the Vienna Convention on the Law of Treaties (Vienna Convention), treaties shall be interpreted by taking into account:

- (a) Any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
- (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation.

In light of the Vienna Convention, which is applicable in interpreting the TRIPS Agreement²¹, the subsequent agreements among WTO Members and their practice in the application of TRIPS provisions could be relevant for interpreting the agreement. Bilateral

¹⁹ For instance, because WIPO's international standardized costs and procedures may not be suitable for the population of the country involved.

²⁰ Hong Xue, 'The Voice of China: A Story of Chinese-Character Domain Names' [2004] 12 Cardozo J Intl and Comp L 559.

²¹ Susy Frankel, 'WTO Application of "the Customary Rules of Interpretation of Public International Law" to Intellectual Property' [2006] 46 Va J Intl L 365.

treaties such as free trade agreements, along with the country-practice in domain name dispute resolution mechanisms, could be considered within a WTO TRIPS framework.²² If there is a new standard of ADR in ccTLD dispute resolution that has become an international practice, then TRIPS Article 41 could suggest that WTO Members adopt ADR in order to provide an acceptable level of protection.²³

VI. CONCLUSION

This paper examined the impact of the WTO TRIPS system on country-code (ccTLD) domain name policies. It examined the regulation of country-code domain names in the global trade agreement network that has emerged post-TRIPS, along with the international practice in domain name dispute resolution. It suggested that a new standard of domain name dispute resolution is taking shape. The impact of this new standard, however, deserves further examination. The current context suggests that most countries, including developing countries, will converge towards the adoption of this new standard.

²² Scholars have disagreed on the hierarchy of treaties with respect to international customary law, but they acknowledge that both are important interpretation sources. See, for instance, John O McGinnis, 'The Appropriate Hierarchy of Global Multilateralism and Customary International Law' [2004] 44 Va J Intl L 229.

²³ The potential expansion of international standards has been identified in other areas of intellectual property under the TRIPS Agreement and could be extended to domain names. See Peter Drahos, 'Expanding Intellectual Property's Empire: the Role of FTAs' (2003), available at: <<http://ictsd.org/downloads/2008/08/drahos-fta-2003-en.pdf>> See also Carlos Correa, 'Bilateral Investment Agreements: Agents of New Global Standards for the Protection of Intellectual Property Rights' [2004] GRAIN report, 29: 'The standards set forth in investment agreements may influence not only national IPR legislation and practices, but also multilaterally negotiated IPR standards. The MFN clauses (...) contribute to a global elevation of protection standards'. See n 8. New global standards for the protection of intellectual property rights are emerging in the WTO-TRIPS framework. When a country increases its intellectual property protection through bilateral investment treaties (BITs) or through free trade agreements, the scope of the increased protection is multiplied by means of the most-favoured-nation clause (MFN) included in those treaties and in the TRIPS agreement. Article 4 of the TRIPS Agreement provides a MFN clause, under which any country that grants higher intellectual property protection to the nationals of any country shall accord the same heightened protection to nationals of all other WTO Members. Through MFN clauses, it has been pointed out, new international standards of IP protection may be established.

BIBLIOGRAPHY

'Domain Counts and Internet Statistics' <<http://www.whois.sc/internet-statistics/>> accessed 16 November 2012

'Internet World Stats Index' <<http://www.internetworldstats.com/stats.htm>> accessed 16 November 2012

ComScore, 'Estado de Internet en Argentina' (2011)

'Futuro Digital Latinoamérica 2012' (2012)

Correa C, 'Bilateral Investment Agreements: Agents of New Global Standards for the Protection of Intellectual Property Rights' [2004]

Draho P, 'Expanding Intellectual Property's Empire: the Role of FTAs (2003), <<http://ictsd.org/downloads/2008/08/draho-fta-2003-en.pdf>> accessed 17 April 2013

Frankel S, 'WTO Application of "the Customary Rules of Interpretation of Public International Law" to Intellectual Property' [2006] 46 Va J Intl L 365

INTA, Model Free Trade Agreement (30 May 2011)

National Telecommunications and Information Administration, 'Statement of Policy on the Management of Internet Names and Addresses' of 1998 <<http://www.ntia.doc.gov/federal-register-notice/1998/statement-policy-management-internet-names-and-addresses>> accessed 16 November 2012

McGinnis JO, 'The Appropriate Hierarchy of Global Multilateralism and Customary International Law' [2004] 44 Va J Intl L 229

Latinoamericann, 'Statistics for Domain Name Registrations in Latin America' (28 September 2011)

Porteneuve E, 'Country code Top Level Domain-Names - ccTLD - History in the Making' <<http://www.wwtld.org/meetings/cctld/20010219.ccTLD-history-in-the-making-EP.html>> accessed 16 November 2012

Ruiz-Tagle P, 'Trademarks, the Internet and Domain Names in Latin America' [2007] 97 Trademark Rep 974

Valdés R and Tavengwa R, 'Intellectual Property Provisions in Regional Trade Agreements', WTO working paper (2012), 22

Verisign, 'The Domain Name Industry Brief' (October 2012), <<http://www.verisigninc.com/assets/domain-name-brief-oct2012.pdf>> accessed 16 November 2012

WIPO, 'Report of the First Internet Domain Name Process' [1999], <<http://www.wipo.int/amc/en/processes/process1/report/finalreport.html>> accessed 16 November 2012

'ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes',
<<http://www.wipo.int/amc/en/domains/bestpractices/bestpractices.html>>
accessed 16 November 2012

Arbitration and Mediation Centre ccTLD Database,
<http://www.wipo.int/amc/en/domains/cctld_db/output.html> accessed 16 November 2012

Xue H, 'The Voice of China: A Story of Chinese-Character Domain Names' [2004]
12 Cardozo J Intl and Comp L 559

2 LINKING INTELLECTUAL PROPERTY RIGHTS WITH PLANT GENETIC RESOURCES: MYTHS AND REALITIES FOR FOOD SECURITY IN LEAST DEVELOPED COUNTRIES SUCH AS BANGLADESH

* Dr Mohammad Towhidul Islam

ABSTRACT

The TRIPS Agreement establishes standards for national protection of intellectual property rights (IPRs) that touch on plant genetic resources (PGRs), especially in the form of plant varieties and biotechnology, specifically through patents and plant varieties protection (PVP). This maintains a one-size-fits-all approach for all countries irrespective of their standing in terms of their relative economic development and their basic needs such as food security. This paper revisits the relationship between the TRIPS Agreement and PGRs, including major myths and realities relating to food security in least developed countries, particularly Bangladesh. Furthermore, it examines the issue of IPR regimes with the most relevance to PGRs. It then focuses on the existing laws in Bangladesh relevant to PGRs, including the draft plant variety protection laws that Bangladesh must undertake to secure compliance with the TRIPS Agreement. The paper also summarizes the progress to date in establishing IPRs in PGRs in Bangladesh. Based on these observations, it provides recommendations for the design and operation of an intellectual property system tailored to Bangladesh's PGRs and food security concerns.

Keywords: *intellectual property rights, TRIPS Agreement, Bangladesh, least developed countries, plant genetic resources, plant varieties protection, agriculture, sui generis protection*

I. INTRODUCTION

The World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)¹ establishes standards for national protection of

* **Dr Mohammad Towhidul Islam** (Bangladesh) is Associate Professor in the Department of Law at the University of Dhaka, Bangladesh. He joined the Department of Law as a Lecturer in 2003. He holds a PhD in Intellectual Property Law from Macquarie University, Australia. He also holds a LL.M in International Human Rights Law from UEL Law School, London. He studied for LL.B (Hons.) and LL.M at the University of Dhaka, Bangladesh. Prior to joining the University of Dhaka's Department of Law, he lectured in private universities and practised law in the court room and chamber. He has taught Land Law, Intellectual Property Law, Company Law, International Trade Law, Business Law, Contract Law, Legal System, and Legal Research. His research interests are in the fields of Intellectual Property Law, Land Law, International Trade Law, International Refugee Law, International Human Rights Law, and Corporate Governance and Finance Law. He writes extensively on International Intellectual Property Law, International Trade Law, and International Human Rights Law. His research articles appear in reputed refereed (peer-reviewed) journals including the Oxford Journal of International Intellectual Property Law and Practice, Sweet and Maxwell Journal of International Trade Law and Regulation, Nordic Journal of Commercial Law, Mediterranean Journal of Human Rights, Sri Lanka Journal of International Law, Macquarie Journal of Business Law and Manchester Journal of International Economic Law. His book *TRIPS Agreement of the WTO: Implications and Challenges for Bangladesh* is due to be published shortly in England.

¹ Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 33 ILM 1197 [hereinafter TRIPS Agreement or TRIPS].

IPRs² that touch on PGRs, especially in the form of plant varieties and biotechnology, specifically through patents and PVP. This maintains a one-size-fits-all approach for all countries irrespective of their relative economic development and basic needs such as food security. Developed countries have gradually developed technology to genetically modify PGRs. Such technology often produces better yields and ensures food security. Moreover, licensing fees from the trade of PGR-based products also encourage further research and development (R&D) aimed at enhancing PGRs. This signifies that the IPR protection of PGRs will lead to more appropriable yields ensuring enhanced food security.

However, least developed countries such as Bangladesh lag behind research and development (R&D) and often cannot afford to import technology for the genetic modification of PGRs. Rather, farmers in Bangladesh are accustomed to the free availability of PGRs. Free availability enables farmers to produce crops at low costs and thus helps meet their food security requirements. Moreover, by using genetic technology in their small holdings, least developed countries such as Bangladesh produce better yields, further enabling them to meet their food security requirements. However, licensing fees for using patented technology usually increase the costs of food production, which in turn jeopardizes food security.

The entry into force of the TRIPS Agreement linked two previously less related domains, namely intellectual property and international trade. Thus PGRs became commodities of trade, since under the TRIPS Agreement, WTO Members are obliged to protect microorganisms, microbiological processes and non-biological processes for the production of plants and animals, and plant varieties, through IPRs, including patents or *sui generis* (of its own kind) protection. Accordingly, countries are also banned from using goods embodying IPRs without paying licensing fees. Such obligations restrict access to PGRs, which were once free for all. Restricted access to PGRs is compounded by the fact that the TRIPS Agreement is not primarily an agreement about food and agriculture and hence it does not refer to any notion of food security.

Pursuant to the TRIPS Agreement obligations, Bangladesh prepared its draft Patent Law 2007, which paved the way for patenting PGRs. In addition, under bilateral investment treaties, namely, the United States-Bangladesh Bilateral Investment Treaty 1986 and the European Union-Bangladesh Cooperation Agreement on Partnership and Development 1999, Bangladesh is required to enter into consultation and negotiations to join the International Convention for the Protection of New Varieties of Plants (known as UPOV after its French acronym), which contains standards on *sui generis* protection.³ Accordingly, Bangladesh is in the process of preparing a draft Plant Variety and Farmers' Rights Protection Act (draft Plant Variety Act) containing a UPOV-style *sui generis* protection system, a system (as an alternative to patent

² It was customary to refer to industrial and intellectual property rights. The term 'industrial' was used to cover technology-based subject areas such as patents, designs and trademarks. 'Intellectual property' was used to refer to copyright. The modern convention is to use 'intellectual property' to refer to both industrial and intellectual property. The TRIPS Agreement translates IPRs into trade-related intellectual property rights in order to commercialize the inventions and simultaneously prevents others from doing so, unless licensing fees are paid; for further details, see M Rafiqul Islam, *International Trade Law of the WTO* (2006) 379–380.

³ The International Convention for the Protection of New Varieties of Plants was adopted on 2 December 1961, by a Diplomatic Conference held in Paris. It was revised in 1978 and 1991 [hereinafter UPOV Convention].

protection) also required in the TRIPS Agreement. In addition, as a party⁴ to the Convention on Biological Diversity⁵ and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)⁶, with the support of local and international entrepreneurs, Bangladesh drafted the Biodiversity and Community Knowledge Protection Act (draft Biodiversity Act) containing access to and benefit sharing of PGRs.⁷

However, the UPOV-based draft laws have sparked extensive debate in Bangladesh between policymakers and civil society. Central to these discussions is the issue of striking a balance between the rights of commercial breeders and the traditional rights of farmers and communities to save, use, sow, resow, exchange and sell seeds. In fact, striking the right balance between the rights of breeders and farmers can ultimately lead to the establishment of a regime that may enhance food production in a densely populated country at a low cost, and help meet Bangladesh's food security objectives.

This paper revisits the relationship between the TRIPS Agreement and PGRs and its major implications and challenges relating to food security for least developed countries, particularly Bangladesh, and also examines the issue of IPR regimes with the most relevance to PGRs. It then focuses on existing laws in Bangladesh relevant to PGRs, and the draft laws proposing plant variety protection that Bangladesh needs to undertake as part of securing compliance with the TRIPS Agreement. This paper summarizes the progress to date in establishing IPRs in PGRs in Bangladesh. Based on these observations, this paper offers recommendations for the design and operation of an intellectual property system tailored to PGRs and Bangladesh's food security concerns.

II. THE RELATIONSHIP BETWEEN INTELLECTUAL PROPERTY RIGHTS IN PLANT GENETIC RESOURCES AND FOOD SECURITY

Innovations in PGRs, including seeds, plants and plant parts, often involve plant breeding and agro-biotechnology products. Such innovations are not made in isolation, but are derived from existing PGRs that are often freely available in the public domain and protected by IPRs.⁸ This protection of IPRs in PGR-cum-public goods gives rise to significant controversy over food security between plant breeding industries and farmers based in developing and least developed countries.

⁴ Bangladesh signed and ratified the Convention on Biological Diversity in 1992 and 1995 respectively. Bangladesh's International Treaty on Plant Genetic Resources for Food and Agriculture signed on 17 October 2002 and ratified on 14 November 2003.

⁵ Convention on Biological Diversity, done at Rio de Janeiro, 5 June 1992 (entered into force on 29 December 1993) 31 ILM 822 [hereinafter CBD].

⁶ International Treaty on Plant Genetic Resources for Food and Agriculture, adopted by the Food and Agriculture Organization (FAO) Conference on 3 November 2001 (entered into force on 29 June 2004) <<http://www.fao.org/ag/cgrfa/IU.htm#documents>> 23 March 2010 [hereinafter ITPGRFA].

⁷ Several drafts on Plant Variety and Farmers' Rights Protection Act were made in 2001, 2002, 2003, 2007, and 2009 [hereinafter draft Plant Variety Act]. In addition, two drafts on Biodiversity and Community Knowledge Protection Act were made in the names of Biodiversity Act and Biodiversity and Community Knowledge Protection Act [hereinafter draft Biodiversity Act].

⁸ Rahul Goel, 'Protection and Conservation - TRIPS and CBD: A Way Forward' (2008) 3(5) JIPLP 334.

Intellectual property rights in PGRs, as provided for in the TRIPS Agreement, are supported by plant-breeding industries with the view that the protection of plant genetic inventions provides incentives for plant breeding and boosts production of agricultural products that improve food security.⁹ In reality, this view can be rebutted with the contention that the conferral of IPRs in genetic innovations essentially results in a monopoly of genetic resources found in the public domain and provides unilateral benefits for a limited number of biotechnology-rich developed countries. This leads to increases in the price of agricultural products and undermines food security.¹⁰ Furthermore, although farmers based in developing and least developed countries possess unique local knowledge about their food needs and technical capacity for follow-on innovations, the breeder-cum-sellers benefiting from the innovation system often ignore farmers based in developing and least developing countries.¹¹

Moreover, because of the protection mandated in the TRIPS Agreement, multinational companies make use of herbicide-tolerant, insect-resistant and genetic restriction technologies¹², which are found to affect the traditional saving of seeds, conservation of agricultural biodiversity and other agrarian means of living in developing and least developed countries. This impinges on farmers' comparative advantage of using and reusing PGRs and thus creates challenges in addressing food security concerns.¹³ In addition, multinational companies focus only on the handful of crops with high appropriable value, including maize, cotton, soybeans and canola. Such a selective production of crops often fails to achieve food security for three-fourths of the world's population dependent on cereal crops such as rice and wheat.¹⁴

Further, IPRs in PGRs are based on the view that any increase in cereal yields achieved from an IPR-initiated reward is crucial for meeting food security. In addition, proponents of IPRs in PGRs claim that the higher yields produced from genetically modified PGRs appear to be a welcome initiative in achieving food security in South Asia and sub-Saharan Africa due to the limited amount of cultivatable land in those countries. To meet this demand for food security, growing crops using biotechnology is a reality, as is the acceptance of breeders' dominance. This acceptance signifies that compliance with the TRIPS Agreement endorses PVP and IPR rules in the form of patents and *sui generis* protection, boosts agricultural products and improves food security.

As a *sui generis* form of PGR protection and also as an exception to patents, plant breeders' rights are recognized in Europe and are provided for under the UPOV Convention. However, the TRIPS Agreement makes no reference to PBRs. In addition, the UPOV Convention provides for farmers' privileges as exceptions to patent rights. Developing and least

⁹ Anitha Ramanna, 'Intellectual Property Rights in South Asia: Opportunities and Constraints for Technology Transfer' in Suresh Chandra Babu and Asok Gulati (eds), *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia* (2005) 187–209.

¹⁰ Sarah Wright, 'Globalizing Governance: The Case of Intellectual Property Rights in the Philippines' (2008) 27 *Political Geography* 721, 722.

¹¹ Keith Aoki, 'Free Seeds, Not Free Beer: Participatory Plant Breeding, Open Source Seeds, and Acknowledging User Innovation in Agriculture' (2009) 77 *Fordham L R* 2275.

¹² B Wright, 'Agricultural Innovation after the Diffusion of Intellectual Property Protection' in Jay P Kesan (ed), *Agricultural Biotechnology and Intellectual Property: Seeds of Change* (2007) 13.

¹³ Jagjit Kaur Plahe, 'The Implications of India's Amended Patent Regime: Stripping away Food Security and Farmers' Rights?' (2009) 30(6) *Third World Quarterly* 1197.

¹⁴ B Wright, 'Agricultural Innovation after the Diffusion of Intellectual Property Protection' in Jay P Kesan (ed), *Agricultural Biotechnology and Intellectual Property: Seeds of Change* (2007) 13.

developed countries accept the UPOV exception concerning farmers' privileges in the name of farmers' rights. However, farmers' rights that counter PBRs require not only protection of traditional agrarian practices, but also recognition of farmers as breeders.¹⁵ The provision concerning farmers' rights creates an opportunity for developing and least developed countries to establish a unique system that meets both requirements.¹⁶ Such a provision enhances IPRs, as required by the TRIPS Agreement, while protecting genetic resources to promote innovation in PGRs in line with the UPOV Convention. This boosts agricultural products and enhances food security.¹⁷

In addition, this provision encourages developing and least developed countries to uphold the rights of farmers in line with the Convention on Biological Diversity¹⁸, the ITPGRFA¹⁹ and other non-binding obligations, including the International Undertaking on Plant Genetic Resources for Food and Agriculture (IUPGRFA)²⁰ that recognizes farmers' unique local knowledge of their food security and technical capacity to make follow-on innovations that meet those needs.²¹ Such efforts are likely to extend the concept of PBRs to include not only new varieties developed by breeders, particularly multinational companies, but also those developed by farmers or non-governmental organizations (NGOs).²² Furthermore, such efforts ensure that biopiracy (utilization of resources in developing countries by developed countries for profit without compensation) does not occur.²³

In Bangladesh, intellectual property laws, dating from the colonial period or remaining in effect after decolonization on the basis of the defunct rule of continuity, made no specific reference to PGRs and food security.²⁴ However, it is accepted that IPRs in PGRs came to Bangladesh with the British accession to the Paris Convention for the Protection of Industrial Property 1883 (Paris Convention).²⁵ Intellectual property rights in PGRs became applicable through the Patents and Designs Act, 1911 (Patents and Designs Act)²⁶ and the Trade Marks

¹⁵ Anitha Ramanna and Melinda Smale, 'Rights and Access to Plant Genetic Resources under India's New Law' (2004) 22(4) Development Policy Review 423.

¹⁶ *ibid* 424.

¹⁷ UPOV Convention.

¹⁸ CBD.

¹⁹ ITPGRFA.

²⁰ Report of the Conference of FAO, Rome, 22d Session, UN Doc. (1983) C/83/REP.

²¹ Susan K Sell, 'Corporations, Seeds, and Intellectual Property Rights Governance' in Jennifer Clapp and Doris Fuchs (eds), *Corporate Power in Global Agrifood Governance* (2009) 187–215.

²² Ronald J Herring and Milind Kandlikar, 'Illicit Seeds: Intellectual Property and the Underground Proliferation of Agricultural Biotechnologies' in Sebastian Haunss and Kenneth C Shadlen (eds), *Politics of Intellectual Property: Contestation over the Ownership, Use, and Control of Knowledge and Information* (2009) 66–68.

²³ Ramanna 187–89 (n 9).

²⁴ Sam Ricketson, *The Berne Convention for the Protection of Literary and Artistic Works* (1987) 797–807.

²⁵ *Paris Convention for the Protection of Industrial Property 1883*, signed 20 March 1883, 828 UNTS 305 [hereinafter Paris Convention].

²⁶ *Patents and Designs Act, 1911* (ACT NO. II of 1911) *Bengal Code Vol. VII; Pakistan Code Vol. 6*, enacted 1 March 1911 (hereinafter Patents and Designs Act).

Act, 1940, which was replaced by the Trade Marks Act, 2009 (Trade Marks Act).²⁷ However, Bangladesh did not frequently encounter private rights relating to IPRs in PGRs. This is because most of the research into PGRs was carried out by the public sector, which did not bother to obtain IPRs in PGRs. In addition, previously IPRs were not concentrated in the private sector.²⁸ The TRIPS Agreement, however, which mandates protection of PGRs, has altered the situation. Private-sector companies have now started to undertake R&D in high yielding crops and to use IPRs to secure their investment. Such use of IPRs in PGRs is ostensibly related to food security.

III. INTELLECTUAL PROPERTY RIGHTS RELEVANT TO PLANT GENETIC RESOURCES

Over the past few decades, the issue concerning IPRs in PGRs has evolved significantly. Until the last century, PGRs, which were common heritage, did not qualify as inventions.²⁹ In the course of the 20th century, human intervention superseded the focus on common heritage, leading to the creation of new plant varieties and endowing them with patents or other forms of exclusive IPRs such as PBRs, trademarks, geographical indications and trade secrets.³⁰

General use restriction technologies (GURT) and bag-label contracts are also relevant. In Bangladesh, certain IPRs are considered to be relevant to PGRs. These are patents, trademarks, geographical indications and trade secrets. The most relevant IPRs in PGRs are discussed below.

A. PATENTS

Patents are the most important form of IPR protection today for PGRs, since they provide the strongest protection for investments made in agricultural R&D aimed at improving productivity and attracting capital. The TRIPS Agreement lays down the general principle on patentability. In that context, TRIPS Article 27.1 stipulates that patents shall be available for any invention in all fields of technology, provided that the invention is new, involves an inventive step and is capable of industrial application. However, Article 27.3(b) contains an exception to this general principle in the field of life sciences, biotechnology and genetic engineering. It states that: 'Members may exclude from patentability plants and animals other than microorganisms, and essentially biological processes for the production of plants or

²⁷ *Trade Marks Act, 2009* (ACT NO. XIX of 2009) *Bangladesh Gazette Extra* published 31 August 2010 <http://www.wipo.int/wipolex/en/text.jsp?file_id=197266> 10 December 2010 (hereinafter Trade Marks Act).

²⁸ Savita Mullapudi Narasimhan, 'Towards a Balanced "Sui Generis" Plant Variety Regime: Guidelines to Establish a National PVP Law and an Understanding of TRIPS-Plus Aspects of Plant Rights' (Bureau for Development Policy, United Nations Development Programme, New York, 2008) <<http://www.undp.org/content/dam/aplaws/publication/en/publications/poverty-reduction/poverty-website/toward-a-balanced-sui-generis-plant-variety-regime/TowardaBalancedSuiGenerisPlantVarietyRegime.pdf>> 15 December 2009.

²⁹ Kal Raustiala and David G Victor, 'The Regime Complex for Plant Genetic Resources' (2004) 58 *Intl Org* 277.

³⁰ S Verma and M S Sidhu, 'Impact of Intellectual Property Rights on the Indian Seed Industry' (2009) *Man and Development* 67, 67–68.

animals other than non-biological and microbiological processes.' Article 27 is flexible in its protection of plant varieties, since it allows WTO Members to adopt patents or other means.³¹

In Bangladesh, the provisions of the Patents and Designs Act define a patentable invention as 'any manner of new manufacture and includes an improvement and an alleged invention'.³² In that sense, PGR-derived products and processes qualify as inventions and hence are patentable. Plants or plant varieties that are new and derived from earlier varieties may also be patentable since they meet the requirements of invention. The definition of invention is broad since it covers seeds that are new and have industrial application. In line with this definition, PGRs are included within the scope of inventions subject to patent protection.³³

B. PLANT BREEDERS' RIGHTS

In addition to patent systems, new plant varieties are protected by a special *sui generis* PVP system popularly known as PBRs. This permits developers of new plant varieties to control their marketing and use.³⁴ Such rights are similar to patents with the exception that the right holders may only prevent third parties from commercially exploiting the protected materials.

The only pre-existing *sui generis* plant variety protection is provided in the UPOV Convention. This prompts many countries to ratify the UPOV Convention in order to secure compliance with the TRIPS Agreement. Technically, a *sui generis* system may form part of other IPR laws such as patent law. This approach exists in principle in the United States and Australia.³⁵ Alternatively, a *sui generis* system may constitute a law separate from other IPR laws, as sanctioned under the TRIPS Agreement and endorsed by India and Thailand.³⁶

In Bangladesh, the ratification of the TRIPS Agreement has brought IPRs in PGRs to the forefront, especially PBRs. At this moment, its IPR laws do not include provisions on PBRs. To fill the vacuum, its draft Plant Variety Act provides for PBRs as an alternative to patents. This is a preferable means of protection than patents, given the circumstances of the pre-TRIPS Agreement era in which farmers in Bangladesh farmed on the basis of the free sharing of knowledge.³⁷ In addition, Bangladesh opted for PBRs for a number of other reasons. In the first place, compared to patents, PBRs appear less monopolistic to most developing and least developed countries reliant on their agricultural sector. Since agriculture is a sector of primary importance in Bangladesh, the selection of PBRs in the draft Act is a preferable choice

³¹ Jayashree Watal, 'Intellectual Property and Biotechnology: Trade Interests of Developing Countries'(2000) 2(1-3) International Journal of Biotechnology 44.

³² Patents and Designs Act Section 2(8), which states: 'invention' means any manner of new manufacture and includes an improvement and an alleged invention.

³³ Syeda Rizwana Hasan and Tanim Ahmed, 'Hybrid in Bangladesh: Concerns of Farmers (Briefing Paper, No. 4, Bangladesh Environmental Lawyers' Association, Dhaka, 2005).

³⁴ UPOV Convention, Articles 3 and 19.

³⁵ Dan Leskien and Michael Flitner, 'Intellectual Property Rights and Plant Genetic Resources: Options for a *Sui Generis* System' (Issues in Genetic Resources No. 6, IPGRI, Rome, June 1997).

³⁶ Robert E Evenson, 'Intellectual Property Rights and Asian Agriculture' (2004) 1(1) Asian Journal of Agriculture and Development 15, 15–18.

³⁷ Phillipe Cullet, 'Plant Variety Protection in Africa: Towards Compliance with the TRIPS Agreement' (2001) 45(1) Journal of African Law 97, 117–122.

for protecting farmers' rights. Further, subsistence agriculture forms a large part of Bangladesh's agricultural activities. This implies a close link between agriculture and the fulfilment of the food needs of all individuals. Since PBRs provide for flexibilities to reflect countries' specific agro-economic conditions, the draft Plant Variety Act is expected to constitute an appropriate response to the country's subsistence agriculture and to fulfil its food security requirements.³⁸

C. TRADEMARKS

Trademarks can be applied to PGR-based products or services. For instance, trademarks are used to market seeds or spraying services. Trademarks are also important in most food markets. Marks help identify brand names and prevent other companies from benefiting from brand loyalty.³⁹ The TRIPS Agreement provides for the registration of trademarks for agricultural products (e.g. seeds and fertilisers).⁴⁰

In Bangladesh, under the provisions of the Trade Marks Act, trademarks can be applied to goods and services.⁴¹ In that sense, trademarks can be used to market agricultural products, especially seeds, foods or spraying services. They distinguish brand names of PGR-based products and prevent other companies from benefiting from brand loyalty.

D. GEOGRAPHICAL INDICATIONS

Geographical indications, including appellations of origin, are a form of IPRs of importance to PGRs. For the most part, geographical indications relate to PGR-based products — or items derived from these, as in the case of wines and spirits — having originated in a particular region, locality or country, where reputation or some quality or characteristic of the goods is attributable to that origin. Plant varieties developed with traditional knowledge and associated with a particular region can also be protected as geographical indications. The advantage of such protection is that it is not time-bound, unlike plant patents or PBRs. Many see this as a mechanism for raising income in agriculturally based developing economies, though the major users at present are European nations.⁴²

The provisions in the TRIPS Agreement on geographical indications maintain a dual structure of protection. In the first place, the Agreement obliges countries to use legal means to prevent the identification or presentation of a product that would mislead consumers as to its true geographical origin and to prevent acts of unfair competition in this regard. The TRIPS Agreement also calls for a higher level of protection for geographical indications for wines and spirits. The TRIPS Council is engaged in negotiations with a view to accommodating other products including PGRs.⁴³

In Bangladesh, the Trade Marks Act does not follow the TRIPS Agreement mandate for geographical indications, as it does not allow for the registration of a product with a

³⁸ *ibid.*

³⁹ Watal 34 (n 31).

⁴⁰ TRIPS Agreement, Article 15.

⁴¹ Trade Marks Act Section 2(8).

⁴² Watal 44 (n 31).

⁴³ Keith E Maskus, 'Intellectual Property Rights in Agriculture and the Interests of Asian-Pacific Economies' (2006) 29(6) *World Economy* 715.

geographical indication.⁴⁴ However, it is possible to use the common law tort of passing off⁴⁵ to protect geographical indications in the country.

E. TRADE SECRETS

Trade secrets provide protection for any information (whether patentable or not) that has economic value and is prevented from disclosure by firms through reasonable efforts. Trade secrets may be critical for biological materials that are used in production but not sold. Examples include a microorganism used to make a drug or a parent line used to make a hybrid.

The commercial advantage of trade secrets is that the inventor is not required to publish the protected information. Trade-secret protection can be used by the agricultural sector to protect hybrid plant varieties for instance. Trade secrets can be protected against third-party misappropriation through laws relating to unfair competition or to restrictive trade practices or to contract law.⁴⁶ The TRIPS Agreement also requires countries to set out laws defining the nature of unfair competition in this area with the intention of raising the costs of learning technical business secrets through permissible reverse engineering and encouraging labour mobility.⁴⁷

In Bangladesh, trade-secret protection is available under common law. However, it has never been tested. This is also the case with the protection of undisclosed test data submitted for obtaining marketing approval for new agricultural chemicals.

F. OTHER INSTRUMENTS ASSERTING INTELLECTUAL PROPERTY RIGHTS IN PLANT GENETIC RESOURCES

In addition to common IPRs, plant innovators rely on several other means to assert their IPRs. Genetic use restriction technology (GURT) is one of them. It uses terminator genes, which counter the traditional right of farmers to save seeds.⁴⁸ To counter the adverse effects that the development of such technology may have on biological diversity and on farmers' rights, the Cartagena Protocol on Biosafety⁴⁹ effectively appears to be a milestone. This international agreement aims to manage such technology risks and ensure traditional practices of seed saving.⁵⁰ There are certain specific contractual arrangements such as the bag-label

⁴⁴ Trade Marks Act Section 6.1(d).

⁴⁵ In the common law, a person who gains a reputation in connection with the use of a particular mark is entitled to prevent another from passing off goods or services as being those of the owner of the mark, if the work of the latter is likely to injure the former's reputation. See Kok Keng Lau, 'Passing off of Well-Known Trade Marks' (2010) 22 Singapore Academy of Law Journal 426.

⁴⁶ Watal 44 (n 31).

⁴⁷ Maskus 715 (n 43).

⁴⁸ Joseph Gopo and Patricia Kameri-Mbote, 'Biotechnology: A Turning Point in Development or an Opportunity that Will Be Missed' in Ricardo Melendiz-Ortiz and Vicente Sanchez (eds), *Trading in Genes: Development Perspectives on Biotechnology, Trade and Sustainability* (2005) 36-51.

⁴⁹ Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 29 January 2000, 39 ILM 1027.

⁵⁰ Gopo and Kameri-Mbote 47 (n 48).

contracts that control access to genetic resources and the use of hybrids, which ensure the protection of parent lines.⁵¹

Pursuant to Bangladesh's Seeds Ordinance and the Seeds Rules 1998⁵², even the private sector may import and market any non-notified seeds.⁵³ As a result, the importing and marketing of terminator or GURT seeds are also allowed under Section 17(3). Farmer rights groups in Bangladesh vehemently oppose such technology seeds. They seek to raise public awareness of the adverse effects of terminator technology and are pressing the Government to adopt a biosafety regulation in line with the Cartagena Protocol on Biosafety.⁵⁴

In addition, Bangladesh does not provide for (i) bag label contracts, which restrict the use of the materials by farmers and others; (ii) material transfer agreements (MTAs), which define the rights and obligations of users dealing with patented materials; or (iii) technology use agreements (TUAs), which restrict the use of plant genetic material by farmers.⁵⁵

Thus, it appears that initially countries with a significant agricultural sector adopted IPRs in PGRs, either through the existing IPR framework or by amending existing IP laws. In Bangladesh, the Patents and Designs Act and the Trade Marks Act already provided for patents and trademarks for PGRs. However, plant breeders' and farmers' rights were not protected until the TRIPS Agreement entered into force.

IV. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: IMPLICATIONS AND CHALLENGES FOR FOOD SECURITY

At present, intellectual property rights in PGRs have extensive implications for food security because of the linkage between intellectual property and tradable biological resources beginning in the 1980s, and the subsequent institutionalization of IPR protection in the TRIPS Agreement. Pursuant to a crucial and controversial provision in the TRIPS Agreement, WTO Members are obliged to extend IPR protection to plant varieties. This gives rise to the obligation to grant State-supported monopolies on the commercial distribution of scientifically engineered seeds. For the biotech industry, the institution of such protection through PBRs offers the prospect of high yields and encourages commercial breeders, who decades earlier usurped seed innovation from farmers, to invest more in this sector.⁵⁶ However, for many farmers in developing and least developed countries, the expansion of IPRs to include plant varieties marks a departure from the traditional practice of reusing and trading seeds collected from their own fields and strips away their comparative advantage in reproducing seeds. Thus, it poses a threat to their traditional way of life: traditional varieties are pushed aside in favour of purchasing new seeds for every crop.⁵⁷ Many are also concerned about the implications of the

⁵¹ Geertrui Van Overwalle, 'Patent Protection for Plants: A Comparison of American and European Approaches' (1999) 39 IDEA 143.

⁵² 'The Seed Rules, 1998' <<http://www.sca.gov.bd/seedrul.html>> 10 July 2010.

⁵³ M B Dastagiri, 'The Seed Laws of Asian Countries under the WTO and IPR Regime: A Paradigm Shift' (2008) 37(4) Outlook on Agriculture 297.

⁵⁴ See Farhad Mazhar, 'Genetic Resources Conservation and Utilization: The Role of the Farming Communities' (Presented at the National Workshop on Plant Genetic Resources organized by the National Committee on Plant Genetic Resources, BARC, Bangladesh, 26-29 August 1997).

⁵⁵ *ibid.*

⁵⁶ Vandana Shiva, *Biopiracy: The Plunder of Nature and Knowledge* (1997) 1-6.

⁵⁷ Philip M Nicols, 'Trade without Values' (1996) 90 Northwest U L Rev 658.

shift of agricultural research from public to private funding often dominated by multinational companies.⁵⁸

A. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: FOSTERING
COMMERCIALIZATION

The TRIPS Agreement generally fosters the commercialization of PGRs, resulting in laboratory-produced substitutes displacing traditional agriculture-based products. For TRIPS Agreement proponents, the commercialization of PGRs is needed to secure investments, so that more companies become involved in agricultural research and develop technologies specifically designed to enhance food security through higher yields, enhanced disease resistance and greater drought tolerance, making the seeds market competitive in price.⁵⁹ However, this argument runs counter to the commercializing of a number of major agricultural inputs, including seeds and herbicides, and destabilizes local food economies, with far-reaching effects on food security in developing and least developed countries.⁶⁰

Indeed, the commercialization of PGRs is a shift away from local farmer-centred agricultural practices towards ones that are mediated heavily by corporate (often foreign) profiteering interests. Corporate control over farm-saved seeds has implications for local food access and this has led many to link farmers' rights with broader human rights issues, including food sovereignty rights and the right to food.⁶¹ This is because the autonomy of individual farmers, the health of communities and the very functioning of the seed distribution system and the conservation it enables are all tied to farm-saved seeds. From these perspectives, private rights in PGRs, which shift farmer-centred agricultural practices towards those that serve corporate interests, are seen as raising the price of patented seeds compared to other seeds, thus impacting food security.⁶²

B. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: STRIPPING OFF COMPARATIVE
ADVANTAGE

In comparison with most fields of industrial innovation, innovation in plant breeding results in a self-reproducing organism. Thus, imitation of the agricultural product is relatively easy and comparatively advantageous to incorporate into farming operations. With the use of self-reproducing organisms and biotechnology, both industrialized and developing countries, such as the United States, Europe, China, India, Brazil, and Thailand have dramatically increased their agricultural production of cash crops including soybeans, peas, cereals and

⁵⁸ Craig Borowiak, 'Farmers' Rights: Intellectual Property Regimes and the Struggle over Seeds'(2004) 32(4) *Politics Society* 511, 512.

⁵⁹ P O Goldsmith, D K Nauriyal and W Peng, 'Seed Biotechnology, Intellectual Property and Agricultural Competitiveness' in Jay P Kesan (ed), *Agricultural Biotechnology and Intellectual Property: Seeds of Change* (2007) 31.

⁶⁰ Fred Magdoff and Brian Tokar, 'Agriculture and Food in Crisis: An Overview' 61(3) *Monthly Review* (July 2009) <<http://www.monthlyreview.org/090701magdoff-tokar.php>> 25 March 2010.

⁶¹ Hans Morten Haugen, Manuel Ruiz Muller and Savita Mullapudi Narasimhan, 'Food Security and Intellectual Property Rights: Finding the Linkages' in Tzen Wong and Graham Dutfield (eds), *Intellectual Property and Human Development: Current Trends and Future Scenerarios* (2011) 123-124.

⁶² Borowiak, above n 58, 522–530.

corn.⁶³ In addition, developing and least developed countries use such agricultural comparative advantage freely in order to reduce staple food prices.⁶⁴ Intellectual property rights that are introduced in PGRs through the TRIPS Agreement are likely to dismantle the comparative advantage, and force farmers under contract to repurchase seeds every year, which prohibits them from saving seeds and selling them to other producers.⁶⁵

In Bangladesh, PVP, as projected in the draft Plant Variety Act, supposedly ensures PBRs by removing farmers' comparative advantage in exchanging or selling seeds and requiring royalty payments each time seeds are planted. In addition, it requires the Patents and Designs Act to incorporate the patenting of biotechnological products or processes. This is expected to result in higher prices for food, seeds, agricultural chemicals, herbicides and other agro-products made from patented biotechnology, as is already the case in TRIPS-compliant developing countries such as India and Thailand.⁶⁶

C. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: CREATION OF PRIVATE MONOPOLY RIGHTS

By applying IPRs to PGRs, the TRIPS Agreement protects the interests of private capital. However, private property rights over genetic resources result in monopolies. Such privatization of PGRs has far-reaching environmental and social consequences, including food insecurity, because the process of commercialization affects and undermines other forms of use and alternative ways of shaping the societal relationships with nature.⁶⁷ In addition, private property rights and the resulting privatization and monopolization of genetic resources threaten the principle of the free exchange of seeds, which is essential for the development of agriculture and the creation of plant genetic diversity. This process is often criticized as biopiracy, which signifies a problem of illegal appropriation as well as the monopolization of resources through IPR protection.⁶⁸

Under the Patents and Designs Act in force in Bangladesh, biotechnological products or processes are patentable, since they fall within the broad definition of invention. In addition, in the draft Plant Variety Act, the PVP is in line with the UPOV Convention, as required by the United States-Bangladesh and the European Union-Bangladesh bilateral treaties. All such requirements result in genetic resources becoming private properties in Bangladesh. This means that foodstuffs, seeds, agricultural chemicals, herbicides and other agro-products derived from biotechnology are likely to be in private hands, especially in multinational companies through

⁶³ Carl E Pray and Anwar Naseem, 'Supplying Crop Biotechnology to the Poor: Opportunities and Constraints' (2007) 43(1) *Journal of Development Studies* 192.

⁶⁴ Ryan Cardwell and William A Kerr, 'Protecting Biotechnology IPRs in Developing Countries: Simple Analytics of a Levy Solution' (2008) 59(2) *Journal of Agricultural Economics* 217.

⁶⁵ David Lea, 'The Expansion and Restructuring of Intellectual Property and Its Implications for the Developing World' (2008) 11(1) *Ethical Theory and Moral Practice* 37.

⁶⁶ U K Deb, M J H Javed, and M A Razzaque, 'Plant Genetic Resources and Farmers' Rights: The Case of Bangladesh' in Ratnakar Adhikari and Kamallesh Adhikari (eds), *Farmers' Rights to Livelihood in the Hindu Kush-Himalayas* (2003) 68–83.

⁶⁷ Plahe 1197–98 (n 13).

⁶⁸ Christoph Görg and Ulrich Brand, 'Contested Regimes in the International Political Economy: Global Regulation of Genetic Resources and the Internationalization of the State' (2006) 6(4) *Global Environmental Politics* 101, 110.

patents or other IPRs. This encourages multinational companies to take the opportunity to monopolize the market and charge higher prices for vital products including foodstuffs.⁶⁹

D. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: SHIFTING PUBLIC-FUNDED RESEARCH TO PRIVATELY FUNDED RESEARCH

Before the TRIPS Agreement came into force, most new plant varieties in openly pollinated plants were developed by publicly funded research programmes or institutes, commercialized on a concessionary basis and often given to farmers at nominal or no charge.⁷⁰ At that time, it was believed that private firms could not capture sufficient returns on investments in R&D in this area and as such, governments intervened to fund research to correct this market failure by different forms of government subsidy and support.⁷¹ Under the TRIPS Agreement, the government's role of promoting agricultural research and supplying seeds at nominal costs has been scaled back.⁷² At present, agriculture in developing and least developed countries fails to obtain government agricultural subsidies and other benefits for farmers. In addition, those government agencies involved in agricultural research concentrate on biotechnology and are in the process of patenting plant genetic materials and seeds. Such cutting of subsidies and patenting of PGRs are likely to have adverse effects on food security.⁷³

Furthermore, the focus on the biotechnology industry appears to be a serious competition issue.⁷⁴ This is because food security is at risk since the technologies are overpriced to the exclusion of small farmers and there is no alternative source of new technologies, particularly from the public sector.⁷⁵ In Bangladesh, agriculture has remained a key source of livelihood for farmers for centuries. Hence, in common with other least developed countries, Bangladesh concentrates on agricultural production and offers agricultural subsidies, even from the foreign aid that forms a substantial part of the national budget.⁷⁶ However, currently the various donors do not encourage the country to invest in agriculture, which is likely to affect food security.

⁶⁹ See Farhad Mazhar, 'Nayakrishi Experience: Addressing Food Crisis through Biodiversity-Based Ecological Production Systems' (Presented at Policy Dialogue Series organized by UNDP, Dhaka, 8 July 2008).

⁷⁰ Carl E Pray and Umali-Deininger, 'The Private Sector in Agricultural Research Systems: Will it Fill the Gap?' (1998) 26(6) World Development 1127.

⁷¹ James D Gaisford, Jill E Hobbs and William A Kerr, 'Will the TRIPS Agreement Foster Appropriate Biotechnologies for Developing Countries?' (2007) 58(2) Journal of Agricultural Economics 199.

⁷² Cullet 97 (n 37).

⁷³ *ibid.*

⁷⁴ *ibid.*

⁷⁵ *ibid.*

⁷⁶ Kanchana Kariyawasam, 'Access to Biological Resources and Benefit Sharing: Exploring a Regional Mechanism to Implement the Convention on Biological Diversity in SAARC Countries' (2007) European Intellectual Property Review 325.

E. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: MISBALANCING BIO-DIVERSITY

In order to maximize profits, the TRIPS Agreement also allows seed companies to develop bioengineered varieties dependent upon agrochemicals, including fertilisers, herbicides and insecticides. This induces farmers to buy such inputs and pay heavy royalties to multinational companies and various taxes include value-added tax (VAT) to the government.⁷⁷ In addition, in order to secure private rights, the TRIPS Agreement encourages monocropping, which creates the possibility of epidemics because genetically uniform crops are extremely vulnerable to diseases. Perhaps the most striking example is the corn blight, which struck the United States in 1970; similar epidemics continue to occur in developing countries.⁷⁸ In addition, the increasing dependence of small farmers on the biotechnology industry, which the TRIPS Agreement fosters, raises fears that, in the future, small farmers might have a low number of patent-free seed cultivars at their disposal, which will prove less efficient than patented seeds and produce smaller yields.⁷⁹

Furthermore, alongside the shift to agricultural biotechnology research and the rise and expansion of IPRs in PGRs, there has been a redirection of research. The focus is on crops that will earn high profits with concomitant neglect of unprofitable subsistence crops.⁸⁰ Further, the shift from agricultural to industry research increasingly edges out subsistence farmers, who rely on seed saving and maintain and develop farmer landraces. This results in the rapid disappearance of *in-situ* genetic conservation methods and related farming knowledge.⁸¹

F. THE TRIPS AGREEMENT AND PLANT GENETIC RESOURCES: ACCESS TO AND BENEFIT SHARING OF SUCH RESOURCES

The recognition of farmers' rights in different international instruments, including the Convention on Biological Diversity forms the basis of efforts to facilitate farmers' access and benefit-sharing of PGRs as monetary and non-monetary benefits in the form of access fees, up-front payments, royalties, licence fees and the like. However, although the TRIPS Agreement was adopted after the Convention on Biological Diversity, it makes no reference to the Convention on Biological Diversity. Agriculture-reliant developing countries are beginning to include an access and benefit-sharing provision in most of their biodiversity legislation. Bangladesh's draft Plant Variety Act and the draft Biodiversity Act include access and benefit sharing.⁸²

V. NEW STRATEGIES NEEDED

In the development of national and international frameworks for plant variety innovations, policymakers need to be aware of the diverse perspectives surrounding the use and

⁷⁷ Lea 37 (n 65).

⁷⁸ R. Kennedy, 'International Conflicts over Plant Genetic Resources: Future Developments' (2006) 20(1) *Tul Envtl L J* 1, 2–5.

⁷⁹ Christoph Baumgartner, 'Exclusion by Inclusion? On Difficulties with Regard to an Effective Ethical Assessment of Patenting in the Field of Agricultural Biotechnology' (2006) 19 *Journal of Agricultural and Environmental Ethics* 521, 528–530.

⁸⁰ Pray and Naseem 192 (n 63).

⁸¹ Maskus 715 (n 43).

⁸² Draft Biodiversity Act Section 4 and 18; Draft Plant Variety Act Section 10, 11 and 22.

breeding of plants.⁸³ With this background in mind, an enhanced framework for least developed countries such as Bangladesh requires (a) reasonable national regulatory systems; and (b) affiliation with an international coalition to exert pressure to ensure that international agreements, including those concerned with trade, are responsive to food security.

A. FRAMING NATIONAL REGULATORY SYSTEMS

As part of the formation of national regulatory systems, a least developed country such as Bangladesh is obliged either to introduce patents for new plant varieties or have an effective *sui generis* law to protect IPRs in PGRs by 1 July 2013. In addition, the protection provided to trademarks, geographical indications and trade secrets needs to be enhanced, in order to comply with the requirements of the TRIPS Agreement.

1. Introducing patents for new plant varieties by redefining 'Invention'

The definition of the term 'invention' acts as a yardstick for identifying patentable plant varieties products or processes. The TRIPS Agreement does not define the term invention and leaves it to Member countries to define. From such a standpoint, the term 'invention' must be of a technical character to the extent that it must relate to a technical field, concern a technical problem, and possess technical features in terms of the matter for which the invention is sought.⁸⁴ This interpretation is confirmed in jurisprudence with the comment that an invention must have a technical character, provide a technical contribution to the art and solve a technical problem.⁸⁵ The same approach is taken in legal doctrine throughout the Western world; such doctrine states that inventions are creations in the technical field containing a technical teaching.⁸⁶ Therefore, in the context of a patentable invention, knowledge is mainly considered to be technical knowledge.⁸⁷

Despite such instances and discretions, the Patents and Designs Act in Bangladesh provides a broad and vague definition of the term invention: any manner of new manufacture and includes an improvement and an alleged invention.⁸⁸ According to this definition, new plants or plant varieties are patentable inventions.

To avoid problems of access arising from the monopoly conferred by a patent, Bangladesh, a least developed country reliant on its agricultural sector, has the option to exclude plant varieties from patentable inventions and switch to *sui generis* PVP. As another option, Bangladesh may redefine the term 'invention'.

⁸³ Daniel Robinson, 'Sui Generis Plant Variety Protection Systems: Liability Rules and Non-UPOV Systems of Protection' (2008) 3(10) JIPLP 659, 664–665.

⁸⁴ Uwe Fitzer, 'Laws and Regulations for the Protection of Biotechnological Inventions' in Jose Luis Barredo (ed), *Microbial Processes and Products* (2005) 465–494.

⁸⁵ Van Overwalle 585 (n 51).

⁸⁶ *ibid.*

⁸⁷ *ibid* 587.

⁸⁸ Patents and Designs Act Section 2(8).

Currently, Bangladesh's draft Patent Act 2013 (draft Patent Act)⁸⁹ is the subject of extensive discussion. It does not exclude plant varieties from patentability, but seeks to redefine invention. It defines the term 'invention' in imprecise and long-winded wording. It includes any new, sufficiently inventive and useful art, process, method or manner of manufacture, machine, apparatus or other article or substance produced by manufacture and including any new, sufficiently inventive and useful improvement thereof, and an alleged invention.⁹⁰ However, the wording 'sufficiently inventive and useful improvement' is capable of encompassing all substances that exist in nature that are discovered or the subject of bioprospecting.

2. Geographical indications

In Bangladesh there are many agricultural products and species with geographical indications. Such products include plant varieties, medicinal plants or traditional knowledge.⁹¹ The protection of IPRs in the form of geographical indications may be claimed for such agricultural products under the common law tort of passing off. However, this common law tort is not used widely in Bangladesh and hence requires legislation or an amendment to Section 6.1(d) of its Trade Marks Act, which can provide geographical protection to its own geographical indications or those of trading partners on the basis of reciprocity. It may also be possible for the holders of traditional knowledge in goods produced and sold using geographical indications to register and protect their knowledge under such law. India enacted such an Act under the name of the Geographical Indication of Goods (Registration and Protection) Act, 1999, in order to provide the higher level of absolute protection to geographical indications irrespective of origin.⁹²

3. Trade secrets

Protection of trade secrets is available in Bangladesh under the common law tort of passing off. However, owing to its non-popularity and difficulty of proving the claim, Bangladesh needs to introduce the legal basis to extend such protection to cover third parties who directly or indirectly disclose a trade secret. Bangladesh also needs legislation to protect undisclosed test data submitted to the DPDT for obtaining marketing approvals for new agricultural chemicals, fertilisers, herbicides, and pesticides.

4. Plant variety protection (plant breeders' rights)

Intellectual property right regimes such as PVP are established to help achieve societal goals. Policymakers in least developing countries such as Bangladesh should therefore view PVP as a tool to be adapted and used for achieving goals of national agricultural development, rather than an obligation imposed by industrialized countries.⁹³

⁸⁹ Patent Law, 2007 (Department of Patents, Designs and Trademarks, Ministry of Industries, Government of the People's Republic of Bangladesh 10 January 2007) [hereinafter draft Patent Act 2007].

⁹⁰ Draft Patent Act 2007 Section 2(14).

⁹¹ Mahfuz Ullah, *Intellectual Property Rights and Bangladesh* (2002) 61–62.

⁹² Siriginidi Subba Rao, 'Indigenous Knowledge Organization: An Indian Scenario' (2006) 26 International Journal of Information Management 224.

⁹³ Robert Tripp, Niels Louwaars and Derek Eaton, 'Plant Variety Protection in Developing Countries: A Report from the Field' (2007) 32 Food Policy 354.

In view of such an understanding, least developed countries such as Bangladesh can find a solution proposed in the context of the interpretative resolutions to the IUPGRFA by recognizing concurrently and equally the rights of farmers and the rights of commercial breeders.⁹⁴ Indeed, the TRIPS Agreement allows developing nations to construe such an option with the use of the term '*sui generis*' since it provides the discretion to determine the type and design of plant protection regime. It enables developing countries to promote innovative plant breeding, while preserving national objectives such as the protection of biodiversity, traditional farming, and food security.

However, Bangladesh's draft Plant Variety Act that strengthens PBRs with the expectation that it will promote trade in Bangladesh does not define farmers as breeders. The sidelining of farmers through overprotection would affect trade and could lead to food security issues in Bangladesh. Therefore, while strengthening PBRs, incorporating farmers as breeders would preserve farmers' traditional farming practices, farmers' innovations from selection and maintaining of seeds, farmers' traditional conservation of biodiversity and farmers' access to benefit-sharing mechanisms. Thus, national priorities in agriculture-focused Bangladesh would be met. This would also balance the interests of the variety of actors (especially commercial breeders and farmers) involved in agricultural trade. For example, such a strategy is consistent with the interests of commercial breeders and farmers in India and Thailand. They promote the seed industry by encouraging seed trade, boosting exports and protecting seed quality.⁹⁵

In order to benefit from defining farmers as breeders in Bangladesh, a review of the existing Seeds Ordinance, the Seeds Rules and the Seeds Policy⁹⁶ is necessary, along with the insertion of provisions therein to regulate the sale, import and export of seeds, as the TRIPS Agreement does not require governments to regulate seed trade. To that end, the existing seeds framework needs to be harmonized with the draft Plant Variety Act and the Biodiversity Act. This will effectively nullify any compromise in the rights of farmers to save, resow or exchange seeds. It will also effectively put an end to the registration and sale of an existing variety or a farmers' variety, or the authority to issue compulsory licensing to control prices and regulate the supply of seeds under public interest conditions.

5. Limiting patents and plant breeders' rights through compulsory licensing

Limiting patents and plant breeders' rights can play a role in reducing and minimizing food and livelihood security concerns in a least developing country such as Bangladesh. The limitation on patents and PBRs can be imposed through compulsory licensing. The draft Plant Variety Act and the draft Patent Act should introduce compulsory licensing of patents and PBR-protected products: (a) where circumstances of national security concerns exist; (b) where such are required for the maintenance of nutritional stability and prevention of monopoly; (c) where purposes of other public interests subsist; and (d) where there has been no sale of the propagating material of the new plant variety or the sale thereof is of an insufficient quantity for the needs of the people within the country or the price thereof is overpriced.

⁹⁴ Cullet 117–22 (n 37).

⁹⁵ See Srividhya Ragavan and Jamie Mayer O'shields, 'Genetic Use Restriction Technologies: Do the Potential Environmental Harms Outweigh the Economic Benefits?' (2007) 20 Geo Intl Env'tl L Rev 97.

⁹⁶ The National Seed Policy' <<http://www.sca.gov.bd/seedpol.html>> 10 July 2010.

6. Access to and benefit sharing of plant genetic resources

Access to and benefit sharing of PGRs are the key elements in addressing major food and livelihood security concerns in a least developed country such as Bangladesh. To this end, farmers should be allowed to choose from a wide range of germplasm and samples that would be best suited to their present needs and have access to them. They should also have the right to use their own seeds. They should be free to improve germplasm (varieties and breeds) with their own materials and with those introduced from other sources. Farming communities should be free to sell the harvested commodity, to save seed (on a non-commercial basis) for replanting and to share and exchange seeds. Farmer-to-farmer seed exchange and the sale of seed by farmers should be allowed; however, a farmer should not be entitled to such rights in cases where the sale is for the purpose of reproduction under a commercial marketing arrangement. There should also be a broad access framework, either preventing the biopiracy of PGRs or their removal from the country by local agents through local access, or the privatization by foreigners for profiteering purposes. It could also allow dissemination at the lowest possible cost to all farmers if the biopirated variety is a staple food crop.⁹⁷

B. RATCHETING UP INTERNATIONAL COALITION

A *sui generis* plant variety protection system, as set out in the review of the TRIPS Agreement, should not be developed in isolation. Given that plant varieties are only a subset of biological resources, all WTO Members and countries that are parties to the Convention on Biological Diversity should work together to draft a single all encompassing law. This law should recognize farmers as breeders and ensure their rights, taking into account the requirements of the Convention on Biological Diversity and the TRIPS Agreement.

VI. CONCLUDING REMARKS

On the one hand, IPRs in PGRs transform agricultural goods or services from common heritage to private property by restricting their uses. As a consequence, IPRs, as a tool to secure the investment of private individuals in PGRs, cause hardship in developing and least developed countries due to elevated prices of agricultural products in the guise of monopoly power. This forces farmers into dependence on engineered seeds and other agricultural inputs. These factors are linked to insecure access to food.

On the other hand, the TRIPS Agreement provides some exceptions and flexibilities, including the discretion to define patentable inventions, to choose between patents and PBRs, and to provide for compulsory licensing. This study recommends that Bangladesh align itself with other least developed countries, with a view to ensuring that the review of Article 27.3(b) of the TRIPS Agreement favours their agricultural needs. Furthermore, it encourages least developed countries to take advantage of the flexibilities provided in TRIPS, in order to safeguard their food sector and to protect farmers' rights. Such policy decisions economically affect poor farmers as well as the food sector in Bangladesh. These decisions also have the potential to influence IPR policies in other least developed countries.

With this end in view, this study shows a clear need for public policy interventions to promote the utilization and the flow of PGRs. It also urges Bangladesh to frame legislation to

⁹⁷ Nirmal Sengupta, 'Traditional Knowledge and Intellectual Property Right' in Paramita Dasgupta (ed), *The WTO at the Crossroads* (2009) 100–115.

suit its agricultural development needs, fulfil the TRIPS Agreement mandates and respect other commitments arising from the Convention on Biological Diversity and the ITPGRFA. This will promote farmers' rights, ultimately ensuring access to food.

3 A BRIEF NOTE CONCERNING PIPELINE PATENTS IN BRAZIL

* Pedro Marcos Nunes Barbosa

ABSTRACT

Until 1996, when Brazil changed its Industrial Property Law, there was no patent protection for pharmaceutical and food inventions and only process patents (and not product patents) existed for chemical inventions. To comply with the TRIPS Agreement, new Brazilian intellectual property laws extended patent protection to most areas of technology. A special and temporary provision was included in the law, the so-called pipeline system. By virtue of this provision, previously published inventions relating to pharmaceuticals and food were patentable in Brazil, provided that, *inter alia*, the resulting product had not entered the market. This controversial TRIPS-plus provision, which generated over 1,100 patents in Brazil, is now the subject of a constitutionality claim before the Brazilian Supreme Federal Court filed by the Attorney General.

Keywords: *Brazilian pipeline patents, access to health, unconstitutionality*

I. INTRODUCTION

This paper focuses on the controversial system of pipeline patents in Brazil and reviews the relevant provisions of the Industrial Property Law in force. Before proceeding with an analysis of the pipeline system, however, it provides a short historical overview of Brazilian industrial property laws. It further notes the mandatory changes in Brazilian Law standards in order to comply with international obligations. One of the innovations contemplated in the 1996 Industrial Property Law revoking the former Brazilian 1971 Industrial Property Code (Law 5772/71) was the establishment of the pipeline system.

As this paper demonstrates, the escalating costs of purchasing pharmaceutical drugs negatively impacted on the country's health budget. The costs of these drugs had risen because the subject matter of most pipeline patents was pharmaceutical products. Furthermore, this paper also explores the standpoint of competitors and consumers on the pipeline system; the competitors have a legitimate expectation of exploring the public domain technology market, and the consumers have the possibility of buying newly patented medicines at a lower price.

Amid the social conflicts of interests among competitors, consumers and private right holders stemming from the pipeline system, especially those concerning the effects of the binding provisions of the Brazilian Constitution, in 2009 the Federal Attorney General filed a constitutionality claim against the pertinent provision of the 1996 Industrial Property Law before the Brazilian Supreme Federal Court. For the purposes of this paper, the main arguments used by the plaintiff and the *amici curiae* briefs filed are described.

* **Mr Pedro Marcos Nunes Barbosa** (Brazil) is a doctorate student in Commercial Law at the University of São Paulo (USP), Brazil; he gained his Master's degree in Civil Law from the State University of Rio de Janeiro (UERJ), Brazil; he has studied Intellectual Property Law at the Catholic University of Rio de Janeiro (PUC-RIO), Brazil; in addition, he has undertaken a graduate course (extension) in Philosophy at the Rio de Janeiro São Bento School. He is Professor of Civil Law (obligations, contracts and properties) and Intellectual Property for bachelor and graduate programmes at the Catholic University of Rio de Janeiro. He is Coordinator of the Graduate Programme in Intellectual Property Law at the Catholic University of Rio de Janeiro. He is also Cultural Director of the Institute of Brazilian Lawyers (2012–2014) and Head Intellectual Property litigator with Denis Borges Barbosa Attorneys at Law <www.nbb.com.br>.

In the concluding sections of this paper, a summary of the arguments developed in the previous sections are presented, demonstrating the unconstitutionality of the pipeline system in Brazil and its failure to fulfil principles mandatory to the public interests.

II. A SHORT HISTORICAL OVERVIEW OF BRAZILIAN INDUSTRIAL PROPERTY LAW

Brazil has a longstanding tradition of intellectual property protection. In fact, the first pertinent national law was enacted in 1809 (the so called *Alvará*) by the King of Portugal and Brazil, King D. John VI. Its purpose was to regulate external trade, especially with the British, to stimulate foreign investments in Brazil, and to grant patents to subject matter that succeeded in proving local innovation.

Notwithstanding the contemporaneous view of international novelty standards, intellectual property protection in Brazil evolved more as a means of attracting industries to the country, rather than promoting the invention of novel subject matter. A new invention not previously worked in the country, even though the respective invention was already known or worked elsewhere, was deemed novel under Brazilian law.

Fifteen years later, the 1824 Constitution¹ included a patent protection norm in its Bill of Rights list; some provisions to that end remained in all the following six Constitutions (1891², 1934³, 1946⁴, 1967⁵ and 1969⁶) and are still mentioned in the fundamental rights embodied in the 1988 Constitution, which is still in effect.⁷ Even though the wording regarding patent protection varied in the provisions of these Constitutions, there was always a property approach towards technological intangible assets.⁸

¹ Article 179, XXVI. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/constituicao24.htm> accessed 18 June 2012.

² Article 72, §25. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/constituicao91.htm> accessed 19 June 2012.

³ Article 113, §18. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/constituicao34.htm> accessed 19 June 2012.

⁴ Article 141, §17. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/constitui%C3%A7ao46.htm> accessed 19 June 2012.

⁵ Article 150, §24. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/Constitui%C3%A7ao67.htm> accessed 19 June 2012.

⁶ Article 153, §24 has the same law text as the previous 1967 Constitution. Available online at:

<http://www.planalto.gov.br/ccivil_03/constituicao/emendas/emc_anterior1988/emc01-69.htm> accessed 9 June 2012.

⁷ Free translation of former Article 5, XXIX: 'The Law will guarantee to the authors of industrial inventions the temporary privilege for its use, as well as the protection to the industrial creation, the property of trademarks, the trade names and other distinctive signs, considering the social interest and the technological and economic development of the Country'.

<http://www.planalto.gov.br/ccivil_03/constituicao/constitui%C3%A7ao.htm> accessed 19 June 2012.

⁸ 'Not only goods, or tangible assets, but also intangible assets can be classified as being of the nature of [property], for example: the commercial point, the copyright or the rights of the owner of an invention. On this view, property is conceived of as an extension and variety of aspects that could not correspond to those of Roman Law; in other words, there is no longer [the notion of] property, but *properties*, because each category of goods will support a private form of appropriation: the plasticity of property law in infinite', translated from Oscar Barreto Filho, *Teoria do Estabelecimento Comercial – Fundo do Comércio ou Fazenda Mercantil* (Saraiva 1988).

Brazil was a founding member and active contributor to portions of the Paris Convention of 1883⁹, which was elaborated on international standards of intellectual property law. Furthermore, Brazil acceded to the Berne Convention on 6 February 1922¹⁰, signed the Patent Cooperation Treaty on 19 June 1970, and became a Member of the World Trade Organization on 1 January 1995.¹¹

Although Brazil has always fully recognized the intellectual property system, in light of the social impact of exclusive patent rights, it excluded from 1945 some fields of technology from patent protection protected in most OECD countries at the time. In fact, the Brazilian Industrial Property Code of 1945 (and the ensuing Laws up to 1996) banned the issuance of all food and pharmaceutical patents, along with chemical product patents; this exclusion was entirely compatible with the treaties then in force.¹²

Therefore, publications of a patent specification, for instance made abroad or in Brazil, for food and pharmaceutical inventions, turned the pertinent teachings into a part of the Brazilian public domain. The purpose of Brazil's public policy was to protect its undeveloped industries from international competition, and to avoid the establishment of artificial barriers that could minimize access to products or services deemed necessary for the development of the Brazilian economy and society.

The refusal to grant patent protection in health and food-sensitive areas, in addition to being compatible with the international treaties in force, was also deemed compliant with the Brazilian Constitution¹³ (and its internal technological development purposes), which guarantees minimum standards of State protection of fundamental rights.

To conclude, it is necessary to consider the historical efforts of patent protection from both a national and international perspective. Such protection has acted as an instrument to promote innovation in Brazilian law, since it simultaneously complies with the social, technological and economic development targets of the Constitution.

⁹Information available online at:
<http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2>
accessed 18 June 2012.

¹⁰Information available online at:
<http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=15>
accessed 18 June 2012.

¹¹Information available online at:
<http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm> accessed 19 June 2012.

¹² Regarding the obligations concerning the Paris Convention (Article 2(1)), as Brazil accorded equal treatment to both nationals and foreigners concerning the prohibition of patent granting in those niches, there was no violation in the adoption of the aforementioned public policy.

¹³ Free translation of Article 196 of the Constitution in force: 'Health is a right of all and a duty of the State and shall be guaranteed by means of social and economic politics aimed at reducing the risk of illness and at universal and equal access to actions and services for its promotion, protection and recovery'. Even under the previous 1967 Constitution, the Supreme Court declared constitutional the refusal of pharmaceutical patents (Decision of April 13, 1982, RE 94.468-1-RJ).

III. THE TRIPS AGREEMENT AND THE NEW INTELLECTUAL PROPERTY LAW IN BRAZIL

As usually noted by legal commentators, most developing countries had a lower level of intellectual property protection before the entry into force of the WTO Agreement, most probably because of their own internal political welfare standards. These economically underprivileged countries agreed to expand intellectual property rights in their struggling economies. Bilateral and regional trade agreements, in which other parties subjected less powerful governments to significant political and financial pressure, further enhanced intellectual property protection after the WTO Agreement entered into force.

According to developed countries, in what could be deemed a self-centered view of innovation and intellectual property systems, the gap between the average level of intellectual property protection prevailing in the highest stage capitalist economies and the optimum level of protection for those countries still seeking to create a minimum national structure was incompatible with the promotion of what developed countries considered fair trade.

The huge consumer market of the developed countries was attractive to countries in other stages of economic development, which had an adequate productive scale ability (lower wages, cheaper materials, more basic assets quantity etc.). Developing countries wanted to guarantee reasonable tariffs on their exported goods. In the short term, it was argued that conceding to a level of intellectual property protection that could be deemed in excess of the optimal level of protection would result in greater access to the OECD markets.

Therefore, hard TRIPS Agreement negotiations were 'necessary' for the establishment of a multilateral system inclusive of a generally higher¹⁴ standard of intellectual property protection¹⁵ for developing and least developed countries. To achieve such a system, developed countries used increased access to their huge consumer markets as a bargaining tool.¹⁶ A sad note in this context is that the design of the WTO multilateral trading system was perceived to avoid and dilute unilateral pressure, especially on developing countries.¹⁷

¹⁴ '[E]xperience shows that emerging economies are, in fact, greatly challenged by the costs and hardship associated with adjusting their development strategies to new legal realities and that successive rounds of negotiations tend to reduce the flexibilities available for nations to tailor intellectual property law to their own needs' in Jerome H. Reichman and Rochelle Cooper Dreyfuss, 'Harmonization Without Consensus: Critical Reflections on Drafting a Substantive Patent Law Treaty' [2007] 57 Duke L J 85.

¹⁵ 'Serving as key leaders of the in the developing world, both Brazil and India had been vocal about their opposition to the inclusion of new substantive intellectual property norms in the GATT'. in Peter K. Yu, 'The Objectives and Principles of the TRIPS Agreement' [2009] 46 Houston L Rev 79.

¹⁶ 'Developing country Parties to the GATT, therefore, had not committed themselves to accept rules that expanded IP protection. What happened then between Punta del Este (1986) and Montreal, where the Mid-Term Review Decision was adopted, in 1989, and in which the mandate for negotiators to conclude an Agreement covering standards became also unequivocally mandatory? (...) The answer is that developing country Parties to GATT understood (or were led to understand) in the meantime that a future Agreement on TRIPS would protect them against unilateral sanctions by developed country partners because of their failure to protect the IP rights of developed countries' citizens' in Nuno Pires de Carvalho, *The TRIPS Regime of Patent Rights* (Kluwer Law International 2002).

¹⁷ 'The Understanding leaves no doubt that it is intended to strengthen the multilateral trading system. In an article clearly signalling this intent, entitled 'Strengthening of the Multilateral System', the ministers impose upon the member states a requirement to seek 'recourse to, and abide by, the rules and procedures of this Understanding', when seeking redress of a 'violation of obligations or other

The entry into force of the TRIPS Agreement with its new basic mandatory standards¹⁸ obliged legislators throughout the globe to produce new internal norms. Owing to the natural need to treat unequal societies in a fair manner¹⁹, the TRIPS Agreement provided flexibilities for the application of the new rules, in particular for developing countries. One important example was time application differentiation.

Such flexibilities included a longer period of time for incorporating most TRIPS Agreement obligations: for developing country Members and those in transition, a period of five years until 1 January 2000; and for developed country Members, most of which had legislation already in accordance with the TRIPS Agreement, a one-year period. A ten-year deadline was also given for those developing countries that did not offer protection for specific areas of technology such as pharmaceuticals.

Therefore, although Brazil had the right to delay the implementation of the TRIPS Agreement up to 1 January 2000, and certain provisions (protection of pharmaceutical and agrochemical subject matter, pursuant to Articles 65.1, 65.2 and 65.4 of the TRIPS Agreement) until 2005, it voluntarily enacted the 1996 Industrial Property Law before the mandatory deadline. In anticipation, the Brazilian Government abdicated a substantial opportunity to invest in its local welfare, especially in the frailest technology sectors.

As a matter of fact, before 2000 (the general deadline for developing countries to implement the TRIPS Agreement), Brazil approved its plant varieties law (9.456/97), its software law (9.609/98), and its new provisions on authors' right (9.610/98). Just after the 2000 deadline, Brazil passed an unrequired data protection exclusivity law (10.503/2002) to complete its intellectual property adaptation 'package'.

Under the new 1996 Industrial Property Law, the pipeline system enabled a new claim by the right holder to an invention that included content in the public domain. The pipeline system was therefore a voluntarily adopted TRIPS-plus legal device that significantly affected public access to technology.

The pipeline provision (thereafter accepted unilaterally by Mexico)²⁰ was proposed by the United States during the TRIPS Agreement negotiations and formally refused by negotiating

nullification or impairment of benefits' under the covered agreements. Article 23 goes on to specify that the members 'shall (...) not make a determination to the effect that a violation has occurred (...) except through recourse to dispute settlement in accordance with the rules and procedures of this Understanding. ... 'In short, the Understanding leaves no doubt that freelance, unilateral, or even unauthorized bilateral dispute resolution is not acceptable'. Michael Young, 'Dispute Resolution in the Uruguayan Round - Lawyers Triumph over Diplomats' [1995] 29 Intl Lawyer 389 (1995).

¹⁸ See Denis Borges Barbosa, 'Minimum Standards v Harmonization in the TRIPS Context: the Nature of Obligations under TRIPS and Modes of Implementation at the National Level in Monist and Dualist systems' in Carlos M. Correa, *Research Handbook on the Interpretation and Enforcement of Intellectual Property Under WTO Rules* (Edward Elgar Publishing Ltd 2010).

¹⁹ Free translation. 'because, people being unequal, they should not have an equal portion' in Aristotle, *Ética a Nicômaco*. Tradução, textos adicionais e notas: Edson Bini (Editora Edipro 2007).

²⁰ Article 12 of the Mexican Law of Industrial Property, in force as of 28 June 1991 'all applications covering inventions that were not patentable under the prior law and that had been filed in a member country of the Patent Cooperation Treaty (PCT), prior to the date of enactment of the new law, could be subject to the filing of a valid patent application in Mexico, with recognition of convention

parties.²¹ As demonstrated in Section IV, the basic premise of the pipeline system was to revoke public domain subject matter, and to base a local patent on a grant made abroad.

On the contrary, the TRIPS Agreement expressly exempted from protection acts which occurred before the date of application of the Agreement for the Member in question. Furthermore, it did not create an obligation to restore protection to subject matter which, on the date of application of the Agreement for the Member in question, fell into the public domain, as mentioned in Articles 70.1²² and 70.3.²³

Thus Brazil made a fast-track effort to adapt its internal intellectual property laws to the international standards set by the multilateral WTO Agreements, irrespective of whether the standards focused on promoting internal welfare. Brazil's preferred external policy of resisting most of the changes proposed by the developed countries and its voluntary acceptance of a TRIPS-plus device showed lack of a coherent position.²⁴

IV. THE PIPELINE SYSTEM AND CONFLICTS IN ACCESS TO HEALTH

Under the pipeline system, the Brazilian Patent and Trademark Office (PTO) automatically dispensed with the examination of the patentability requirements of novelty, inventive step and industrial application for patents granted in another country. In many cases, this led to the issuance of a revalidation patent. Even the foreign filings already published (and therefore in the Brazilian public domain) concerning subject matter excluded from patentability at the time of filing in Brazil were considered by the Brazilian PTO. The only inventions essentially excluded from protection under the pipeline system were those already introduced in the market (anywhere in the world) at the date of the revalidation filing in Brazil.

priority on the first application filed in any one of said countries and regardless of prior disclosure, provided that the following conditions, disclosed in Article 12 transitional, were met: - The corresponding Mexican patent application was filed within 12 months of the enactment of the law; the application should be filed by the first applicant of the corresponding foreign application or by the assignee thereof; - The applicant could prove to have filed the application in any of the member countries of the PCT or could prove to have obtained the corresponding patent; and - The exploitation of the invention, or the import on a commercial scale of the patented product or of the product obtained by the patented process, had not been initiated by any person in Mexico, prior to the filing of the application in Mexico'. Amalia Bagües, *The End of Pipeline Patents in Mexico* available online at: <<http://bcb.com.mx/Publicaciones/2010/WIPR/WIPRMayJune2010.pdf>> accessed 5 November 2012.

²¹ UNCTAD-ICTSD, *Resource Book on Trips and Development* (2005).

²² TRIPS Article 70.1: 'This Agreement does not give rise to obligations in respect of acts which occurred before the date of application of the Agreement for the Member in question'.

²³ TRIPS Article 70.3: 'There shall be no obligation to restore protection to subject matter which on the date of application of this Agreement for the Member in question has fallen into the public domain'.

²⁴ This can be established as a clear conflict of interests between foreign politics and national lobbies in Congress. For details concerning the interests at play at the time, see Garcia and Mendes di Blasi, *A Propriedade Industrial* (Forense 2000).

Accordingly, Article 230 of Law 9.279/96 provides:

A patent application may be filed relating to substances, matters or products obtained by chemical means or processes, food and chemical-pharmaceutical substances, matters, mixtures or products, and medicaments of any kind, as well as the respective processes of obtaining or modifying them, by any person entitled to protection under a treaty or convention in force in Brazil, and the date of the first filing abroad shall be recognized, provided that subject matter has not been placed on any market by direct initiative of the proprietor or by third parties with his consent, nor have third parties carried out, in this country, serious and effective preparations for exploiting the subject matter of the application or patent.

Patent revalidation was not an original²⁵ binding provision in Brazil²⁶ or abroad²⁷, as the principle of the independence of patents in the Paris Convention (Article 4*bis*) enabled full discretion to each patent and trademark office to establish its own examination criteria.

Nevertheless, under the pipeline system more than 1,100 pipeline applications were filed concerning subject matter that was in the public domain in Brazil. Many blockbuster pharmaceutical right holders benefited²⁸ under the pipeline system, with protection being granted for medicines to treat diseases such as cholesterol (Lipitor)²⁹, thrombosis (Plavix)³⁰, aids (Kaletra)³¹, cancer (Zyprexa)³², schizophrenia (Seroquel)³³, and erectile dysfunction (Viagra).³⁴

²⁵ Free translation: 'Men walk, almost every time, by paths built by others and act by imitation' in Nicolau Machiavelli, *O Príncipe* (Editora Centauro 2001).

²⁶ As stated, the 1809 Brazilian Alvará protected the importation of an already known technology, however the Brazilian law up to 1883 did not assure exclusive rights to foreign inventors who did not work their inventions in Brazil.

²⁷ '[T]he duration of the patent of importation may be made dependent on the duration of a foreign patent which is the basis of the grant of the patent of importation'. G H Bodenhausen, *Guide to the Application of the Paris Convention for the Protection of Industrial Property* (United International Bureaux for The Protection of Intellectual Property - BIRPI 1968) p 62.

²⁸ 'Inventions are Patentable Despite a Lack of Perceptible Public Benefit'. David Vaver, *Intellectual Property Law* (2nd edn Irwin Law 2011).

²⁹ Patent number PI 1100079-1. This patent was also the object of a deadline postpone litigation between the right holder Warner-Lambert and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 00233326119994025101 (originally before the 14th first instance Federal Trial Court).

³⁰ Patent numbers PI 1100113-5 and PI 1100111-9. These patents were also the object of a deadline postpone litigation between the right holder, Sanofi-Synthelabo, and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 05243877720054025101 (originally before the 37th (13th) first instance Federal Trial Court).

³¹ Patent number PI 1100397-9. This patent was also the object of a invalidation claim litigation between a national pharmaceutical company, Cristalia, against the right holder, Abbott and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 08083895420094025101 (originally before the 39th (9th) first instance Federal Trial Court).

³² Patent number PI 1100012-0. This patent was also the object of a deadline postpone litigation between the right holder, Eli Lilly, and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 05345626720044025101 (originally before the 37th (13th) first instance Federal Trial Court).

While mentioned as a fundamental right in the Brazilian Constitution, whether technologies may be protected by patents depends on their ability to fulfil the concept of 'invention'. Since the idea of an 'invention' stems from the novelty³⁵ requirement and is intimately linked to the concept of *ordre public* under the Brazilian system, the first constitutional infringement perpetrated by the pipeline system concerns the novelty criteria.

In fact, although the 1996 Industrial Property Law allowed for the revalidation of technologies that were not considered new, it is argued that the Brazilian Congress does not have the power to edit legislation that is contrary to the national Bill of Rights.³⁶ As the Brazilian democratic system is based on the supremacy of the Bill of Rights over any other binding norm, a law contrary to the Constitution is void as unconstitutional.

As noted by legal commentators³⁷, the novelty requirement imposes a balance between the society, the State and the right holder, since the latter will benefit from an exclusive right

³³ Patent number PI 1100099-6. This patent was also object of a deadline postpone litigation between the right holder Zeneca and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 200651015003322 (originally before the 38th (31st) first instance Federal Trial Court).

³⁴ Patent numbers PI 1100088-0 and PI 1100028-7. These patents were also the object of a deadline postpone litigation between the right holder, Pfizer, and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 00257682719984025101 (originally before the 23rd first instance Federal Trial Court).

³⁵ '[P]articularly where the prior art and the invention are identical or the prior art leads directly to the patented invention, it will be relatively easy to determine whether an invention has been made available to the public' in Lionel Bently and Brad Sherman, *Intellectual Property Law* (2nd edn Oxford Press 2004).

³⁶ *Graham v John Deere Co* 383 U.S. 1 (1966) ('Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available. Innovation, advancement, and things which add to the sum of the useful knowledge are inherent requisites in a patent system which by constitutional command must 'promote the Progress of (...) the useful Arts'. This is the standard expressed in the Constitution and it may not be ignored. And it is in this light that patent 'validity requires reference to a standard written into the Constitution'.

³⁷ From the second point of view, the novelty requirement finds its justification in the harsh effect of the exclusivity right in respect of inventions and utility models, and therefore demands a normative publicity. Exclusivity, in fact, is not coordinated with the promotion of technical development, but focuses on publishing the inventions during the patent administrative procedure. So the focus on the public utility of the invention is fulfilled when it may be used by everyone, because the exclusivity effect must be coordinated with the possibility of the society benefiting from the technological content once the patent has expired (...). The publication of the invention by the inventor extinguishes the patentability and, therefore, puts an end to the possibility of acquiring an exclusivity right in the technology invented, since it terminates the possibility to constitute an exclusivity asset. The publicity – before the exclusivity request – extinguishes the right because it cannot any longer fulfil the function of stimulation and inducement which, in other circumstances, would be a consequence of the invention and of the possibility (in terms of the publicity connected with the patent and the limitation of the exclusivity rights period) of general use (...). The examination of novelty finds its justification, first in a guarantee of a serious patenting procedure, and in the protection of the society's interest against the establishment of a patent when a new technology is not present'in Tullio Ascarelli, *Teoria della concorrenza e dei beni immateriali* (Dott A. Giuffr  1960).

which results in loss to others. Therefore, the novelty requirement functions as an equitable means to justify monopoly rights.³⁸

The other issues criticized by many legal authors³⁹ concern the paradox that the pipeline system achieves Brazilian constitutional goals, including (a) culture;⁴⁰ (b) competition; (c) public funding welfare; (d) health; and (e) public domain as a universal freedom (including consumers' choice). While one purpose of intellectual property rights is supposedly to diffuse knowledge, culture and science, this premise is built on the necessity of exchanging exclusivity for technical or expressive innovation. If there is no innovation, there is no point in property rights preventing societies from accessing cultural or technical goods.

Indeed, with the introduction of a retrospective property system taking information out of the public domain, pharmaceutical prices rose sharply once competition (potential players that could enter those technological markets) was excluded. However, the exclusion of competitors as a result of the pipeline system was not the only harmful effect: concentrated offer market directly impacts consumers.

Considering the competitive loss resulting from the advent of the pipeline system, some 1,400 chemical and pharmaceutical industrial plants closed down or discontinued production within five years of the introduction of the pipeline system in Brazil.⁴¹ Manufacturing of pharmaceutical active ingredients was entirely discontinued, and nearly all products protected by the pipeline system entered the Brazilian markets through importation.

Nonetheless, Brazil has a universal health access system that obliges the national Government to provide some designated pharmaceuticals for those that cannot afford them. Therefore, although the factual monopsony could empower the government to a stronger position to negotiate costs, right holders (enforcing their exclusive rights) were able to fix prices that far exceeded the Brazilian health budget. Considering the essential public demand of almost 200 million people, the pipeline patent holders stood to gain billions of dollars from the

³⁸ English Statute of Monopolies (1621) Article 6(a) ('Provided also, that any declaration before mentioned shall not extend to any letters patents (b) and grants of privilege for the term of fourteen years or under, hereafter to be made, of the sole working or making of any manner of new manufactures within this realm (c) to the true and first inventor (d) and inventors of such manufactures, which others at the time of making such letters patents and grants shall not use (e), so as also they be not contrary to the law nor mischievous to the state by raising prices of commodities at home, or hurt of trade, or generally inconvenient (...)').

³⁹ Denis Borges Barbosa, *A Inconstitucionalidade das Patentes Pipeline* (2006). Available online at: <<http://denisbarbosa.addr.com/pipeline.pdf>> accessed 3 November 2012; Pedro Marcos Barbosa, 'Patentes Pipeline: Uma Análise sobre os Dispositivos Pertinentes da Lei 9.279/96' [2012] 16 2nd Federal Circuit Magazine (TRF-2). Available online at: <<http://www.trf2.gov.br/emarf/documents/revistaemarfvoll6.zip>> accessed 3 November 2012.

⁴⁰ 'Between the secret and the information, Laws focused to promote an 'Estate of Culture' should choose in favour of information and for its free circulation: in a way that a secret only is justified by reasonable reasons (...)' Pietro Perlingieri, *O Direito Civil Na Legalidade Constitucional* (Renovar 2008).

⁴¹ Data provided by ABIFINA (generic and similar pharmaceutical and agrochemical association in Brazil).

sale of technologies already in the public domain at the time of filing of the patents in Brazil by essentially selling to the Ministry of Health.⁴²

Another issue with the pipeline system concerns the Bill of Rights provision that only protects intellectual property provided it is used for the promotion of internal welfare and economic or technological development⁴³ (Article 5, XXIX). Since most players in the economy that benefited from the pipeline system were foreign companies (which, as it happened, did not provide employment, restrained industrial investment in Brazil and in essence sent royalties abroad), it may be said that beyond other violations, the functioning of the pipeline system was inconsistent with the intellectual property protection goals embodied in the Constitution. Therefore, those parameters demonstrate its inherent and abstract lack of constitutional status.⁴⁴

The provision not only directly adversely impacted health and social rights, but it also had political implications. Brazil became the subject of international criticism originating from the first national compulsory licence in the Efavirenz case, which was a pipeline patent. The right holder was eager to create an unfavourable environment for the Brazilian Government, accusing the Ministry of Health of abuse. After a long period of negotiation, the Brazilian Government chose to utilize the TRIPS Agreement flexibility in Article 31. Rather than burning political ammunition to enable a compulsory licence, Brazil should have designed a patent system that excluded from patentability technology in the public domain.

In April 2009, the Brazilian General Public Attorney filed a constitutionality claim (docket 4234) before the Brazilian Supreme Court, which has not been adjudicated upon. The plaintiff and amici curiae argued relevant issues such as: (1) lack of novelty would offend Brazilian *ordre public*; (2) revocation of public domain without compensation violates the constitutional provision on expropriation measures; (3) Brazilian sovereignty is offended by a revalidation of a foreign patent office analysis that binds the Brazilian PTO; (4) Congress is not entitled to remove technologies from the public domain by simply editing federal law (to which constitutional provisions are superior); (5) public (free, capitalist) market⁴⁵ competition was avoided concerning technologies in the public domain, which violated the Brazilian Constitution (Article 170, IV); (6) major changes to consumer law to the detriment of consumer protection

⁴² Examples of pharmaceuticals from the pipeline provisions that induced high costs to the Health Budgets include pipeline patents for Lung Cancer (Alimta) – Box 50ml – US\$3,800.00; (HAP/LHP) Arterial and Lung Hypertension (Tracleer) – Box 60 pills – US\$8,800.00; and Aids (Kaletra) – Box 120 pills – US\$800.00. The current minimum wage in Brazil is US\$350.

⁴³ Concerning the TRIPS Agreement provisions: 'IPRs should work 'in a manner conducive to social and economic welfare'. This means that the recognition and enforcement of intellectual property rights are subject to higher social values (...)' Carlos Maria Correa, *Trade-Related Aspects of Intellectual Property Rights* (Oxford University Press 2007).

⁴⁴ Free translation: 'All unjust dispositions, all evil institutions, such as recognized by the people, imply an attack on the Law spirit of the nation and, by consequence, on the national power' in Rudolf Von Jhering, *A Luta Pelo Direito* (Forense 1972).

⁴⁵ Free translation: 'The market is not a natural creation or a spontaneous result of a developing process, but a political choice, always demanding the State's intervention, tracing its limits' in Eroulths Junior Cortiano, *O Discurso Jurídico da Propriedade seus Rupturas: Uma Análise do Ensino do Direito de Propriedade* (Renovar 2002).

and access⁴⁶ to health; (7) violation of the principle of the independence of patents in the Paris Convention (Article 4*bis*); and (8) since most of the right holders were foreign companies, and the law essentially was detrimental to Brazilian citizens and Brazil's economy, it also violated the equal rights⁴⁷ clause in the Bill of Rights.

Even though the Supreme Court has yet to issue its decision on this constitutional claim, the Ninth Federal Trial Court of the Second Federal Circuit⁴⁸ ruled the pipeline system unconstitutional, declaring an HIV Pharmaceutical Patent (Kaletra) void. As rulings declaring incidentally a law unconstitutional do not have an *erga omnes* effect (Supreme Court decisions in a direct constitutional claim render the law itself void), and as the right holder appealed to the Appellate Court of the Second Federal Circuit, the final decision of this individual dispute is unpredictable.

V. CONCLUSION

Despite the enormous public, economic, competition and health concerns at stake, the Supreme Court is not expected to issue a decision before 2013 or 2014, and even though all of the pipeline patents issued will fall into the public domain by 2017, they still consistently affect the health budget.

The ruling will impact future legislative elaboration and immediately affect the royalties sent abroad from the patents, since the Supreme Court's decisions considering unconstitutional claims may result in an *ex tunc* effect.

While the WTO Agreement has actually helped Brazil correct its irrational acceptance of TRIPS-plus commitments, the pipeline system has arguably failed to comply with the Bill of Rights clause allowing for the protection of intellectual property only to the extent it pursues the social interests and provides for Brazil's economic and technological development.

The contention, therefore, is that the pipeline system included in the 1996 Industrial Property Law is unconstitutional, as it ultimately benefited a restricted number⁴⁹ of non-local economic players to the exclusion and detriment of millions of Brazilians and their Government. The pipeline system was essentially forged on an abstract model. It is also contrary to the goals established by the Bill of Rights. In conclusion, the implementation of the pipeline system

⁴⁶ Free translation: 'In this connection, it could be said that this subjective right must focus on the society as a whole, in such a way that the property right can be understood as also involving access to the property right' in Luiz Edson Fachin, *Teoria Crítica do Direito Civil* (Renovar 2003).

⁴⁷ Free translation: 'It is also forbidden to create benefits restricted to foreign groups, to the detriment of nationals, especially if the former enjoy the benefit, as a specific prerogative, of high-level technologies, since this would deny the first principle of an independent State, which is the protection of its nationals, apart from running counter to the idea of authentic national development' in Celso Antônio Bandeira de Mello, *O Conteúdo Jurídico do Princípio da Igualdade* (Malheiros 2010).

⁴⁸ Patent number PI 1100397-9. This patent was also the object of an invalidation claim litigation between a national pharmaceutical company, Cristalia, against the right holder, Abbott, and the Brazilian PTO, filed before the Second Circuit Federal Region Court (TRF-2) under the docket 08083895420094025101 (originally before the 39th (9th) first instance Federal Trial Court).

⁴⁹ 'If the power cannot be trusted to all members of the social body, it should, in any hypothesis, be applied in the benefit of all, and not only for some; nonetheless in the exclusive profit of the powerful' in Fábio Konder Comparato, 'O Poder de Controle na Sociedade Anônima' (Revista dos Tribunais 1976).

failed to comply with the minimum requirement of balance of interests with a view to development as provided in the TRIPS Agreement.⁵⁰

⁵⁰ 'TRIPS still relied heavily on national political processes to ensure appropriate balance. If one is to find balance embedded in the TRIPS context, it can only be found by recognizing that in return for accepting restrictions on national autonomy to maintain unduly low levels of intellectual property protection, developing countries secured benefits in terms of market access and technology transfer. That is, the balance embodied in the 1994 WTO agreements was not a balance intrinsic to intellectual property law, which we find in the domestic political context, nor even a balance that also figured in the right mix of universal standards versus national autonomy, which we find in the classical international intellectual property. Rather, TRIPS added a third vector: policy objectives secured by a balance of intellectual property rights and other tools of economic development'. Graeme B Dinwoodie, 'The Global Politics of Intellectual Property' (unpublished manuscript 2006, on file with the author).

BIBLIOGRAPHY

Ascarelli T, *Teoria della concorrenza e dei beni immateriali* (Dott A. Giuffr  1960)

Barbosa D B, *A inconstitucionalidade das patentes pipeline*

Barbosa D B, 'Minimum Standards v Harmonization in the TRIPS Context: The Nature of Obligations under TRIPS and Modes of Implementation at the National Level in Monist and Dualist Systems' in Correa Carlos M, *Research Handbook on the Interpretation and Enforcement of Intellectual Property Under WTO Rules* (Edward Elgar Publishing Ltd 2010)

Barbosa P M, 'Patentes Pipeline: uma an lise sobre os dispositivos pertinentes da Lei 9.279/96' [2012] 16 2nd Federal Circuit Magazine (TRF-2)

Filho O B, *Teoria do estabelecimento comercial – fundo do com rcio ou fazenda mercantil* (Saraiva 1988)

Bently L and Sherman B, *Intellectual Property Law* (2nd edn Oxford Press 2004)

Comparato F K, 'O poder de controle na sociedade an nima' (Revista dos Tribunais 1976)

Cortiano E J, *O discurso Jur dico da Propriedade seus Rupturas: Uma An lise do Ensino do Direito de Propriedade* (Renovar 2002)

Correa C M, *Research Handbook on the Interpretation and Enforcement of Intellectual Property under WTO Rules* (Edward Elgar Publishing Ltd 2010)

de Carvalho N P, *The TRIPS Regime of Patent Rights* (Kluwer Law International 2002)

de Mello C A B, *O conte do jur dico do princ pio da igualdade* S o Paulo: Ed. Malheiros, 2010

Dinwoodie G B, 'The Global Politics of Intellectual Property' (unpublished manuscript 2006, on file with author)

Fachin L E, *Teoria Cr tica do Direito Civil* (Renovar 2003)

Jhering R V, *A luta pelo direito* (Forense 1972)

Machiavelli N, *O Pr ncipe* (Editora Centauro 2001)

Perlingieri P, *O Direito Civil Na Legalidade Constitucional* (Renovar 2008)

Reichman J H and Dreyfuss R C, 'Harmonization without Consensus: Critical Reflections on Drafting a Substantive Patent Law Treaty' [2007] 57 Duke L J 85

Vaver D, *Intellectual Property Law* (2nd edn Irwin Law 2011)

Yu P K, 'The Objectives and Principles of the TRIPS Agreement' [2009] 46 Houston L Rev 79

4 COPYRIGHT LAW: IMPACTS ON URBAN SHAPING

***Dr Plamena Popova**

ABSTRACT

This paper discusses the impact of copyright law on developments in modern architecture. Further, this paper examines how copyright law shapes the urban environment and its influence on architecture. The fundamental purpose of copyright law is to promote creativity and thus contribute to cultural development. The conflict between moral rights of the author and private property rights defines the extent of copyright protection of architecture. Architectural art is specific compared to other areas of creativity such as literature, music and science. The main challenge of determining the appropriate scope of copyright protection of architectural works stems from two separate absolute rights: authorship and ownership. The paper uses a comparative legal approach based on research from legal and case studies to explore the nature of copyright protection of architectural works.

Keywords: *copyright law, architecture, urban shaping*

I. INTRODUCTION

*'The invention of the printing press
is the greatest event in history ...
The book was to kill the building.
The lead characters of Gutenberg
succeeded the stone characters of
Orpheus.'*¹

In *This is Not the End of the Book* Umberto Eco pays attention to the correlation between books and the 'stone bibles': what he calls architectural works. The thought by Victor Hugo expresses concerns in an era of emerging new technologies – the printing press, and the effect that this technology would have on the architecture – the major cultural media at the time. The invention of the printing press and books as the new information carrier replaces 'in an inexplicable way' architectural works in the culture medium. Eco, however, points out the groundlessness of such concerns and draws a parallel between books and architecture and e-books and books (classical). Eco's idea is that the new information carriers (media) and culture will continue to coexist – books and architecture, and Internet and books. New technologies, however, will change the medium, including the legal medium. Architecture does not disappear because of the advent of the printing press, although the advent of the printing press changes its essential place in the cultural development of societies.

* **Dr Plamena Popova** (Bulgaria) is a Doctor in Intellectual Property Law (2010, Bulgarian Academy of Sciences). She is a lecturer at the University of Library Studies and Information Technologies (UNIBIT), Sofia and her main subjects are Intellectual Property Law and Cyberlaw. Her research interests focus on digital rights and Internet governance issues. She was Visiting Scholar at Kernochan Centre, Columbia Law School - autumn 2010. She is a Member of the IFLA-CLM Committee (mandate 2011-2015) and an ICANN Fellow 2012-2013.

¹ Victor Hugo, *Notre Dame de Paris*, Book Five, Chapter Two.

Legal standards for the protection of human creativity, significantly influenced by the invention and development of printing, regulate the development of the modern architectural environment and architectural creativity. How do modern copyright laws regulate the stone bibles (architectural works), which continue to be one of the main carriers of cultural identities? This paper explores the impact that copyright laws and authors' protection have or could have on architecture as an art piece, a result of human creativity and a carrier of cultural identity.

Architecture and society exist in close interdependence.² Architectural works and the shape of the urban environment are carriers of cultural tradition, information and a factor that affects society and transforms its values. Copyright laws and regulations influence this process.

II. ARCHITECTURE AS A SUBJECT OF COPYRIGHT PROTECTION

Architecture as protectable by copyright law remains controversial despite rich cultural traditions embodied in architectural works. Architecture combines two major functions: aesthetic and utilitarian. This dualistic perception of architectural works, based on a combination of useful features and aesthetic values, is related to the shaping of the urban environment. Architecture is the determinant factor in urban shaping; everyone is forced to encounter architectural structures more often than other art forms. Thus, the aesthetic impact of art architectural forms is comprehensive.

Architectural work presents a unity of tangible and intangible elements, intellectual product and material value. This dual essence of architectural works reflects on the regime of their protection under copyright law. Completed works of architecture receive copyright protection under the Berne Convention for the Protection of Literary and Artistic works.³ Article 2, paragraph 1 of the Berne Convention (determining the scope of protected works) specifically mentions three-dimensional works relating to architecture. Article 4 declares that conventional protection applies to architectural works built in the member countries of the Berne Union, as well as works that are incorporated in such architectural works.

The United States had long refused to provide copyright protection to architectural works. This status quo remained until 1990 when, as a newly acceded member of the Berne Convention, the United States began granting copyright protection to architectural works.⁴ The legal definition in US legislation specifically excludes protection to so-called standard elements of architectural works. In US jurisprudence and legal theory, the accepted view is that a two-step test should be applied, in order to determine whether a particular architectural work is subject to copyright protection: (1) the presence of originality; and (2) architectural decisions that are not dictated solely by the utilitarian (use) of the architectural work.

² Walter Gropius claims that 'Architecture in a broad sense is a logical expression of the main states of society.'

³ Sculpture Act 1798 UK is the act which first granted legal protection to three-dimensional structures and forms of art in history. This act protects the art of making models and statues of human figures and animals. The adoption of this act is crucial in expanding the scope of works that are protected by copyright - for the first time the boundary between two-and three-dimensional works was removed in providing legal protection.

⁴ Title 17 USCA, Section 101 – Definitions.

In Australia copyright protection of architectural works⁵ is provided. Architectural works are defined as a structure of any kind. Almost all kinds of architectural works are protected according to Australian copyright laws, including factories, garden structures and all kinds of facilities. In the cited legal definition, it is explicitly stated that the artistic, aesthetic quality of the architectural work is irrelevant for granting protection to the author. The architectural work is subject to copyright protection if it meets two requirements: (1) originality; and (2) material form. The requirement of originality is a condition that the subject of copyright protection not be a simple repetition of an already known work. Originality is not understood as a novelty but as an expression of the creative process, whether the result is of high artistic and aesthetic value or not.

III. COPYING IN ARCHITECTURE

The legal definition for reproduction (copying) according to Bulgarian copyright law⁶ reproduces the conventional notion of copying. Reproduction of architectural works raises several serious legal problems. Creativity in general and especially creativity in architecture is not necessarily associated with lack of copying. In this sense, it is appropriate to recall legislative decisions in Australia.

Bulgarian law provides definitions of both direct and indirect multiplication of a copyrighted work as forms of reproduction (copying). Architectural works as the works of fine arts are usually created in a single copy – original unlike most of the other copyrighted works. Repetition of an architectural work constitutes the copying of already completed buildings or structures. Copying of architectural works, irrespective of the manner, constitutes a realization (generation) of one or more exemplars of the work. Usually in architecture, economic factors influence the difficult determination of whether an architectural work will be reproduced; the creation of original architectural work that leads to the creation of tangible copies is a relatively rare practice. Significantly, from a legal perspective, Bulgarian Copyright Law states that parts of architectural works are considered a subject of copyright law protection. Therefore, the multiplication of one or more copies of part of a building or part of a structure, or the creation of a product that is a fusion of architecture with another work of art is an act of reproduction.

In accordance with Bulgarian law, there is no exception regarding the means of expression for architecture. The expression of protectable works must be objective; it has to be objectified in reality. For example, the construction (expression) of three-dimensional structures uses the expressive means of 'architectural language'; the creation (expression) of computer programs uses a combination of certain programming languages; works of literature are expressed through combinations of language elements; brush strokes, colour stain and texture of the paint are means of expression in the art of painting. The specific means of architectural language, the lines and surfaces of volumes, allow artistic possibilities of architecture for abstract transformation (recreation) in the art.

To return to the thoughts of Hugo and Eco cited above: currently, human societies face another shift – from printing copies to Internet copies – and thus the legal protection of

⁵ Copyright Act 1968 as amended, Section 10, definition of an artistic work – 'a building or a model of building whether the building or model is of artistic quality or not'.

⁶ 'Directly or indirectly duplicating the work or part thereof in one or more copies, in any manner and in any form whether permanent or temporary, including the digital storage of the work on an electronic medium.'

creativity must meet the challenge of adequately responding to such transition. One possible lesson for the reformation of copyright law is to consider the characteristics of architectural art and urban shaping, its copyrights protection, and the possible parallels between both transitions: from architecture to books and from books to the Internet.

IV. ON AUTHORSHIP IN ARCHITECTURE

Architectural works and the urban environment reflect cultural values as part of the cultural processes in society, and the cultural tradition, but also contain future cultural values and cultural heritage of the communities. The sustainability of architectural works in time and space determines the role of the architectural environment as an important carrier of the cultural memory of societies. The basis of the comprehensive impact of architecture is a continuous creative process that includes shaping the architectural idea to the realization of architectural work. The debate in architectural theory of the essence of the architectural creative process comprises two overlapping, main concepts: focusing on the utilitarian features of the architecture and the view that highlights the leading role of creativity in architecture.

The question of authorship in architecture and especially the question on the moral rights of the author in architecture and urban shaping are essential. Protection of moral and material interests of authors of literary, scientific or artistic works is a part of the fundamental principles of human rights adopted at the international level.⁷ The Berne Convention defines the principle protection of moral interests of authors through the text of Article *6bis*.

The core of the moral rights of authors is the right of authorship and the right of integrity of the work, which are generally accepted and enshrined in the text of most modern copyright laws. The right of authorship reflects the author's interest to be identified and to attain recognition for the link between the author's personality and the creativity of the architectural work that is protected. The authors-architects have significant moral interests in the link between their creative and personal qualities and a concrete architectural work to be legally recognized. The authorship is linked to the right for the name, nickname or other identifying sign of the author to be placed on the creative work. These moral rights, which are closely related to the personality of the author-architect, are eternal and inalienable.

V. MORAL RIGHT OF INTEGRITY OF ARCHITECTURAL WORK

The right to protect the reputation of the author is a term (concept) adopted in the Berne Convention designating the right of the author to preserve the integrity of his or her work and to oppose eventual alterations.⁸

In countries that adopt a civil law tradition⁹, the focus is on the legal protection of the moral interests of the author and on the relationship between the artist's personality and work.¹⁰

⁷ M Vivant, 'Authors Right, Human Right' RIDA-1997 No 174, p 60-122, Article 27, paragraph 2 of the Universal Declaration of Human Rights establishes a universal high standard of protection of moral interests of authors and Article 15 paragraph 1 of the International Covenant on Economic, Social and Cultural Rights.

⁸ The text of Article *6bis* uses the term 'honor and reputation' as a compromise between the participants in the Berne Union.

⁹ France is an example.

According to Geller¹¹, reputation, together with certain items, is included in the patrimony, which the author is legally empowered to control. Geller sees the reputation itself as an extension of the personality of the author.

Australian copyright law governs the moral right of integrity of the works subject to copyright law protection.¹² According to the normative text, the author has the right to integrity of authorship in respect of the work. A part of this right is the possibility for the author to oppose any 'derogatory treatment' of the work. This moral right is associated with the personality of the author, who is the only possible right holder.¹³

VI. RATIO AUTHOR - OWNER - SOCIETY IN ARCHITECTURE

Architecture is the intersection of art and aesthetics with significant material interests. The creative process of architectural works usually focuses significantly on economic factors, which often shifts the emphasis away from creativity. In some cases, economic factors interfere with the liberty of the architect as an author of creative work and thus with the author's rights.

In architecture (as art and as science) the issue of fair balance between an *author - owner - society* has always been raised. This balance is essential in copyright law protection of architectural works and the exercising of individual rights. From the very beginning of architecture, the *artist-owner-society* relationship reflects the biggest conflict of interests that is potentially concentrated in the architectural work itself. The creators of the architectural work invest effort and creativity and their interests should be adequately protected by the law. The ownership of architectural works, either public or private, represents property rights that are closely connected with the material value of the architectural work. Architecture, unlike literature or music, creates problems in copyright law precisely because with architecture, the focus is different and reflects contrary interests: public and private, the author's moral rights and the owner's property.

¹⁰ Defining the legal nature of the relationship between the author's personality and his work is a subject of theoretical debate. Personalist theories associated right of integrity of the work with *the persona*. *Persona* is the external expression of an individual, the perception of the individuality of the community. In this sense, the right to integrity of the work or the right of the author's reputation is accepted as legal protection of the public identification of the author, through his work. Copyright law in Europe, which is significantly influenced by the theories associated the protection of works with the element of personal participation of the creator.

¹¹ P Geller, 'Must Copyright be Forever Caught between Marketplace and Authorship Norms', in B Sherman – Of Authors and Origins, Oxford, 1993.

¹² Article 195AI, Copyright Act 1968.

¹³ Australia has exemplary case law and practice in the enforcement of moral rights of authors of architectural projects and works. It is noteworthy that a legal dispute in connection with the world-renowned architecture works (Sydney Opera House) is one of the essential factors leading to legislative amendments to the concept of moral rights in Australian law. For more details, see Matthew Rimmer, 'The Garden of Australian Dreams: The Moral Rights of Landscape Architects'. Fiona Macmillan, Kathy Bowrey, *New directions in Copyright Law*, Volume 2 Cheltenham, UK 2006, 134-171.

VII. PRIVATE INTERESTS – THE CONFLICT BETWEEN THE AUTHOR AND PROPERTY RIGHTS IN ARCHITECTURAL WORKS

The clash of interests of the author and owner is also seen in other visual arts, but it is particularly clear in architectural works and urban shaping. Often the author's countering interest, the interest of the user, is actually the interest of the owner of the physical object that embodies the copyrighted architectural work. Therefore, two absolute rights, namely the right of the author and the property right are opposed. Thus, the conflict of the absolute rights of the author and owner is the main problem with the author's protection of architectural creativity. Roman law principle holds that the owner is free to use his or her property as desired; this is the idea of classic property. The concept of moral rights of authors arose in a more recent historical period and despite its relative novelty, reflects the principles that embody serious moral interest. The conflict between the moral interests of authors and the property interests of owners of architectural works, in this sense, clearly reveals the relationship between classic and intellectual property law in the modern world. One type of the property is fixed on a tangible object, and the other on the work embodied in the material. Another theoretical level of conflict is the relationship between moral interest and material interest.

VIII. THE PUBLIC INTEREST IN ARCHITECTURAL WORKS AND THE ARCHITECTURAL ENVIRONMENT

Architecture implicates the individual rights of authors, the individual rights of owners and public interests of the society. The public interest in architecture in view of copyright law protection may be considered from two perspectives:

- The interests of society, driven by daily contact with the urban medium;
- The public interest as affected by the immanent presence of the urban medium and architectural works as key elements of cultural processes in society.

Copyright law provides limitations driven by public demands for cultural development and access to arts, science and literature on the exercise of an author's rights. Le Corbusier defines the 'intensive growth of the private interest of the early industrial age' as the main reason for reduced attention to public interest. The Athens Charter of 1933 provides that private interests will be subordinated to the public without considering total dependence and subordination of social needs.

Thus, the protection of public interest is linked to the adequate protection of individual rights of creators of architecture, understood as an initial stage in the existence of architecture as part of the culture of society. Cultural developments in society are directly dependent on the stimulation of individual creativity.

IX. RESOLVING THE CONFLICT BETWEEN THE RIGHTS OF OWNERSHIP AND RIGHTS OF AN AUTHOR IN THE ARCHITECTURAL WORK

Architectural work involves the interests of the author, the owner and the public interest. This conflict of interests is resolved in various ways in different countries by means of legislation or by case law.

Notably, an absolute requirement for the author's consent in case of the alteration or demolition of an architectural work is a highly burdensome obstacle in the exercise of property rights of the architectural work. Such an absolute requirement is also not consistent with architectural practice. This is also a principle position stated in a WIPO Study on the rights of authors in works of architecture.¹⁴ The criterion of necessity is a leading element in the cited study, as it is recommended that the author not be excluded from the processes of eventual modifications of an architectural work. However, the relationship between the author-architect's personality and the author-architect's work should be taken into account, and a fair balance among individual interests, the interests of owners and public interests of cultural development and cultural values should be sought.

As shown by case law and different legal approaches to resolving the conflict between the author's moral rights and the owner's property rights, it is impossible to formulate a general rule applicable in all legal systems. From the perspective of the concept of balance of interests, the interest of the owner of the physical object usually prevails.

Owing to recent changes in the Bulgarian Copyright Law of 2010, a requirement was introduced for the owner of the architectural work intending to alter or demolish it to consult with the Professional Association of Architects – Union of Architects in Bulgaria. Until 2010, the copyright regime that allowed the owner to demolish or reconstruct an architectural work, without consulting the author or Union of Architects, was in force.

In the United States, a text concerning the alteration and destruction of works of architecture¹⁵ is in force, whereby the owner of the building embodying an architectural work may modify or destroy it without the consent of the author of the architectural work. Winick¹⁶ states that there are other legal means other than copyright law for the protection of architectural works with artistic and aesthetic value, namely, local legislation and regulations for the protection of cultural heritage.¹⁷ The parallel implementation of acts is considered to be a sufficient legal guarantee for the artistic and aesthetic forms embodied in the architectural works with social and cultural value.

Australia has introduced a precise legal procedure that respects the interests of both the property rights of owner and moral interests of the author of the architectural work. On a normative level, a compromise is achieved that respects both the moral interests of authors and the property rights of owners of an architectural work. The essence of the normative text is the obligation of the owners to consult and negotiate concerning planned alterations or demolition of copyrighted architectural work.¹⁸ The essence of the legal norm is that the owner of an architectural work should inform the author in writing of its intention to alter, move, demolish or destroy the building and carry out mandatory consultations with the author of the work.

¹⁴ Opinion of WIPO <http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=75696>.

¹⁵ Title 17 USCA, Section 120b.

¹⁶ R. Winick, 'Copyright Protection for Architecture after Architectural Works Copyright Protection Act of 1990', IPLR, New York, 1994.

¹⁷ Title 17 USCA Section 301, b 4 'Nothing in this title annuls or limits any rights or remedies under the common law or statutes of any State with respect to — (...) State and local landmarks, historic preservation, zoning, or building codes, relating to architectural works protected under section 102(a)(8).

¹⁸ Article 195AT 2A, Copyright Act 1968.

In Italy, which follows the civil law tradition, the problem of the conflict between property rights and moral rights of integrity of the architectural work is resolved in an interesting way:

However, in the case of works of architecture, the author may not oppose modifications deemed necessary in the course of construction. Further, he may not oppose other modifications which may be necessary in any such completed work. However, if the work is recognized by the competent State authority as having an important artistic character, the author shall be entrusted with the study and execution of such modifications.¹⁹

The above legal solution may be considered a successful example of resolving the conflict as apparently the interests of owners of architectural works and the interests of authors and public interest are taken into account. This rule establishes the aesthetic value or artistic quality of the architectural work as a criterion for granting the author the right to participate in the modification of the architectural work. In this way, legal certainty is submitted on a sufficient level, since the requirement for the artistic character of the architectural work is for it to be recognized by a public authority.

X. THE EFFECTS AND IMPACTS OF COPYRIGHT LAW ON CONTEMPORARY ARCHITECTURE – SOME EXAMPLES IN BULGARIA

Examples that illustrate the role of copyright law and, in particular, the normative solution of the conflict between author and property rights, as determined in Bulgarian legislation prior to 2010, are discussed below. It should be noted that until 2010 Bulgarian Copyright Law provided a norm, according to which the owners of architectural work could destroy and modify their building without notification or consultation with the author and without taking into account the right to the integrity of the work.

An emblematic example of the impact of copyright law provisions, or rather the lack of guarantees from the copyright on contemporary architecture, is the destruction of the Mausoleum (of Georgi Dimitrov) that took place 61 years after its construction.²⁰ Of course, the destruction of this architectural work (described as the centre of totalitarian cult in Bulgaria in the communist era) was based also on many other complex reasons. With no doubt, the cultural and aesthetic value of the mausoleum would have an influence on the discussions on its eventual destruction, if a rule similar to that adopted in the Italian legislation was in force in Bulgaria. Consultations with the authors of the architectural work (as prescribed in Australian legislation) or consultation with the Professional Association of Architects (which is incorporated in the adopted version of the Bulgarian copyright law in 2010) could have altered the decision to destroy the mausoleum. Opinion of the destruction of the mausoleum is still ambivalent in Bulgarian society and is associated with purely aesthetic dimensions of the problem: the replacement of the mausoleum, a building with obvious aesthetic value (even with conflicting historical dimensions), with a parking lot and an empty garden space. Copyright law protection, since it presumably concerns relatively new and modern architectural works, should have a more balanced role in view of public interest.

¹⁹ Article 20 of the Italian Copyright Law (No 633 from 1941).

²⁰ It is noteworthy that the Mausoleum was built in six days in 1949, and it took six days for its demolition in 1999.

The protection of buildings and architectural works, which form the cultural identity of the society in Bulgaria, is covered predominantly by the rules of cultural heritage law.

Additionally, another legal issue could be identified: the modern Bulgarian law on cultural heritage contains a provision, according to which cultural values may not be established as cultural objects unless 50 years have passed from the moment of its creation. This leaves a certain group of works in a very delicate situation. These are the works of contemporary architecture, which although protected by copyright law and having obtained respective value or possessing high artistic and aesthetic value for a community, could not receive protection under the cultural heritage law. In this case, the above position of Winick, namely that an alternative protection over architectural works and urban environment is available through cultural heritage laws, cannot not be justified.

Another case, which refers to buildings of architectural value, although of local importance, concerns the building of Janitza, constructed in 1972. This architectural work, according to some estimates of leading Bulgarian architects, has architectural value and is an expression of specific fusion architecture characteristic of so-called totalitarian architecture. However, the same building has undergone many changes and renovations in the period after 1990, which are considered to be inconsistent with the overall appearance and architectural style. The architectural works receive copyright law protection and thus the application (implementation) of the Italian or Australian model for guaranteeing the moral right of integrity of the author could ensure that the aesthetic and cultural value of the architectural work is retained.

Significant reconstructions and interference in urban shaping have been widespread in Bulgaria during the last 20 years. There are numerous examples of architectural works in which the appearance and character were irreparably harmed. Further, with regard to the buildings, architectural ensembles and cities that are declared cultural heritage, priority is given to the cultural heritage legislation. In modern architecture and urban shaping, priority should be given to the copyright law. In this particular category of architectural works, modern architecture, the risk concerns mainly the so-called models of totalitarian architecture and brand new works.

This trend is not exclusive to Bulgaria. In recent decades on a global scale, the specimens of modern architecture established after World War II are at risk to a greater extent than architecture from any other historical period. In the view of the international organization, DOKOMOMO, specializing in this field, in the late 1980s most of the specimens of modern architecture had already been completely destroyed or altered beyond recognition. However, a major factor influencing contemporary architecture is that many of these architectural works were not perceived as monuments of culture and cultural heritage. In this sense, Bulgarian cultural policy conforms to the standard approaches and understandings prevalent in Europe during the 1980s. With regard to modern architecture, copyright law could constitute an adequate instrument for adequate impact and protection. Many of the works of modern architecture could be regarded as objects of copyright law protection. The proposal to broaden the moral rights of the author of an architectural work maintains the balance and does not considerably affect the interests of owners, and is also consistent with current legal trends of modern States in Europe and Australia.

This position takes into account the concept of balance of interests between the creators (authors), owners (users) and the public. Architecture forms a significant cultural capital and its sustainable development is one of the main directions of European cultural policies. Meanwhile, the moral rights of authors could be one of the remedies for sustainable cultural development and sustainable architecture, taking into account that comprehensive measures in various legally regulated areas are necessary. The urban environment and architectural space as part of the culture should be protected, and the same applies to the rights of their authors. Proper protection of the moral rights of authors of architectural works is an essential element in the overall strategy for the cultural development of society and the evolution of cultural processes and values, along with legal protection of cultural heritage.

XI. COPYRIGHT AND CULTURAL HERITAGE IN URBAN SHAPING

In most cases, copyrighted architectural works are transformed into cultural heritage and their legal status aggregates two main types of subjective rights: rights connected to its status of cultural objects, and copyright law protection, which applies 70 years after the death of the author or authors.

The objectives of the copyright law are not limited to the protection and promotion of economic advantages for authors and holders of exclusive rights of the architectural works. The cultural dimensions of copyright law are expressed in the nature of the protected works: architectural art that is an intrinsic part of the cultural identity. The role of copyright law provisions in the field of culture is clearly expressed by the protection of moral rights of authors and architects. From this perspective, the individual moral interests of authors of architectural works often coincide with the broader public interest in architecture and culture, and promotion and access to knowledge. The establishment of an adequate legal protection of the moral rights of authors, architects and their implementation is a factor in fostering creativity in architecture.

This approach has been successfully introduced in Australia, which presents impressive examples of the author's protection in architecture, and in many European countries. Italian copyright law also protects the moral rights of authors and thus the cultural significance of the author's work. This approach reflects the undeniable link between the position of individual creative effort and contribution of the author - architect and public interest in culture. The necessity to protect the moral interests of authors in architecture is one of the arguments raised on the need for serious reforms in the European legal framework on copyright issues.²¹ The necessity of unification of the *acquis communautaire* in the field of copyright law is considered to be a way to help the economic return on creativity as the activity that forms the cultural capital of society. Some of the arguments for reform of the European legal framework relate to the need to protect public interests in culture through protection of moral rights of authors and architects in particular.

Essentially, the issue of the scope of moral rights of authors-architects could be identified in terms of individual moral interests of the author and not material reward. The author's reputation and the author's ability to exercise some control over the created architectural work are an expression of the correlation persona-author. Therefore, adequate legal regulation of the moral interests of authors is for the benefit of the individual interests of authors, but also for the benefit of the public interest for cultural development. Copyright law of course could

²¹ H Macqueen, 'Copyright Law Reform – Some Achievable Goals' (2006) London.

not replace instruments of public law for the protection and safeguarding of cultural heritage. Subjective rights are an instrument to protect and promote individual creativity essential for cultural development.

Copyright laws generally provide protection that is limited in duration and connected to a specific starting point and a specific author. After a certain period, copyrighted works are 'released' to the public domain and become available to the public. One of the guiding principles of copyright law is to protect both the author and authorship and the public interest in access to knowledge. Cultural heritage and laws have, on the other hand, their focus on the public interest and not on individual interest and usually follow (in temporal terms) the emergence of authorship in copyrighted work. Whilst copyright laws restrict the use of works in favour of the author (i.e. the public interest is restricted in favour of the individual interest), cultural heritage law has set a limitation on individual interest in favour of the public. The above description is valid in the classical conflict between private and public interests in relation to copyrighted works. This conclusion is not true, however, with regard to architectural works, which are usually created as originals and the creation of multiple copies (on a scale comparable to literary, musical or other works) is practically impossible. Thus, the preservation of copyrighted architectural works is effectively the problem of the protection of the author and the public interest, both of which are often interlinked (particularly in cases of cultural/aesthetic value of the architectural works, versus the interests of the owner of the architectural works).

XII. THE ROLE OF COPYRIGHT LAW AND ARCHITECTURAL CREATIVITY

The Athens Charter of 1933 outlines some important problems associated with creativity in general and creativity in architecture specifically. Emphasis is placed on the need to balance the interests among key actors in the creation of an architectural work. The postulate of the Charter corresponds to the modern principles of sustainable architecture: respect of the interests of modern society and responsibility for the interests of future generations.

The need for a fair balance among individual interests of the owner/investor/user, the author of the architectural work and the interests of society could be examined in light of the legal basis of the moral rights of architects. The moral rights of authors of copyrighted architectural works protect, in a narrow sense, the creator's interests related to the creator's professional ability and reputation in society. In broad terms, the moral right of authors of architectural works represents a guarantee of artistic freedom, cultural development and sustainable architecture. The right of authorship and integrity of the work constitute a guarantee for the preservation of modern architectural forms that shape and create, along with architectural heritage, the urban environment. In this sense, the precision of restrictive texts governing the right of integrity in the direction of enhanced author involvement in reconstruction, alteration or demolition of architectural works, is an attempt to follow the trends proclaimed by the Athens Charter and modern instruments in an architectural field. Postulates of the Athens Charter are valuable evidence of attempts to protect sites of modern architecture, which attempts began simultaneously with its formation of modern architecture as a part of art.

XIII. CONCLUSION

In conclusion, it should be emphasized that the concept of art in architecture includes architectural heritage and contemporary artistic forms in architecture. Some of the risks to

modern architecture in Bulgaria that shape the urban environment could be overcome by the overall protection of moral and economic rights of the participants in the architectural creation. The concept for balance of the interests among author, owner and society, found both in the legislation and case law, reflects the current trend in the relationships of objects with copyrighted architectural works.

The balance between the significant material interests of the participants involved in the architectural and construction process (investor, owner) and the moral and economic rights of creators of architecture is essential for modern copyright law. The possibilities of architectural heritage and contemporary architecture in the formation of cultural capital are undeniable. In architecture, cultural capital is highly concentrated and in the public interest. Adequate copyright protection of the moral rights of authors of architectural works is an essential guarantee of the cultural role of architecture and for preserving the balance of interests implicated in architectural works. The protection of architectural works in Australia and Italy is an example of the interconnectedness of precise normative regulation and extensive case law in developments in architecture.

Appropriate copyright law is an element of adequate cultural policies that take into account the individual interests of authors and owners and the public interest in preserving and protecting the culture. The modern urban environment is shaped by architectural heritage and modern architecture, some of which are copyrighted and are potentially of cultural value and at least participate in cultural processes.

Architectural works are a unique example of the combination of tangible and intangible property and classic and intellectual property. The study of copyright law protection and architectural works allows an understanding of trends in intellectual property from a new perspective.

This paper could eventually be extended to include the effects and trends of reforming copyright law based on a comparative analysis of architectural works regimes and regimes based on the new carriers of information and new technologies.

BIBLIOGRAPHY

Geller P, 'Must Copyright Be Forever Caught between Marketplace and Authorship Norms, in B Sherman – *Of Authors and Origins* (Oxford 1993)

Ginsburg J, 'Copyright in the US after the Berne Convention', NIR (1992)

Ginsburg J, 'Copyright Protection for Architecture and the Berne Convention', 65 New York University Law Review, New York (1990)

Huet M, *Le Miroir Figé*, Paris (1976)

Macqueen H, Copyright Law Reform – Some Achievable Goals, London (2006)

Rimmer M, 'The Garden of Australian Dreams: The Moral Rights of Landscape Architects' Macmillan F, Bowrey K, *New Directions in Copyright Law*, Volume 2 Cheltenham UK (2006) 134-171

Winick R, 'Copyright Protection for Architecture after Architectural Works Copyright Protection Act of 1990', IPLR New York (1994)

5 THE INDONESIAN PLANT VARIETIES PROTECTION ACT: THE DILEMMA OF MEETING INTERNATIONAL AND BILATERAL OBLIGATIONS AND PROTECTING TRADITIONAL FARMERS

*Dr Nurul Barizah

ABSTRACT

Plant variety protection is a relatively new concept for many Indonesians. It was developed because of the patent regime's failure to provide appropriate protection for new plant varieties. This new *sui generis* legislation for the protection of plant varieties was enacted in response to Article 27.3(b) of the TRIPS Agreement, which requires WTO Members to provide an effective *sui generis* law for the protection of new plant varieties. This paper analyses the current state of plant variety protection in Indonesia. It covers the threshold of protection, the subject, scope, right and obligation of breeders, exceptions to infringement, farmers' rights and local varieties. It also analyses the current policy to revise the Plant Variety Protection Act and the underlying reasons for this, including Indonesia's national interest and its international and bilateral commitments. The main focus of the paper explores why such policy is not broadly compatible with the Indonesian agricultural tradition of seed sharing. Accordingly, this paper explores the tradition of seed sharing in Indonesian culture known as *adat*. In addition, it explores the likely implication of such protection for national agricultural innovation.

Keywords: *plant-variety protection, international and bilateral commitments, farmers' rights, seed sharing, adat, local varieties and agricultural innovation*

I. CURRENT STATE OF PLANT VARIETY PROTECTION IN INDONESIA

A year prior to the enactment of the new Patent Act of 2001¹, Indonesia enacted the Plant Variety Protection Act (hereinafter called the PVP Act).² Like other intellectual property rights, plant variety protection (PVP) is a relatively new concept for many Indonesians. It was developed because of the patent regime's failure to provide appropriate protection for new plant varieties, which were regarded as the most important outcome in the breeding process.³ The new *sui generis* legislation for the protection of plant varieties was enacted in response to Article 27.3(b) of the TRIPS Agreement, which requires Members to provide an effective *sui generis* law for the protection of plant varieties if not protected by patents.⁴

* Dr Nurul Barizah (Indonesia) is currently Lecturer in Law at the Faculty of Law, Universitas Airlangga, Indonesia. She obtained her Master of Laws (LL.M) and her PhD from the University of Technology, Sydney (UTS), Australia. She is also Head of the Faculty of Law's Intellectual Property Centre at the, Universitas Airlangga, Indonesia.

¹ The Act of the Republic of Indonesia Number 14 of 2001 regarding Patents (State Gazette of the Republic of Indonesia Number 109 of 2001, Supplementary State Gazette Number 4130).

² The Act of the Republic Indonesia Number 29 year 2000 regarding Plant Varieties Protection (State Gazette of the Republic Indonesia Number 241 year 2000, Supplementary State Gazette Number 4130).

³ Andriana Krisnawati and Gazalba Saleh, *Perlindungan Hukum Varietas Baru Tanaman Dalam Perspektif Hak Paten and Hak Pemulia (Legal Protection on New Plant Varieties in the Perspective of Patent Rights and Breeder Rights)* (PT Raja Grafindo Persada 2004), 87.

⁴ The Indonesian Patent Act only protects the process for plant production by using biotechnology techniques, while the PVP Act provides protection of the product resulting from natural and biotechnology techniques in the form of new plants varieties or species through natural and induced mutation, soma clonal variation, individual crop selection, backcrossing and transformation from the original variety through genetic engineering. See Article 6(5)(c) of the Indonesian PVP Act (n 2).

A. THRESHOLDS OF PROTECTION

Under the PVP Act, plant varieties not protected by patent law fall within this regime. The scope of protection covers all categories of plants, whether they generatively⁵ or vegetatively⁶ reproduced, except microorganisms (protected by patent) such as bacteria, bacteroids, microplasm, virus, viroid, and bacteriophage.⁷

The requirement of protection under this Act is similar to that in other States having ratified the International Convention for the Protection of New Varieties of Plants (UPOV Convention) 1991.⁸ Varieties that may be issued PVP must meet the threshold requirements of newness, distinctiveness, uniformity, stability and have a denomination (name).⁹ Both criteria of newness and distinctiveness are determined at the time of the approval of the PVP application.

A variety is regarded as new if the propagation material or the harvested products have not been traded, or may have been traded in Indonesia for less than a year, or been traded overseas for no more than four years for a seasonal plant and six years for an annual plant.¹⁰ A variety is unique if it can be clearly differentiated from other varieties, whose existence is already publicly known.¹¹ A variety is uniform if the main features are proven uniform although varied as a result of changes in planting methods and environment.¹² A variety is considered as stable if the plant's characteristic is unchanged when multiplied in large quantities through specific reproduction cycles and is not modified at the end of each reproduction cycle.¹³

However, this Act is seemingly not designed to provide protection for traditional varieties developed by farmers, as it is very difficult for such varieties to satisfy the threshold requirements of uniformity and stability.

B. RIGHT HOLDER, SCOPE, RIGHTS AND OBLIGATIONS OF THE BREEDER

The PVP right holder can be a breeder, or any person or legal body or other parties that receive further rights from the right holder.¹⁴ If the production of variety is based on a contract of employment, the employer is the right holder without compromising the right of the breeder,

⁵ Generative reproduction refers to plant reproduction through cross breeding of reproductive cells.

⁶ While vegetative reproduction refers to plant production that not occur through cross breeding reproductive cells.

⁷ Explanatory Memoranda of Indonesian Plant Varieties Act, Article 2(1) (n 2).

⁸ UPOV is the acronym of the original name in French *Union pour la Protection des Obtentions Vegetables*. UPOV was established by the International Convention for the Protection of New Varieties of Plants on 2 December 1961, and revised at Geneva on 10 November 1972, on 23 October 1978, and on 19 March 1991.

⁹ Article 2(1) of the Indonesian PVP Act (n 2).

¹⁰ *ibid* Article 2(2).

¹¹ *ibid* Article 2(3).

¹² *ibid* Article 2(4).

¹³ *ibid* Article 2(5).

¹⁴ *ibid* Article 5(1).

except if agreed otherwise.¹⁵ Similarly, if the production of a variety is the result of a commissioned work, the party commissioning the work is the right holder, unless otherwise agreed.¹⁶

While breeders have a right to receive a fair compensation and moral right in which their names are included in the PVP certificate¹⁷, PVP right holders are obliged to implement their PVP rights in Indonesia, to pay an annual fee, and to provide and present the sample of seed varieties.¹⁸ However, if technically and economically implementation of the rights is unfair in Indonesia, right holders may be exempted from the obligation to implement them in Indonesia, provided a written application to the PVP Office is filed, enclosing the reason and evidence from an authorized institution.¹⁹

Article 6 stipulates that for the purpose of propagation, a PVP right holder has the right to use and consent to any parties' or other legal entities' use of the varieties, not only in the form of seeds, but also harvested products.²⁰ This Article applies to a wide range of varieties covering an essentially derived variety²¹, undistinguished varieties from protected varieties, along with a produced variety using a protected variety. The right to use a variety involves a number of activities: (a) the production and multiplication of seeds; (b) the preparation for propagation purposes; (c) advertisement; (d) offering; (e) selling or trading; (f) exporting; (g) and importing and preparation for any of the above activities.²² The scope of the right under this Act is similar to that established in Article 14(1) of the UPOV Convention 1991.

Article 6(4) obviously provides that harvested products for propagation purposes originating from protected varieties must be used with the consent of the PVP right holder. This provision aims to ensure that part of the harvested product is not used for seed multiplication.²³ Furthermore, Article 6(5) stipulates that the usage of new protected varieties requires the consent of the PVP right holders, which also applies to essentially derived varieties. This is consistent with Article 14(5) of UPOV 1991. As essentially derived varieties are eligible for PVP rights, the consent of the owner of the original variety is required to ensure that the PVP right holder or the owner of the denomination of the original variety continues to enjoy

¹⁵ *ibid* Article 5(2).

¹⁶ *ibid* Article 5(3).

¹⁷ *ibid* Article 8.

¹⁸ *ibid* Article 9.

¹⁹ *ibid* Article 9(2)-(3).

²⁰ *ibid* Article 6(2).

²¹ Under Government Regulation Number 13 of 2004 concerning the *Penamaan, Pendaftaran dan Penggunaan Varietas Asal untuk Pembuatan Varietas Turunan* Essential (Denomination, Registration, and the Use of Original Varieties for Developing Essentially Derived Varieties), the 'essentially derived varieties' referred to in Article 1(6), signify varieties resulting from *perakitan* (engineering) of original varieties by selection, such that such varieties express essential features of their original varieties (minimum 70 per cent), but can be clearly distinguished from their original variety by the characteristic occurring as a result of derivation activities. Furthermore, Article 2(2) states that these essentially derived varieties result from certain selection methods, including natural mutation, induction mutation, individual selection of existing varieties, cross breeding (*silang balik*), soma clonal variations and genetic engineering. See also *ibid* Article 6(5)(a), (b) and (c) of the Indonesian PVP Act.

²² *ibid* Article 6(3) of Indonesian PVP Act.

²³ *ibid* Explanatory Memoranda of Article 6(4) of the Indonesian PVP Act.

economic rights from the essentially derived varieties. Therefore, in terms of scope, Article 14 of UPOV 1991 is incorporated into Article 6 of the Indonesian PVP Act.

The only plant variety which cannot be granted PVP is one whose purposes conflict with prevailing laws, social order, ethics or morality, religious norms, and the health and conservation of the environment.²⁴ The production of psychotropic plants is regarded as being contrary to the prevailing laws, public order, health, ethics and living environment. A plant variety deemed contrary to religious principles is, for instance, one that uses genes from animal sources, which goes against the norms of particular religions.²⁵

C. EXCEPTIONS FROM INFRINGEMENT

Article 10 provides three acts that are not regarded as infringing PVP rights: (1) use of the harvested crop of protected varieties provided it is not for commercial purposes; (2) use of protected varieties for research and plant breeding activities; and (3) government use of protected varieties in the light of food supply policy and medicine without infringing the economic right of the PVP right holder.

The requirement and procedure for the use of plant varieties by the Government are enshrined in Government Regulation Number 14 of 2004²⁶, which addresses the possibility of food insecurity and the threat of health in the public interest.²⁷ According to this Regulation, to use protected varieties the Government must consider the economic rights of right holders by providing fair remuneration to them; the amount of such remuneration is based on an agreement between the right holder and the Minister.²⁸ Furthermore, protected varieties can be freely used for the purpose of research activities, plant breeding and constituting new varieties as stock for cross breeding provided they are not used for original varieties in accordance with Article 6(5). The aforementioned Articles are consistent with Articles 15(1) and 17 of UPOV 1991.

D. BREEDERS' RIGHTS VERSUS FARMERS' RIGHTS

According to the PVP Act, the only right granted to the farmer is the use of part of the harvested crops from protected varieties, provided it is not for commercial purpose. The non-commercial purposes under this Article concern a farmer's individual activities, particularly those of small farmers for their own needs and do not include activities to meet the needs of their group.²⁹ This Act seemingly promotes an imbalance in protection between the general

²⁴ *ibid* Article 3 of the Indonesian PVP Act.

²⁵ *ibid* Explanatory Memoranda of Article 3.

²⁶ Government Regulation Number 14 of 2004 Regarding Requirement and Transfer Procedure for Plant Varieties Protection and the Use of Protected Varieties by the Government (State Gazette of the Republic of Indonesia 2004 Number 31, Supplementary State Gazette of the Republic of Indonesia Number 4376).

²⁷ *ibid* Articles 33(1) and (2).

²⁸ *ibid* Articles 33(3) and (4).

²⁹ *ibid* Explanatory Memoranda of Article 10(1) a.

public's interest and the PVP right holder.³⁰ In addition, this Act appears to refer to breeders' rights rather than farmers' rights.³¹

This aspect of the Act, on the scope of breeders' rights and offering a very limited exception for farmers' use, reflects the market-oriented commercial value of the system. For many generations, farmers in Indonesia have exchanged seeds amongst the larger farming community. It should be noted that they engaged in seed exchange activities not for commercial purposes, but rather out of friendship and solidarity with the community to achieve *kerukunan* or social harmony.³²

To a certain extent, it is argued that the PVP Act may have potential implications for the tradition of exchanging seed among traditional farmers. However, the PVP Act may not be an issue if farmers have been exchanging seeds for generations, as presumably the seeds they exchange are traditional seeds and not a new variety bought from the commercial market and thus not covered by the PVP Act.³³ The traditional seed can still be exchanged and distributed by traditional farmers to their neighbours without infringing breeders' rights. However, the exchange of seeds becomes an issue if someone acquires a PVP seed and exchanges it. However, if farmers maintain the use of traditional seeds, they may not obtain the agricultural advantages offered by a PVP seed and thus become less competitive, but they are likely to be involved with small-scale traditional markets rather than large-scale commercial seed markets where the PVP seed is used.³⁴

To be competitive, farmers are required to use PVP seeds, however, since the harvested varieties of these seeds cannot be exchanged and even certain types of seeds cannot be resown, the dependency of farmers on the seed industry is inevitable. The typical farmer in Indonesia is a small economically marginalized farmer with limited land. If farmers are forced to rely upon expensive purchased seed from seed industries, it may potentially destroy their livelihood.

³⁰ Nurul Barizah, *Intellectual Property Implications on Biological Resources; Indonesia's Adoption of the International Intellectual Property Regimes and the Failure to Adequately Address the Policy Challenges in the Area of Biological Resources* (Nagara 2010), 281.

³¹ Farmers' rights is a concept proposed by Mooney. This concept acknowledges 'the contribution farmers have made to the conservation and development of plant genetic resources, which constitute the basis of plant production throughout the world'. While Dutfield argued that farmer's right is one of the IP rights, 'but it is frequently suggested as a principle that could be introduced into an IP system for plant varieties as some forms of compensation or benefit sharing mechanism', see the discussion in Graham Dutfield, *Intellectual Property Rights and the Life Science Industries: A Twentieth Century History* (Ashgate 2003), 216. See also Resolution 5/89, which endorses the concept of farmers' rights. Under the Resolution, farmers' rights mean rights arising from the past, present and future contributions of farmers in conserving, improving, and making available plant genetic resources, particularly those in the centres of origin/diversity. These rights are vested in the international community as trustee for present and future generations of farmers for the purpose of ensuring full benefit to farmers and supporting the continuation of their contributions, as well as the attainment of the overall purposes of the International Undertaking. This Resolution was adopted at the 25th Session of the FAO Conference in Rome, 29 November 1989.

³² Further analysis can be found in Nurul Barizah, 282 (n 30).

³³ *ibid.*

³⁴ *ibid.*

As mentioned earlier, Article 6(5) also stipulates that the use of new protected varieties, along with the use of essentially derived varieties, requires the authorization of the PVP right holder. This Article is another example of the emphasis on the commercial rights of breeders. Even though this Article essentially anticipates the development of modern biotechnology techniques of transferring genes with a high degree of certainty, this provision limits the scope for farmers to develop new seed based on their traditional breeding methods for protected new varieties bought from seeding industries.

In this context, the PVP system appears to favour researchers and commercial plant breeders rather than farmers.³⁵ Article 1(4) of the Act lays down the following condition in its definition of plant breeding (*pemuliaan tanaman*):

Plant breeding is a series of research activities and experiments or the discovery and development of a particular variety, in accordance with, *standard methods* for the production of new varieties while protecting the purity of the new seed that is produced.³⁶

This Article may be interpreted in a way that breeding processes developed by farmers and local communities will not be recognized as plant breeding pursuant to the above provision. Meanwhile, the new varieties developed by commercial plant breeders may be derived from the original plant developed by farmers, but the Act does not clearly spell out the compensation for farmers for developing local varieties used by commercial breeders for creating new varieties.³⁷

E. LOCAL VARIETIES

The Act provides that the State controls local varieties owned by a community.³⁸ The local varieties refer to already existing varieties that have been cultivated by farmers for generations and have become communal property.³⁹ The control of the State will be implemented by the Government.⁴⁰ This includes regulations on right to payment, the use of local varieties in relation to PVP and other efforts for the conservation of genetic resources.⁴¹ The Government is also responsible for giving a denomination to the local varieties.⁴²

Under Government Regulation No. 13 of 2004, the mayor of the city or regency, acting on behalf of the society in their region as the owner of local varieties, has the mandate to control local varieties (*bupati/walikota*) to.⁴³ As a result, a prior agreement with the mayor of the city is required by those intending to use local varieties as original varieties for developing essentially

³⁵ See Hira Jhamtani and Lutfiyah Hanim, *Globalisasi dan Monopoli Pengetahuan, Telaah tentang TRIPs dan Keragaman Hayati di Indonesia (Globalization and Monopoly of Knowledge, Analysis of TRIPs and Biodiversity in Indonesia)* (INFID, KONPHALINDO, Institute of Global Justice 2002), 101.

³⁶ Article 1(4) of Indonesian PVP Act (n 2) (emphasis added).

³⁷ See also Government Regulation Number 13 of 2004 (n 21).

³⁸ *ibid* Article 7(1) of the Indonesian PVP Act of 2000 above (n 2).

³⁹ *ibid* Explanatory Memoranda of Article 7(1).

⁴⁰ *ibid* Article 7(2) of the Indonesian PVP Act 2000.

⁴¹ *ibid* Explanatory Memoranda of Article 7(2).

⁴² *ibid* Article 7(3) of the Indonesian Plant Varieties Act of 2000.

⁴³ Government Regulation No. 13 of 2004, Article 5 (n 21), this role includes naming local varieties and then registering with the PVP office.

derived varieties.⁴⁴ This agreement also needs to spell out the economic benefit of the owner of local varieties for the purpose of increasing prosperity of the community and genetic resources conservation.⁴⁵

Through the PVP Act, the Government asserts controlling authority over plant varieties.⁴⁶ In these circumstances the Government may be seeking to exclude outside misappropriation. However, a local community that has developed these plants may reject excessive governmental control. This kind of provision is justified by the principle of sovereign control, but is contrary to the principles concerning farmers' rights embodied in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)⁴⁷ and the effort in the Convention on Biological Diversity (CBD)⁴⁸- Bonn Guidelines to extend the control of biological resources to local farmers and communities.⁴⁹ In order to adhere to these principles, the state authority over local plant varieties may specify that it will obtain prior informed consent (PIC) and share benefits from local communities, if their varieties are sought for research and commercialization.⁵⁰

The PVP Act is not intended to bar small farmers from the opportunity to use new varieties for their own private use and permanently protects local varieties for the benefit and interest of wider society.⁵¹ In practice, the Act has the potential to limit significantly opportunities for small farmers.

II. CURRENT POLICY DIRECTION: A NEED FOR REVISION

Although most substantive parts of the PVP Act refer to UPOV 1991, including the guidelines for examination, the Indonesian Government has sought to revise the Act from 2007 until the present. The basis for the revision is driven by several motivations, including Indonesia's national interest, along with international and bilateral commitments.

In the context of national interest as an agricultural nation, the revision is motivated by (1) the need for a ready supply of distinct crops and plants for developing a progressive, efficient and strong agriculture;⁵² (2) the need to preserve germplasm resources to enhance the

⁴⁴ *ibid* Article 9.

⁴⁵ *ibid* Article 10(1)-(2).

⁴⁶ Daniel Robinson, *Exploring Components and Elements of Sui Generis Systems for Plant Variety Protection and Traditional Knowledge in Asia: A Study Commissioned by the International Centre for Trade and Sustainable Development* (ICTSD 2007), 29.

⁴⁷ International Treaty on Plant Genetic Resources for Food and Agriculture, opened for signature 3 November 2001 (entered into force on 29 June 2004). Official text available online at: <<http://fao.org/ag/cgrfa/UI.html>>.

⁴⁸ The United Nations Convention on Biological Diversity, done at Rio de Janeiro, 5 June 1992, 31 ILM 822, opened for signature 5 June 1992 (entered into force on 29 December 1993). Text and information on the CBD can be found at the site of the Secretariat of the CBD, UNEP, the Rio Declaration, UN.Doc.A/CONF.151/5/Rev.1 (1992). Available online at: <<http://biodiv.org>>.

⁴⁹ *ibid*.

⁵⁰ *ibid*.

⁵¹ The General Explanatory Memoranda of the Indonesian PVP Act (n 2).

⁵² *ibid* the Preamble of Indonesian PVP Act of 2000, point b.

development of seeding industries in order to obtain superior crops or plant;⁵³ and (3) the need to provide legal protection for individual and legal entities to promote and protect their interests and participation in producing new and superior varieties.⁵⁴

In the context of an international commitment, Indonesia needs to transform the international convention on plant varieties into a national legislative framework.⁵⁵ In other words, Indonesia is favourable to ratifying UPOV 1991, although there is no single obligation under international law for States, including Indonesia, to become a member thereof.

Under the TRIPS Agreement, WTO Members are obliged to provide protection for plant varieties either by patents or by an effective *sui generis* system or by any combination of both.⁵⁶ The TRIPS Agreement does not define the term '*sui generis*', and similarly, the history of the drafting of the treaty does not provide any further reference.⁵⁷ The term '*sui generis*' signifies 'of its own kind' or 'unique', but this understanding fails to identify what types of legal systems are permitted under the Agreement. Thus, UPOV may be regarded as a form of *sui generis* law providing protection of plant varieties as contemplated by TRIPS Article 27.3(b).⁵⁸ However, Members may choose to adopt the protection of plant genetic resources by choosing their own model as long as it is effective.⁵⁹ Accordingly, Members have no legal obligation to adopt the UPOV Convention, or in particular, the most controversial version, UPOV 1991.

Currently, there are two versions of the UPOV Convention which are in force, namely the 1978 and 1991 Acts.⁶⁰ In principle, both Acts provide a minimum standard of protection for

⁵³ *ibid* point c.

⁵⁴ *ibid* point d.

⁵⁵ *ibid* point e.

⁵⁶ Article 27.3(b) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) of 1994. Marrakesh Agreement Establishing the World Trade Organization, Annex 1 C, Legal Instruments – Results of the Uruguay Round Vol. 31; 33 I.L.M.1997, 1201, 15 April 1994 (Entered into force on 1 January 1995).

⁵⁷ Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* (2nd ed, Sweet & Maxwell 2003), 147-151.

⁵⁸ Michael I Jeffrey, 'Intellectual Property Rights and Biodiversity Convention; Reconciling the Incompatibilities of the TRIPS Agreement and the Convention on Biological Diversity' in Burton Ong (ed), *Intellectual Property and Biological Resources* (Marshall Cavendish Academic 2004), 1885-225, 197.

⁵⁹ Based on a 1997 report, there are four elements that any national plant variety protection law must contain in order to qualify as effective under Article 27.3(b) of the TRIPS Agreement: (1) the law shall apply to all species and botanical genera; (2) it shall provide exclusive right to the plant breeder to control particular acts in relation to the protected varieties; (3) it shall provide national treatment and MFN treatment to breeders from other WTO Members; and (4) it shall consist of procedures for breeders to enforce their rights. See Laurence R Helfer, 'Intellectual Property Rights in Plant Varieties, International Legal Regimes and Policy Option for National Government', FAO Legislative Study 85, Food and Agriculture Organization of the United Nations, Rome (2004), 56-7.

⁶⁰ UPOV was first adopted on 2 December 1961 (hereinafter UPOV 1961). It was amended in 1972 and then it was revised again in 1978 (hereinafter UPOV 1978). UPOV 1978 was amended again in 1991 (hereinafter UPOV 1991). Interestingly, when UPOV 1978 entered into force, States could no longer accede to UPOV 1961. See UPOV 1978, Article 33(3). However, when UPOV 1991 entered into force, UPOV 1978 was closed to further accession except for those States that had already notified their intention to accede to UPOV 1978 and had started that process. See UPOV 1978 Article 37(3) (n 8). See also Nurul Barizah, 'TRIPs Plus on Plant Varieties Protection under Indonesia-Japan Economic Partnership Agreement (IJEPA) [2009] 24 Yuridika 90, 95.

plant varieties fulfilling the legal thresholds of protection (newness, distinctiveness, uniformity⁶¹ and stability).⁶² The UPOV Convention is distinct from the patent system because it provides two exclusions from protection, namely, farmer's rights⁶³, as mentioned earlier, and research and development (R&D) exceptions.⁶⁴ Having undergone several revisions, the 1978 and 1991 Acts have a number of differences. Under UPOV 1978, consent from the breeder is not required for 'the utilization of the variety as an initial source of variation for the purpose of creating other varieties or for the marketing of such varieties'⁶⁵, and farmers can also save seeds of protected varieties.⁶⁶ This farmer's privilege, according to Blakeney, is crucial for food security in a number of countries in which farmers can save their own seed for replanting and exchange.⁶⁷

The 1991 Act of the UPOV Convention revised the two aforementioned exemptions and broadened breeders' rights to encompass all acts relating to the production and reproduction of seeds, including other planting material.⁶⁸ Accordingly, under UPOV 1991, farmers' privilege to save and reuse seed from protected varieties without the breeder's consent is no longer protected.⁶⁹ Furthermore, with regard to farmers, UPOV 1991 provides that:

Each contracting party may, within reasonable limits and subject to the safeguarding of the legitimate interests of the breeder, restrict the breeder's right in relation to any variety in order to permit farmers to use for propagating purposes, on their own holdings, the product of the harvest which they have obtained by planting, on their own holdings, the protected variety.⁷⁰

In interpreting the term 'legitimate interest' under the above provision, Blakeney argues that it refers to 'royalties that should be paid to the breeder for reuse of seed'.⁷¹ Protected material can thus be reused by farmers under UPOV 1991 if they pay royalties.

Moreover, 'essentially derived varieties and certain other varieties' of the protected varieties⁷², are also secured by the 1991 Act of the UPOV Convention as the scope of the protection is extended to cover those varieties. This extension may be limited to varieties 'that

⁶¹ *ibid.* UPOV 1991 uses the word 'uniform', while UPOV 1978 uses the word 'homogeneous'.

⁶² See Article 5 of UPOV 1991; Articles 6-9 define these requirements (n 8).

⁶³ Graham Dutfield (n 31).

⁶⁴ Article 15 of UPOV 1991 (n 8).

⁶⁵ *ibid* UPOV 1978 Article 5(3).

⁶⁶ According to Blakeney, under Article 5 of UPOV 1978, 'the rights of the breeder of a protected plant variety were restricted to commercial dealing in the *reproductive material* through (1) production for purposes of commercial marketing, (2) offering for sale, and (3) marketing. This meant that a farmer growing a first crop from purchased seed of the protected variety was legally free to save seed from the first harvest, which could be used for sowing a second and subsequent crops on his own farm'. Michael Blakeney, 'Intellectual Property Rights and Global Food Security', in David Vaver III (ed) *Intellectual Property Rights: Critical Concepts in Law* (Routledge 2006) 315-338, 318.

⁶⁷ *ibid.*

⁶⁸ Article 14(1) of UPOV 1991 (n 8).

⁶⁹ Michael Blakeney, 318 (n 66).

⁷⁰ Article 15(2) of UPOV 1991 (n 8).

⁷¹ *ibid.*

⁷² *ibid* Article 14(5).

take over virtually the whole genome of the protected variety'.⁷³ Interestingly, a research exception is permitted as Article 15(1) underlines the 'free of availability of protected varieties as a source of germplasm for the introduction of further variation'.⁷⁴ However, in the light of the wider range of plants to which UPOV 1991 applies and the abolition of farmers' rights, the Convention strengthens the protection of breeders and provides a broader approach for PVP to all forms of production at an international level.⁷⁵

Consideration should be given to concerns about the effect of the PVP system on developing countries. The greater width and higher thresholds of protection required under UPOV 1991 has led certain commentators to conclude that it poses certain obstacles for developing nations and may not be an appropriate model of PVP for those countries.⁷⁶ It is argued that farmers in developing countries may not be able to pay for protected seeds which could become more expensive due to the UPOV 1991 standard.⁷⁷ It is also argued that farming practices in developing countries are different in character to farming practices in developed countries, and that UPOV 1991 does not suit developing countries' practices.⁷⁸ The practice of farmers in developing countries usually involves small-land holdings and manpower or animal working, while in developed countries farmers have large farms and agribusiness and also use chemical substances.⁷⁹ Those problems are associated with UPOV 1991 and not UPOV 1978 because under UPOV 1978, farmers' rights are legitimate, while breeders' rights are not as strong as those enshrined under UPOV 1991.

It should be noted that although the UPOV Convention was originally designed for developed nations with the aim of providing exclusive rights for breeders of new plant varieties, many developing nations have also ratified it.⁸⁰ This is not merely because the UPOV Convention provides an alternative to patents as a *sui generis* system, as mentioned earlier, but is partly on account of the duress imposed by negotiations on bilateral trade agreements.⁸¹ As

⁷³ Michael Blakeney, 318 (n 66).

⁷⁴ *ibid.*

⁷⁵ Article 15 of the UPOV 1991 (n 8).

⁷⁶ Nurul Barizah, 97 (n 60).

⁷⁷ *ibid.*

⁷⁸ According to Marin, broadly speaking, farmers in developing countries use subsistence agriculture in small land holdings for their main sources of income. See Patricia Lucia Cantuaria Marin, *Providing Protection for Plant Genetic Resources: Patent, Sui Generis Systems and Biopartnerships* (Kluwer Law International 2002) 49-50; see farmers' privilege in Graham Dutfield, *Intellectual Property Rights, Trade and Biodiversity: Seeds and Plant Varieties* (Earth Scan 2000), 33.

⁷⁹ Nurul Barizah, 97 (n 60).

⁸⁰ The first developing countries to join UPOV were Uruguay, Argentina and South Africa, followed by a number of developing countries after 1994. UPOV has 70 member countries (status on 22 October 2012). Available online available at:

<<http://www.upov.org/export/sites/upov/members/en/pdf/pub423.pdf>>

⁸¹ See, for instance, The Viet Nam - United States Trade Agreement which obliges both parties to become members of UPOV, in the Commission on Intellectual Property Rights (CIPR), Integrating Intellectual Property Rights and Development Policy, (Final Report 2002), 62. Available online at:

<http://www.iprcommission.org/papers/pdfs/finals_report/CIPRfullfinal.pdf>. See also Peter Drahos, 'Expanding Intellectual Property's Empire: the Role of FTAs' (ICTSD 2003). Available online at: <http://www.bilaterals.org/IMG?doc?expanding_IP_empire_-_Role_of_FTAs.doc> (last accessed August 2012). See also Linda Weiss (et al.) *How to Kill A Country: Australia's Devastating Trade Deal with the United States* (Allen & Unwin 2004), 113-138.

Correa argues, such an agreement can be used as an instrument for developing the highest global standards for IP protection.⁸²

Under the Indonesia-Japan Economic Partnership Agreement (IJEPA) for instance, Indonesia is obliged to seek to become a party to a number of international conventions for the protection of intellectual property; one of them is UPOV 1991 as stipulated under Article 106.⁸³ Furthermore, Article 116 provides that 'each party shall provide for the protection of all plant genera and species by *an effective plant varieties protection system which is consistent with the 1991 UPOV Convention*' (emphasis added). Consequently, Indonesia shall adopt UPOV 1991 and shall amend its national PVP Act in line with UPOV 1991'.

Some argue that it is potentially risky and may not be appropriate for developing nations to implement UPOV 1991, as the UPOV 1991 provision was actually designed for developed countries with commercial breeding industries.⁸⁴ Furthermore, UPOV 1991 may also not be appropriate for developing countries on the basis that the characteristics of their agricultural system, culture and technology are totally different from those of the original UPOV Members.

Furthermore, in the context of sustainable development, the application of UPOV 1991 may disadvantage a country⁸⁵ in which agriculture plays an important socio-economic role, as well as in those where the biological and cultural diversity in agriculture must be protected and rewarded for their commercial benefits. Accordingly, the application of UPOV 1991 for an agriculture-reliant country such as Indonesia may still be inappropriate for the time being.

III. TRADITIONAL FARMERS: *ADAT* ON SEED AND CULTURE OF SHARING

As mentioned earlier, the PVP Act prohibits farmers from sharing and exchanging purchased seeds of the protected varieties. In the context of Indonesia, the sharing and exchange of seeds are based on time-honoured principles of traditional wisdom⁸⁶ belonging to

⁸² See this analysis in Carlos M Correa, 'Bilateral Investment Agreement: Agents of New Global Standards for the Protection of Intellectual Property Rights?' A study commissioned by GRAIN, 2004. Available online available at: <<http://grain.org/briefings/?id1186>> (last accessed 2 October 2012).

⁸³ See Article 106 of the IJEPA.

⁸⁴ Maristela Basso and Edson Beas Rodriguez Jr, 'Free Trade Agreement, UPOV and Plant Varieties' in Christopher Heath and Anselm Kamperman Sanders (eds) *Intellectual Property and Free Trade Agreement* (Hart Publishing 2007), 196.

⁸⁵ *ibid.*

⁸⁶ This traditional wisdom is based on the following principles: (1) People's dependency on nature requires a harmonious relationship, in which people are a part of nature itself which should be kept in balance; (2) The right over certain *adat* territory is exclusive as right over and or communal property resources or collective resources known as *adapt* territory known as *ulayat* in most part of Sumatra, Petuanan in Maluku. This binds all *adat* people to keep and manage it for common justice and prosperity, and to secure it from exploitation by other parties; (3) The system of knowledge and the structure of *Adat* Governance provides the capacity to solve their problem related to the use of forest resources; (4) Allocation system and *Adat* law enforcement to secure communal property resources from over use whether by their own community or other parties outside the community; (5) Distribution sharing mechanism of harvest crop of communal property resources had able to eliminate social envy in the society, see Abdon Nababan, 'Pengelolaan Sumberdaya Alam Berbasis Masyarakat Adat, Tantangan dan

many collective communities. According to research conducted by Nababan, *adat* communities also have a distribution-sharing mechanism of harvested crop along with communal property resources, which has significant value for eliminating social envy within the society.⁸⁷ In addition, it has been shown that, through the traditional wisdom of Indonesian *adat*, the society has able to sustain and enrich biodiversity⁸⁸ because each ethnic group in Indonesia has its own measure to conserve genetic resources.⁸⁹

The *Dayak Kanayant* community located in West Kalimantan, for example, observes a traditional ritual related to rice called *Naik Dango*, which is usually conducted after harvest.⁹⁰ On that ceremonial day, according to Hira and Hanim, all neighbouring villages come together with their own seeds from their harvest, including their saving seeds.⁹¹ Those seeds are then exchanged among them and planted for the forthcoming session. This tradition enriches the varieties of rice genetic resources.⁹² The varieties developed by farmers also enrich the collection of International Rice Research Institutes (IRRI)⁹³, and become valuable material for further breeding processes and innovation.

This example shows that seeds and their related knowledge are not part of trading activities, as some ethnic groups believe that a seed is not part of commercial good. A seed, according to the *Dayak Kanayant* community, for example, is common property owned by all member of community, including the knowledge related to such seeds.⁹⁴ Those perspectives are not essentially in keeping with the notion of plant varieties protection in which seed is considered as a trade commodity.

Indonesian *adat* communities share similar principles with the majority of people living in developing countries. Possey observed that *adat* communities believe that sharing and not keeping resources will bring power.⁹⁵ They believe that 'wealth comes from giving attitude, not from keeping and taking'. In a similar vein, Manuwoto argues that the ratification of the TRIPS Agreement is another form of cultural imperialism of developing countries such as Indonesia.⁹⁶ This is because the TRIPS Agreement represents the cultural spirit of developed nations, which is unknown under Indonesian *adat* culture.

Peluang' (*Adat Society* -based Natural Resources Management) (paper presented at *Pelatihan Pengelolaan Lingkungan Hidup Daerah*, the Centre of Environmental Research, Bogor Institute of Agriculture – IPB, 5 July 2002), 2.

⁸⁷ *ibid.*

⁸⁸ *ibid.*

⁸⁹ *ibid.* This system differs from one ethnic group to another in accordance with social and cultural conditions and the local type of ecosystem. Such groups generally have a system of knowledge and management of local resources inherited and developed continuously from their ancestors. For example, the *Adat* communities in Kimaan Island, Merauke Regency and Irian Jaya have been developing 144 cultivars of sweet potatoes, while Dani Ethnic, in Palimo, *Lembah Baliem*, has been developing 74 cultivars of sweet potatoes.

⁹⁰ Jhamtani Hira and Lutfiyah Hanim, 70 (n 35). See also this analysis on Nurul Barizah, 355 (n 30).

⁹¹ *ibid.*

⁹² *ibid.*

⁹³ *ibid.*

⁹⁴ *ibid.*

⁹⁵ Possey in M. Baumann (et al.) *The life Industry: Biodiversity, People and Profit* (World Wide Fund for Nature and SwissAid 1996).

⁹⁶ As cited in Hira Jhamtani and Lutfiyah Hanim, 46 (n 35).

According to the Western conception, an innovation will flourish thanks to economic incentives provided through intellectual property protection. From the perspective of local communities, innovation appears to develop from the courage to fulfil the needs of life. This means that innovation is not only born in scientific laboratories, but can suddenly develop everywhere, including in land farms and villages.⁹⁷ In Indonesia for instance, farmers in Kawarang, one of the regencies in West Java, sought to make a unique innovation from hybrid rice they cultivated for the purpose of obtaining a uniform result of the IR64 type-derivative.⁹⁸ The resulting product was called *Muncul* rice. Similarly, farmers in Subang and Indramayu, both being regencies in West Java, did the same but this process resulted in different types of rice. The farmers used a similar name as the earlier innovation with no objection from Kawarang farmers. This knowledge was also shared with many other farmers without any compensation. Every person can cultivate it, can develop its derivatives and disseminate it. The attitude of these breeders was that it is unnecessary to monopolize knowledge and resources to innovate something new and useful.⁹⁹

Accordingly, the ratification of UPOV 1991 is contrary to the Indonesian *adat* on seed, including its agricultural tradition and culture.

IV. THE INDONESIAN PVP ACT AND NATIONAL AGRICULTURAL INNOVATION

Prior to the existence of the PVP Act, R&D in the agricultural sector in Indonesia was publicly funded, primarily by the Agency for Agricultural Research and Development (AARD) of the Department of Agriculture. Consequently, the resulting R&D activities constituted a public good that everyone could use and reproduce for their own use and for commercial purposes, although the Government could have claimed ownership.

Moeljonopawiro, from the National Commission of Germ Plasm, contends that such a situation is not conducive to the development of a private sector seed industry for producing high quality seeds in Indonesia.¹⁰⁰ Research has shown that R&D in agricultural industries is still limited to creating hybrid varieties.¹⁰¹ The richness of biological resources in Indonesia is not being optimally utilized for breeding new varieties because there is little activity in the breeding process.¹⁰² Moeljonopawiro points out that, on average, there are few breeding activities for the development of new varieties in Indonesia, primarily on account of limited research funding, and their being solely dependent on government funding, along with limited

⁹⁷ *ibid* 42.

⁹⁸ Since the green revolution started in the late 1960s, most farmers in Indonesia cultivated hybrid rice (IR 64 type), which was developed by a research institution, and gradually they stopped using traditional types of rice. However, they still maintain *ketan* (glutinous rice), as this rice is usually needed by the society for ceremonial food. Farmers did not cultivate it on special land, but in between an IR 64-type. This method is known as *clingkrik*.

⁹⁹ Hira Djamtani and Lutfiyah Hanim, 42 (n 35).

¹⁰⁰ Sugiono Moeljonopawiro, 'Perlindungan Varietas Tanaman: Kaitannya dengan Pengelolaan Plasma Nutfah dalam Pengembangan Varietas', 1. Available online at: <http://anekaplanta.wordpress.com/2008/01/13/perlindungan-varietas-tanaman-kaitannya-dengan-pengelolaan-plasma-nutfah-dalam-pengembangan-varietas/> (last accessed March 2012).

¹⁰¹ *ibid*.

¹⁰² *ibid*.

skilled breeders, lack of involvement by national seed industries, lack of appreciation and low salary for breeder researchers, lack of perception of the importance of the economic role of breeding activities, and lack of guarantee for the legal protection of new varieties.¹⁰³

The enactment of the PVP Act is intended to assist advanced agricultural development in Indonesia.¹⁰⁴ However, while the PVP Act entered into force 12 years ago, there is little evidence to suggest that this Act has enhanced agricultural innovation and R&D in Indonesia. Equally, private sector participation in R&D in the agricultural sector is barely noticeable.

Interestingly, in 1999, prior to the enactment of the Government Regulation on Transfer Technology, requiring higher education and R&D institutes to establish special units responsible for the implementation, management and transfer of technology of intellectual property and other R&D results¹⁰⁵, the Department of Agriculture had already established the Office for the Management of Intellectual Property and Transfer of Technology, known as *KP KIAT*. This Office was intended to be a bridge between the AARD and agribusiness.¹⁰⁶ However, such transfer of technology is largely inexistent.

Furthermore, a positive correlation between the PVP Act and an innovative spirit in the agricultural sector has yet to be demonstrated in Indonesia. Toto Sutater, the Director of *KP KIAT*, contends that it is difficult to examine whether the existence of intellectual protection in Indonesia stimulates researchers to carry out research, because the average knowledge of researchers about intellectual protection is still limited and the awareness to protect their innovation is still lacking.¹⁰⁷ In addition, Sutater states that there is a mismatch between the career of researchers in public institutions and the need to protect innovation under intellectual protection.¹⁰⁸ Some researchers argue that the outcome of publicly funded research should be the public good and accordingly, it should not be protected under an intellectual property regime.¹⁰⁹

Although, corporations are obliged to allocate part of their income to R&D according to the National System on R&D Act, most local agribusiness companies lack a budget for research. The cooperation between publicly funded research and seed industries is relatively slight and limited to an examination fund. So far, there has been no single agribusiness that has provided funding for developing new varieties.¹¹⁰

¹⁰³ *ibid* 1-2.

¹⁰⁴ See the Preamble point (a) of the Indonesian PVP Act (n 2).

¹⁰⁵ See further Article 16 of the Government Regulation of the Republic of Indonesia Number 20 of 2005 on the Transfer of Technology Intellectual Property and Result of Research and Development Activities by Higher Education and Research and Development Agencies (State Gazette of the Republic Indonesia Number 43 of 2005, Supplementary State Gazette Number 4497).

¹⁰⁶ It acts as a Centre for IPRs of the Indonesian Agency for Agricultural R&D and was established on the basis of a cooperation between the Agency for Agricultural R&D and the Indonesian Institute for Agricultural Research. It undertakes the management of intellectual property protection and transfers technology in the field of agriculture. It reaches out to the private sector (businessmen) with the aim of transferring technology commercially.

¹⁰⁷ The interview was conducted in his office in Bogor, Indonesia (the transcript is available upon request from the author).

¹⁰⁸ *ibid*.

¹⁰⁹ *ibid*.

¹¹⁰ *ibid*.

Otherwise, imported seeds have dominated the market because Indonesia is still unable to create high quality seed and most seed is of subtropical varieties for which Indonesia does not have germ plasma. Under Act No. 12 of 1992¹¹¹, the importation of seed is prohibited, except in the form of *benih bina* (breeder seeds).¹¹² In practice, the Directorate of Seeding Policy grants permission for the importation of seed if such seed has not yet been produced in Indonesia and it is superior compared to domestic seeds.¹¹³ This policy has thrown open the flow of imported seeds on the grounds that they are usually high yielding seeds that have not yet been produced in Indonesia. This practice may undermine the long-term future of seed development.

V. CONCLUSION AND RECOMMENDATION

A. CONCLUSION

Although Indonesia is not a member of UPOV 1991 as yet, the Indonesian PVP Act, including its examination manual, is largely based on UPOV 1991. Accordingly, most of the substantive parts of the Act are already in line with UPOV 1991. The recent effort to revise the Act is intended to pave the way for ratifying UPOV 1991 and bringing the Act into conformity with UPOV 1991 provisions. The obligation to ratify UPOV 1991 is enshrined in a bilateral agreement with Japan. However, ratification of UPOV 1991 seems inappropriate for Indonesia at this stage of its agricultural development.

The ratification of UPOV 1991 is contrary to the Indonesian *adat* on seeds, including its agricultural tradition and culture. Some ethic groups believe that seeds and their related knowledge are not part of commercial goods, but constitute common property. The tradition of sharing resources, including seeds, has been part of traditional wisdom for many Indonesian communities for centuries. This tradition highlights the concept of common property, as well as the need to promote social harmony and avoid social envy.

The Indonesian PVP Act creates an imbalance of rights between breeders and farmers. Moreover, it provides the authority for the Government to control local plant varieties as a manifestation of the principle of sovereign control. However, it goes against ITPGRFA's principles regarding farmers' rights and the effort of the Convention on Biological Diversity to extend control of biological resources to local farmers and community.

The enactment of the PVP Act is intended to advance agricultural development in Indonesia. However, there is little evidence that the PVP Act has enhanced agricultural innovation and R&D in Indonesia. Similarly, private sector participation in R&D in the agricultural sector is barely noticeable. Thus, national agricultural R&D is still dominated by public research funding.

¹¹¹ The Act of Republic Indonesia Number 12 of 1992 on Crop Cultivation System (State Gazette of the Republic of Indonesia Number 46 of 1992, Supplementary State Gazette Number 3478).

¹¹² *ibid* Article 10 refers to the introduction from overseas conducted in the form of seed or *materi Induk* for plant breeding. Furthermore, Article 17(3) emphasizes that the importation of seed from overseas must satisfy the quality standard of *benih bina* (breeder seeds).

¹¹³ See the Directorate of Seeding and (Sarana Usaha) Policy. Available online at:
<<http://ditjenbun.deptan.go.id>>

B. RECOMMENDATION

The Indonesian Government should undertake a comprehensive study or research, based on a consideration of the advantages and drawbacks of ratifying UPOV 1991 from a number of perspectives, particularly that of an agricultural nation. A similar study should also be conducted prior to entering into any new commitment such as a bilateral agreement. This study should include the legal consequences which may form the basis for justifying a policy to ratify UPOV or to amend the Act. The result of such a study should be made available to the public along with all stakeholders.

It is also important for the Government to increase the public's awareness of the protection of plant varieties, particularly for groups that have a strong influence on decision-making processes, such as the People's Representative Council, university students and the Indonesian Farmers' Association. This is largely because PVP is a new concept for many Indonesians.

BIBLIOGRAPHY

Conventions and other International Agreements

Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) - Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments – Results of the Uruguay Round Vol. 31; 33 I.L.M.1997, 1201, 15 April 1994 (entered into force on 1 January 1995)

Bonn Guidelines on Access to Genetic resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, adopted at the COP VI of CBD at Hague, on 7-19 April 2002, UN Doc. UNEP/CBD/COP/6/20

International Convention for the Protection of New Varieties of Plants, 2 December 1961, as revised at Geneva on 10 November 1972, on 23 October 1978 and on 19 March 1991

International Treaty on Plant Genetic Resources for Food and Agriculture, opened for signature on 3 November 2001 (entered into force on 29 June 2004). Official text available online at: <<http://fao.org/ag/cgrfa/UI.html>>

The United Nations Convention on Biological Diversity, done at Rio de Janeiro, 5 June 1992, 31 ILM 822, opened for signature on 5 June 1992 (entered into force on 29 December 1993). The text and information on the CBD can be found at the site of the Secretariat of the Convention on Biological Diversity, UNEP, the Rio Declaration, UN.Doc.A/CONF.151/5/Rev.1 (1992). Available online at: <<http://biodiv.org>>

Resolution 5/89, adopted at the 25th Session of the FAO Conference in Rome, 29 November 1989

National laws of Indonesia

The Act of the Republic Indonesia No. 29 of 2000 on Plant Variety Protection (State Gazette of the Republic Indonesia No. 241 2000, Supplementary State Gazette No. 4043)

The Act of Republic Indonesia No. 12 of 1992 on Crop Cultivation System (State Gazette of the Republic Indonesia No. 46 of 1992, Supplementary State Gazette Number 3478)

The Act of the Republic of Indonesia No. 14 of 2001 on Patents (State Gazette of the Republic of Indonesia No. 109 2001, Supplementary State Gazette No. 4130)

Government Regulation No 13 of 2004, regarding the 'Penamaan, Pendaftaran dan Penggunaan Varietas Asal untuk Pembuatan Varietas Turunan Essential' (Denomination, Registration, and the Use of Original Varieties for Developing Essentially Derived Varieties) (State Gazette of the Republic of Indonesia No 30 of 2004, Supplementary State Gazette Number 4373)

Government Regulation No 14 of 2004 Regarding the Requirement and Transfer Procedure for Plant Variety Protection and the Use of Protected Varieties by the Government (State Gazette of the Republic of Indonesia Year 2004 Number 31, Supplementary State Gazette of the Republic of Indonesia Number 4376)

Government Regulation of the Republic of Indonesia Number 20 of 2005 on the Transfer of Technology, Intellectual Property and Result of Research and Development Activities by Higher Education and Research and Development Agencies (State Gazette of the Republic Indonesia No. 43 of 2005, Supplementary State Gazette Number 4497)

Books, journal articles, Internet materials, etc.

Barizah N, *Intellectual Property Implications on Biological Resources; Indonesia's Adoption of the International Intellectual Property Regimes and the Failure to Adequately Address the Policy Challenges in the Area of Biological Resources* (Nagara 2010)

Barizah N, 'TRIPS-Plus on Plant Varieties Protection under the Indonesia-Japan Economic Partnership Agreement (IJEPA) [2009] 24 Yuridika 90

Basso M and Rodriguez E B Jr, 'Free Trade Agreement, UPOV and Plant Varieties' in Christopher Heath and Anselm Kamperman Sanders (eds) *Intellectual Property and Free Trade Agreement* (Hart Publishing 2007)

Blakeney M, 'Intellectual Property Rights and Global Food Security', in David Vaver III (ed) *Intellectual Property Rights: Critical Concepts in Law* (Routledge 2006) 315-338

Commission on Intellectual Property Rights (CIPR), Integrating Intellectual Property Rights and Development Policy, (Final Report 2002. Available online at:

<http://www.iprcommission.org/papers/pdfs/finals_report/CIPRfullfinal.pdf>

Correa C M, 'Bilateral Investment Agreement: Agents of New Global Standards for the Protection of Intellectual Property Rights?' A study commissioned by GRAIN, 2004. Available online: <<http://grain.org/briefings/?idl186>> (last accessed 2 October 2012)

Draho P, 'Expanding Intellectual Property's Empire: the Role of FTAs' (ICTSD 2003). Available online available at: <http://www.bilaterals.org/IMG?doc?expanding_IP_empire_-_Role_of_FTAs.doc>

Dutfield G, *Intellectual Property Rights and the Life Science Industries, A Twentieth Century History* (Ashgate 2003)

Dutfield G, *Intellectual Property Rights, Trade and Biodiversity: Seeds and Plant Varieties* (Earth Scan 2000)

Gervais D, *The TRIPS Agreement: Drafting History and Analysis* (2nd ed, Sweet & Maxwell 2003)

Helfer L R, 'Intellectual Property Rights in Plant Varieties, International Legal Regimes and Policy Option for National Government', FAO Legislative Study 85, Food and Agriculture Organization of the United Nations, Rome (2004)

Jeffrey M I, 'Intellectual Property Rights and Biodiversity Convention: Reconciling the Incompatibilities of the TRIPS Agreement and the Convention on Biological Diversity' in Burton Ong (ed), *Intellectual Property and Biological Resources* (Marshall Cavendish Academic 2004), 1885-225

Jhamtani H and Hanim L, *Globalisasi dan Monopoli Pengetahuan, Telaah tentang TRIPs dan Keragaman Hayati di Indonesia (Globalization and Monopoly of Knowledge, Analysis of TRIPs and Biodiversity in Indonesia)* (INFID, KONPHALINDO, Institute of Global Justice 2002)

Krisnawati A and Saleh G, *Perlindungan Hukum Varietas Baru Tanaman Dalam Perspektif Hak Paten and Hak Pemulia (Legal Protection on New Plant Varieties in the Perspective of Patent Rights and Breeder Rights)* (PT Raja Grafindo Persada 2004)

Marin P L C, *Providing Protection for Plant Genetic Resources: Patent, Sui Generis Systems and Biopartnerships* (Kluwer Law International 2002)

Moeljonopawiro S, 'Perlindungan Varietas Tanaman: Kaitannya dengan Pengelolaan Plasma Nutfah dalam Pengembangan Varietas' 1. Available online at:
<<http://anekaplanta.wordpress.com/2008/01/13/perlindungan-varietas-tanaman-kaitannya-dengan-pengelolaan-plasma-nutfah-dalam-pengembangan-varietas/>>

Nababan A, 'Pengelolaan Sumberdaya Alam Berbasis Masyarakat Adat, Tantangan dan Peluang' (*Adat Society-Based Natural Resources Management*) (paper presented at *Pelatihan Pengelolaan Lingkungan Hidup Daerah*, The Centre of Environmental Research, Bogor Institute of Agriculture – IPB, 5 July 2002)

Possey in Baumann, M (et al.) *The Life Industry: Biodiversity, People and Profit* (World Wide Fund for Nature and SwissAid 1996)

Robinson D, *Exploring Components and Elements of Sui Generis Systems for Plant Variety Protection and Traditional Knowledge in Asia: A Study Commissioned by the International Centre for Trade and Sustainable Development* (ICTSD 2007)

Weiss L (et al.), *How to Kill A Country: Australia's Devastating Trade Deal with the United States* (Allen & Unwin 2004)

6 ENFORCING INTELLECTUAL PROPERTY RIGHTS IN MEXICO: A DICHOTOMY BETWEEN PROMOTING COMPETITIVENESS AND THE RULE OF LAW

***Luis Ricardo Rodriguez Meneses**

ABSTRACT

The article addresses the struggles of enforcing intellectual property rights in Mexico. According to the information available, counterfeit goods are widespread within the country. Efforts to diminish the illegal traffic of such goods should begin at the border; however, Customs authorities lack the legal and technical capabilities to detect and detain such goods. As Mexico progresses under a new administration and a favourable economic outlook for investors, legal reforms must be implemented in order to avail titleholders of recourse against intellectual property infringement.

Keywords: *customs, enforcement, intellectual property, rights*

I. INTRODUCTION

It is widely known that enforcing intellectual property rights is challenging both for developed and for developing countries. The trade of counterfeit goods has a negative effect on businesses throughout the world. In addition to the adverse economic impact on enterprises, consideration should also be given to the social ramifications of such practices, commonly linked to other criminal activities such as drug trafficking and money laundering.

Mexico has had its share of struggles in dealing with the enforcement of intellectual property infringement; objectively, and from a public policy standpoint, the enforcement of intellectual property rights has been relegated to the backburner, because it is considered not as threatening as other criminal activities that have in some regions crippled Mexican society. As of this date, several business associations in Mexico have projected the impact of piracy on the formal market. According to a study by the American Chamber of Commerce¹, it exceeds 50 per cent of the industry in certain sectors such as movies and music, and has a significant share in other sectors, including apparel and footwear.

The infringement of intellectual property rights in Mexico primarily occurs in four sectors: luxury goods, pharmaceuticals, food and drinks, and software. Based on information provided by Senator Jorge Ocejo, of the National Action Party (PAN), such illegal activities

* **Mr Luis Ricardo Rodríguez Meneses** (Mexico) is lecturer in international trade and customs comparative law in the Master's in Law programme of the Monterrey Institute of Technology and Higher Studies Graduate School of Public Administration in Mexico. He is also a Partner of KPMG Cardenas Dosal S.C., and is head of the Trade and Customs/Global Location and Expansion Services for Latin America. He obtained a law degree specializing in International Law from the University of the Americas, Puebla. He also holds a Master's Degree (LL.M) in International Trade Law from the University of Arizona. In 2005, he received a certificate of registration from the State Bar of California in the United States as an international legal consultant specializing in the Laws of Mexico. In the course of his professional experience, he has served as Legal Consultant to the National Law Centre for Inter-American Free Trade in various projects related to international trade. His areas of service include intellectual property, customs valuation, tariff classification, international contracts, dumping, administration of special export promotion programmes and general matters related to international trade.

¹ <<http://www.amcham.com.mx/wcnews/NewsArticleDisplay.aspx?articleid=262>>

represent a loss estimated at 145 million euros per year.² Such losses comprise revenue derived from sales, special consumption taxes, import duties and income tax. Factors that contribute to such levels of infringement of intellectual property rights in Mexico include consumer culture, low purchasing power and the lack of effective mechanisms capable of holding consumers and sellers accountable for such illegal activities.

Unfortunately, the Mexican Government has failed to provide any official information regarding the infringement of intellectual property rights in Mexico. The abundance of counterfeit goods in the streets throughout the country is evident, but the level or percentage of inputs imported infringing intellectual property rights and utilized in Mexico to produce other goods is unclear. Obviously, given the availability of counterfeit goods visible to the general public, which are subject to scarce accountability, one can easily conclude that the enforcement of intellectual property rights at the Ports of Entry is clearly insufficient.

For businesses established in Mexico and those seeking to take advantage of its steady economic conditions, the protection of intellectual property rights has become a crucial topic. In fact, it was recently raised as a major concern for countries of the Trans-Pacific Strategic Economic Partnership, to which Mexico is also in the process of negotiating its participation.

Seeking to balance an open market policy with an effective legal framework that induces compliance with the applicable legal provisions is quite an endeavour. Presumably, the trade of infringing goods and inputs should be predominantly contained at the border. Nevertheless, the existing customs legal framework fails to provide relief for the subject matter. As it stands, customs officials are only allowed to perform the activities specifically provided for in customs legislation such as noting irregularities regarding valuation, tariff classification, and origin declarations. Although generally deemed compliant with Section 4 of the TRIPS Agreement regarding border measures³, a case can be made that the current infringement conditions in Mexico demand an amendment of the existing Customs legislation in order to allow Customs *ex officio* action.

In that regard, the negotiating parties to the Trans-Pacific Strategic Economic Partnership have expressed concern over the policies and procedures implemented by Mexican Customs on the entry of infringing goods into Mexico. This concern is due to the exaggerated burden imposed on the right holder to denounce possible infringement, which is analysed in the next Section, and the low incidence of reviews at the points of entries that is in some cases less than two per cent of the total shipments that enter the country. An additional concern is the ability of customs employees to act against the flagrant infringement of intellectual property rights, given they are not officials and thus are not empowered to act upon crimes related to such infringements.

II. LEGAL FRAMEWORK

Upon signing the GATT in 1986, Mexican laws relating to trade and investment were thoroughly overhauled. Laws relating to foreign trade, customs, competition policy and obviously laws governing industrial property and copyright were significantly revised.

² <<http://www.senado.gob.mx/index.php?ver=sp&mn=2&sm=2&id=10555&lg=61>>

³ *The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations* Cambridge University Press (1999).

In particular, the Industrial Property Law (LPI) was enacted in 1991, and complementing legal provisions were incorporated into its regulations in 1994. In 1993, the Mexican Industrial Property Institute (*Instituto Mexicano de la Propiedad Industrial* or IMPI) was established to improve the protection of intellectual property rights resulting from the provisions of the North American Free Trade Agreement (NAFTA). Congress passed the Mexican Copyright Law in 1996. It also created an administrative entity called the *Instituto Nacional de Derecho de Autor* or INDA.

Nonetheless, both the Institute for Industrial Property and the Institute for Copyright Laws lack 'teeth', as they are administrative in nature and hence lack the necessary competence. Thus, infringements to intellectual property rights that may constitute criminal actions at the Ports of Entry need to be addressed by prosecuting authorities, once the holder of the intellectual property rights has formally filed a claim. Both institutes, however, have had an important role when it comes to dealing with goods that are already in Mexico, and have assisted the private sector in the course of raids and inspections carried out throughout the country.

It is also worth noting that both the Mexican Industrial Property Law and the Copyright Law fail to provide for a detailed procedure to be established for the seizure of counterfeit goods. Similarly, no specific enforcement mechanisms have been established under the Mexican Customs Law, although there have been two legislative initiatives on the subject.⁴

Under current customs legislation in force since 1996, Mexican Customs employees may suspend the circulation of foreign goods upon prior resolution by the IMPI, INDA or a judicial authority in the area of intellectual property. Indeed, under the Mexican Customs Law, customs authorities have the power to suspend the circulation of goods infringing intellectual property rights, provided the competent administrative or judicial authority has issued an order. Section XXVIII of Article 144 of the Mexican Customs Law provides:

144. The Secretariat shall have, in addition to those conferred by the Federal Tax Code and by other Laws, the following powers:

(...)

XXVIII. Suspend the free circulation of merchandise from abroad within the fiscal premises, once the automatic selection mechanism has been activated, upon prior resolution issued by the competent administrative or judicial authority in the area of intellectual property, and immediately put it at their disposition in the place that such authorities indicate.

Under the provision, the Secretariat of Finance and Public Credit may suspend the circulation of foreign goods within the fiscal premises. Such specific authority is carried out through the General Customs Administration acting through its employees. Customs authorities possess the right to inspect goods at any time during the customs clearance process. However, under the law there is no specific reference of the extension of this inspection power to violations of intellectual property rights. Article 148 of the Mexican Customs Law prescribes

⁴ <<http://www.senado.gob.mx/index.php?ver=sp&mn=2&sm=2&id=10555&lg=61>>

the procedures that must be followed by customs to enforce the administrative or judicial order. Customs cannot act *ex officio*, or solely at the request of the right holder, which complicates matters, since an administrative stay empowering Customs to proceed must first be issued.

The complexity of this process, in which time is of the essence, also carries additional burdens. The administrative order must clearly indicate: (a) the name of the importer of record; (b) a detailed description of the goods; (c) the port of entry of the goods; (d) the estimated time until goods are to be introduced into Mexican territory, which shall not exceed 15 days; (e) the actual location within the jurisdiction of the customs authorities of the corresponding port of entry for which the goods are destined; and (f) the appointment of the recipient of the goods once the goods are seized.

The established procedure, although consistent with Article 51 of the TRIPS Agreement, is heavily reliant on the business intelligence gathered by right holders. Therefore, the procedure is largely ineffective in addressing the matter at hand.

III. INTER-INSTITUTIONAL ARRANGEMENTS

It may be inferred that it is complicated for an intellectual property right holder to possess information at such level of detail for seizure of the goods to be actionable. It is common practice for the intellectual property right holders to act, based on intelligence gathered from information collected abroad. For such purposes, some companies such as *Société Générale de Surveillance*⁵ and *Bureau Veritas*⁶, offer verification services that confirm the activities performed by companies established throughout the globe. Once the information on the companies is gathered, it is common for intellectual property right holders to act on tips provided by customs brokers, business associations or in some cases, customs employees.

Given the complexity of the process, it is generally perceived that border enforcement of intellectual property rights is inefficient to address the movement of infringing goods. In fact, both the public and private sectors have noted that the lack of cooperation and communication between the governmental agencies dealing with the enforcement of intellectual property rights has largely contributed to the problem.

Several committees and institutions have been established throughout the years to address the infringement of intellectual property rights. Notably, an Inter-Secretarial Commission for the Protection, Surveillance and Safeguard of Intellectual Property Rights was created in 1993 to coordinate enforcement efforts; however, it failed because of the lack of cooperation between the governmental agencies involved. The Inter-Institutional Committee to Combat Piracy formed shortly thereafter, bringing together public and private sector representatives affected by violations of intellectual property rights, has offered better results. Its main functions are to study, analyse and coordinate efforts to fight piracy, particularly through training Customs officials. It is within the auspices of this Committee that private companies provide a series of courses to governmental officials. Considering the lack of knowledge and preparation of Customs employees and other officials when it comes to detecting piracy, this is an important factor. Obviously, border enforcement is crucial for an effective system of intellectual property protection.

⁵ <<http://www.sgs.com/>>

⁶ <http://www.bureauveritas.com/wps/wcm/connect/bv_com/group>

IV. DATABASE OF INTELLECTUAL PROPERTY RIGHT HOLDERS

As mentioned previously, legislative initiatives have been taken to provide Customs employees with a greater range of ways to detect piracy. However, such initiatives have been frozen for two years now. Nonetheless, there has been an effort to implement a mechanism confirming to Customs employees that the importer of record at the point of entry is also the rightful holder of the intellectual property right.

The purpose of this project is to enhance coordination between the government agencies involved and to use the technology available to show the real identity of the intellectual property right holder, in addition to any existing licensees. It will also allow government agencies to maintain a register of intellectual property right holders that Customs officials may assume have undertaken action against piracy and counterfeiting of their intellectual property. This would entail relaying information through electronic data interchange (EDI), the IMPI and INDA to all of the customs ports in Mexico regarding intellectual property right holders and licensees in Mexico. In turn, customs employees would possess information regarding the description of the goods and pertinent tariff codes. This would enable the authorities to detect any bogus merchandise on the basis that information regarding the goods differs from that registered in the system.

Under the proposed project, a legal representative of the intellectual property right holder may access the database and confirm information regarding their own information, as well as the information of any licensee, customs ports that it commonly utilizes for the goods, as well as a general description of the products. Once all of the information is entered in the system and confirmed, a letter will then be sent to the intellectual property right holder as confirmation. Upon registration, the intellectual property right holder may access the system to include or modify the following information:

- (i) Name of the goods;
- (ii) technical differences between authentic goods and counterfeit goods;
- (iii) authorized routes for the transportation of the goods;
- (iv) countries where the goods are produced or sourced;
- (v) country of origin for the goods covered by the intellectual property;
- (vi) customs ports that are authorized for the entries; and
- (vii) customs ports used by the holder of an intellectual property right.

Once all this information is included within the system, an 'IP Registration Code' is generated that needs to be included in the customs entries utilized by the intellectual property right holder or its licensees. When an import filing is presented before customs, the customs broker would be required to validate the code assigned with the Mexican customs information database.

Once the customs employees present the goods for clearance, they could access the database to corroborate that the description of the goods is consistent with those presented before customs. In the event that there are discrepancies with the information contained in the database and the merchandise submitted for clearance, the IMPI and INDA would be notified for their revision. Although this has yet to be implemented, the Customs Law would not be reformed as a result of this project, which by itself raises questions of the legality of such procedures.

Under the reform project proposed by Senator Ocejo, Article 144 of the Customs Law would be reformed, in order to allow customs authorities to retain any goods subject to the registration of intellectual property rights not included in the dedicated database. Also, the initiative proposes the establishment of an Intellectual Property Holder database similar to the one previously described. Nevertheless, registration would not be mandatory, which again raises questions as to the enforceability of any resulting measures. The amendment proposes granting the powers to Customs authorities to retain goods for up to five days in the event that, upon the customs clearance, inspection, review, verification in transport or any other of the audit means established in the Federal Tax Code, they detect conflicting information with the intellectual property right database.

Undeniably, the procedure that would be incorporated into the Customs Law has yet to be implemented. It raises the question of the customs authority's ability to act against flagrant crimes. In addition, it presents the challenge that shipment inspections at the border are minimal and random, effectively making it impossible to address the problem. It also highlights the issue of Customs understaffing, and a lack of adequate training, in order to address areas that are priority such as national security, drug related crimes, tariff classification, valuation and revenue collection. This diminishes the possibilities of detecting any intellectual property violations, since the Mexican Customs authorities may conclude that intellectual property infringement is taking place as a result of undervaluation or wrongful tariff classification.

Nevertheless, as mentioned, the main obstacle remains that Mexican customs authorities are not empowered to act on their own initiative and detain shipments based exclusively on the fact that they may be pirated or counterfeit.

V. COUNTERFEIT INPUTS

It is notable that most of the efforts in order to address piracy in Mexico relate to end-user goods. Nevertheless, measures addressing imports of inputs utilized to produce infringing goods and spread piracy have been largely unattended. The most notable cases were led by the music and movie industry, and focussed on seizing raw materials utilized to propagate piracy (blank discs, CD and DVD burners, cases, *inter alia*).

In addition to designating dedicated ports of entry for the importation of the aforementioned goods, special border measures were implemented as a result of the collaboration between IMPI, Philips and the Association for the Protection of Phonographic Rights (APDIF) to inspect blank CDs crossing into Mexico, the importation of which presumably violated Philips' patent rights. The programme included training customs employees to run specific software on samples of imported CDs to determine whether the patent holder or the rightful licensee manufactured them.

As a result of such actions, the intellectual property right holder was able to determine if the importer of record paid the related royalties for the purchase and import of blank CDs. If, from the inspection, it was concluded that no royalty had been paid and the authorities lacked a judicial or administrative stay for the goods, they would be empowered to retain the goods due to undervaluation, on the basis that the royalty was not part of the price paid or payable. Most of these cases were ultimately dismissed at the courts as minor offenses; the mere act of introducing CDs into Mexico did not support claims that an infringement took place within Mexican territory, since the goods were not ultimately imported.

In that context, it is worth mentioning that criminal actions related to the infringement of intellectual property rights require an element of trading or distribution in order to be actionable, and therefore constitute infringement. An additional deterrent to companies seeking to enforce their intellectual property rights is the fact that the claimant must bear the cost of storing the infringing goods until a final resolution on the matter is issued and post bond for any payable import duties and taxes.

VI. CONCLUSIONS

Mexico positioned itself as a benchmark during the past economic crisis. Many analysts rank Mexico as the 13th largest economy in the world, set to become one of the eighth largest economies within the next 20 years. That optimistic outlook is based on sound macroeconomic indicators, which offered stability through very difficult times and a steady influx of foreign direct investment. Mexico also has a diversified network of trade agreements, and although it is still very reliant on the United States of America, it has fared even better than the United States in the latest economic crisis.

Just recently, the split Mexican Congress approved a labour reform within a record time frame. The new law reform balances the scale that was formerly overwhelmingly in favour of the worker and establishes the possibility of new labour agreements at an hourly wage. The approval of the reform indicates that legislators have heeded the mandate of the Mexican society. Approval of reforms that allow Mexico to confront the future with a different commitment to the investment environment are needed.

All these factors set the stage for Mexico to be one of the most competitive economies in the globe for companies seeking to locate or relocate investments abroad. On the other hand, Mexico's current main challenges are crime and drug trafficking. In addressing such problems, it is apparent that such criminal activities do not impose a threat by themselves, but rather the lack of accountability for the transgressors poses a threat. Accountability of transgressors, obviously including those that misappropriate intellectual property rights, needs to be at the top of the agenda.

Changing cultural principles in order to condemn piracy and counterfeit goods might be a lengthy process. Nonetheless, adopting strict legal measures and imposing stiff penalties for those engaged in such illegal activities can serve as an effective deterrent. For such purposes, it is important to reevaluate the powers currently granted to customs employees in order to convert them into customs officials, who are empowered and able to denounce and prosecute violations of intellectual property rights.

According to the results of the Competitive Alternatives study by KPMG for 2012⁷, Mexico is ranked 13th out of 14 countries evaluated when it comes to rule of law. This means the general perception that one will be held accountable for violation of the law when breaching a law is less than countries such as China, India and Brazil, and it is only superior to Russia. This indicator needs to improve if Mexico wants to keep advancing in the world economic and competitiveness spectrum.

⁷ <<http://www.competitivealternatives.com>>

7 COMBATING PIRACY THROUGH EFFECTIVE REGULATION OF THE PRINTING INDUSTRY IN NIGERIA: PROSPECTS AND CHALLENGES

* Dr AbdulwasIU Ojo Akorede Yusuff

ABSTRACT

Book piracy in Nigeria has reached an alarming rate, resulting in huge personal and national economic losses. Many printers and publishers are directly implicated in this criminal activity, perhaps encouraged by a gaping lax in the provisions and enforcement of extant copyright law in the country as well as an unfriendly environment in the printing industry. This paper critically evaluates some of the causes and effects of piracy in the printing and publishing industry, focusing particularly on the provisions of the Copyright (Printing of Works) Regulation 2012. Although laudable, this policy initiative of the Nigerian Government, through the Nigerian Copyright Commission (NCC), requires dogged and strategic enforcement for it to be effective and make a meaningful and appreciable impact on curbing piracy in the country. The paper posits that the overall impact of the Regulation will only be felt over a reasonable period of time because the years of neglect have been long, and the results of piracy and recklessness in the printing industry have been far-reaching. It also suggests that policymakers, stakeholders and law enforcement agencies, at national and international levels, must collaborate and continue to engage in other measures that may be complementary to the proposed Regulation to enhance its effectiveness.

Keywords: *copyright, printing, piracy, regulation, enforcement, books*

I. INTRODUCTION

Piracy in the printing and publishing industry in Nigeria has reached such an alarming rate that the consequences have been devastating, and appear to have spiralled out of control. In the 1970s and 1980s, the industry experienced robust development and growth, making a positive impact on the country's economy by providing employment, attracting significant foreign direct investment and ensuring technology transfer through subsidiaries of many multinational printing companies. Thus, the industry made modest contributions towards Nigeria's gross domestic product (GDP). However, from the 1990s onwards, the industry has witnessed a serious downturn, having lost its vibrancy mainly as a result of piracy which has emerged as the greatest threat to Nigeria's copyright-based industry.¹

* **Dr A.O.A. Yusuff** (Nigeria) is Senior Lecturer and current acting Head of the Department of Public Law, Faculty of Law, Obafemi Awolowo University, Ile-Ife, Nigeria. He was called to the Nigerian bar in 1995 and began working as an academic staff member in 1997. He holds LL.M degrees from the Obafemi Awolowo University, Ile-Ife and the University of Toronto. He also obtained a Ph.D degree from Obafemi Awolowo University in 2008. The author lectures, conducts research and publishes in his core areas of scholarly interest, with a focus on Intellectual Property Law, Health/Medical Law and Policy and Criminal Law. He is an alumnus fellow of the Canadian Institutes of Health Research (CIHR) and a lover of nature, culture and literature.

¹ This view is corroborated by the opinions of two book publishers: Adebayo Lateef (the Longman Educational Books Head of Sales), 'Piracy, Threat to Book Publishing', available online at: <<http://www.nigerianbestforum.com/generaltopics/?p=8228>> accessed 5 October 2012 and Henry Udogun, (Managing Director and CEO of Metropolitan Publisher), available online at: <<http://www.dailyindependentnig.com/2012/09/book-piracy-fraudulent-frustrating/>> accessed 29 October 2012).

The Government of Nigeria, through the Nigerian Copyright Commission (NCC), recognized the urgency and imperative of regulating the printing industry in the country. It acknowledged the need to check the menace of piracy in the industry and create an environment conducive for the printing industry's robust development and integration into the Government's national planning and economic development agenda. The NCC has prepared a draft regulation for the printing industry. The proposed Regulation, which has been applauded by many stakeholders in the Nigerian printing industry in spite of certain reservations, is presently awaiting the assent of the Federal Attorney-General and Minister of Justice before coming into effect.

This paper highlights the debilitating impacts of piracy in the Nigerian printing industry and critically evaluates the specific provisions of the Copyright Act and the draft proposal for the regulation of the printing industry. The paper seeks to examine the prospects of the Regulation, identify its probable challenges and proffer suggestions that can enhance its effectiveness.

II. PIRACY IN THE PRINTING INDUSTRY

The debilitating role of pirates in the printing industry in the reckless infringement of copyright works, especially literary works, is generally known.² Book printers flagrantly infringe and facilitate infringement of protected works in two notable ways:

- (i) Unauthorized reproduction of protected works for commercial purposes; and
- (ii) printing copyright works in excess of the quantity authorized by authors and right owners.

Printers engage in unauthorized reproduction of protected works for commercial purposes, either on their own volition or at the behest of other primary infringers. Furthermore, printers print an excess of the quantity authorized by authors and right owners with the aim of making gains for which no account will be rendered to authors and right owners.³ The losses incurred in these unscrupulous industry felonies are huge.

Other minor ways in which the printing industry actively or indirectly infringes copyrighted works is by the reproduction of works apparently protected by copyright for and on behalf of pirates. In addition, small-scale poorly equipped printers contribute to significant loss

² According to Remi Raji, a university teacher of creative writing at the University of Ibadan in Nigeria, pirates should be treated as armed robbers. See Patrick Akpuh, 'Book Piracy: Publishers are Culpable-Don', available online at: <<http://www.thenigerianvoice.com/nvnews/59289/i/book-piracy-publishers-are-culpable-don.html>> accessed 29 October 2012. This perception was echoed by the Managing Director of Macmillan Nigeria Publishers Limited, Adesanya Adelekan, when he argued that piracy should be seen as a heinous crime against intellectual property and their owners. See 'Tackling Book Piracy', available online at: <<http://www.nigerianbestforum.com/blog/?p=76484>> accessed 5 October 2012. Piracy has also been described as an 'endemic disease' from which Nigeria's publishers, authors and other stakeholders have yet to recover. See Yemi Adebisi and Rukayat Atanda, 'Book Piracy: Fraudulent, Frustrating', available online at: <<http://www.dailyindependentnig.com/2012/09/book-piracy-fraudulent-frustrating/>> accessed 29 October 2012.

³ Some publishers, according to Remi Raji, *ibid*, are also pirates because they will print and sell 20,000 copies, while telling authors and right owners that they have sold only 5,000.

of revenue to authors by making substandard or poor quality reproduction of works. Such poor quality versions exist alongside standard quality ones, but are far cheaper. In most developing countries, admittedly many people live below poverty lines, and original copy of works are usually costly or priced above the average income. However, even where individuals can afford the cover price of original works, many have an aversion to acquiring or investing in (more expensive) original works. The greater challenge perhaps is that even when publishers offer their books at the same price as the pirated copies, pirates do not desist in their criminal activities.⁴ This is because many consumers are already accustomed to purchasing pirated materials, and pirates' distribution networks are quite extensive; thus, pirates have a ready market. This underscores the imperative of eliminating piracy or crippling pirates' activities as much as possible. The loss in revenue resulting from a breach or infringement of authors' moral and exploitation rights is significant.

As Ekpo puts it 'The fight against piracy has not been made any easier by the emergence of new technologies that offer state-of-the-art devices for the reproduction of works.'⁵ As is the case in the music and sound-recording industry, where millions of pirated works are put in circulation, piracy in the printing industry extends to local and foreign works and has been greatly aided by the availability of electronic devices that may be surreptitiously used behind closed doors. A single original foreign work imported for private, personal or institutional use may be reproduced or reprinted for commercial distribution locally without authority. This expectedly results in huge losses for right owners who may never be aware of the breach. This is of course in contravention of international copyright obligations of the country as well as the extant copyright law in the country. Piracy has perhaps reached this stage also because of the sporadic and uncontrolled growth in the printing industry in Nigeria.

A. SPORADIC GROWTH OF THE PRINTING INDUSTRY IN NIGERIA

The printing industry grew rapidly in Nigeria to meet expanding demand in the market for printed works. This is partly a response to a slight increase in literacy level, improved adult literacy and education programmes, and government policies at local, state and federal levels promoting universal and in some cases, free basic education. Growth in the printing industry is also a result of translation and printing of protected works, with or without authority, in the indigenous languages of many local readers. There has also been astronomical growth in the establishment of private schools, at the primary, secondary and tertiary levels, resulting in an increase in enrolment and demand for printed educational materials.⁶ This ultimately

⁴ Yemi Adebisi and Rukayat Atanda (n 2).

⁵ M F Ekpo, 'End of Year Address by the Director General, Nigerian Copyright Commission' in J O Asein and E S Nwauche (eds), *A Decade of Copyright Law in Nigeria* (Nigerian Copyright Commission 2002) 19.

⁶ Although book publishing and printing go beyond educational or 'prescribed school texts', the poor reading culture and low level of literacy in the country means that only a fraction of the populace read for leisure, general education and edification. See L Sanusi, 'Copyright in the Book Industry' in J O Asein and E S Nwauche (eds), *A Decade of Copyright Law in Nigeria* (Nigerian Copyright Commission 2002) 32. Consequently, the most profitable venture in the book printing industry in Nigeria is educational materials. This explains why a significant percentage of piracy in the printing industry, as well as seizures of pirated books, is of educational texts and similar school materials. See 'Copyright Commission Impounds 10,000 Cartons of Pirated Books Worth N1.5billion', available online at: <<http://www.copyright.gov.ng/index.php/83-featured-articles/85-nigerian-copyright-commission->

encourages the growth of the printing industry in the country, but unfortunately the growth has not been in the right manner nor has it taken the right direction.

The sporadic growth of the printing industry has been mostly in the quantity of printing outfits, not in their quality or the quality of their works. There are several poorly managed, ill-equipped, unorganized emergency printers and publishers in Nigeria. Without doubt, the financial base required for setting up modern, well-equipped, adequately staffed, registered and properly managed printing and publishing outfits is huge. Outfits, which cannot afford the capital or investment required, inevitably cannot compete with the well-established and well-managed ones. Expectedly they have lower patronage and market share from those seeking quality, albeit expensive, printing production. The result is that these poorly established printing outfits engage in sharp practices⁷ and reckless infringement of copyright works. They thus become places of choice for pirates and other infringers of copyright works because their charges are definitely lower. They are also unlikely to scrutinize or ask questions of those bringing printing works to them in a bid to break even or make profits for themselves. The survival instinct is thus one of the major reasons for the proliferation of pirates and the printers who cater to their whims.⁸

B. EFFECTS OF PIRACY ON THE PRINTING INDUSTRY

The figures of pirated works in circulation in the country are astonishing. Book piracy in Nigeria has in fact assumed the dimension of organized crime. Pirates not only print unauthorized copies of books in the country, but also order printers outside Nigeria to print pirated copies of books that are later imported into Nigeria for commercial distribution. Asia, especially China and Chinese Taipei, is the destination of choice for importers of pirated books in Nigeria.⁹ The few legitimate printers and publishers struggle to break even, while many are forced to close.¹⁰ Unregistered and poorly managed printing outlets, where copyright works are recklessly and wantonly infringed, continue to proliferate. The economic consequences have been devastating. Some of the consequences include progressive loss of employment of those who work in printing outfits which had to close¹¹, leading to poverty and the attractiveness of

[impounds-pirated-books-worthN1.5billion](#)> accessed 5 October 2012. See also Amidu Arije 'Commission Impounds Pirated Books', available online at:

<<http://www.thenationonline.net/2011/index.php/news/53181-commission-impounds-pirated-books.html>> accessed 29 October 2012. Another seizure by the NCC was also reported to be pirated books belonging to educational materials publishers in the Nigerian printing industry such as Learn Africa (formerly Longman Educational Publishers), Macmillan, University Press, Africana First, Heinemann, and so on. See 'NCC Impounds Three Containers of Pirated Books', available online at: <<http://www.copyright.gov.ng/index.php/news-and-events/120-ncc-impounds-three-containers-of-pirated-books>> accessed 29 October 2012.

⁷ Practices that circumvent the law, and relevant ethical rules, to make ends meet.

⁸ This position is consistent with the result of research recently conducted among book pirates by the Daily Independent in Lagos State, the commercial capital of Nigeria and a major international business centre in Africa. See Yemi Adebisi and Rukayat Atanda 'Book Piracy: Fraudulent, Frustrating', (n 2).

⁹ See 'Tackling Piracy' (n 2), 'Copyright Commission Impounds 10,000 Cartons of Pirated Books Worth N1.5billion' (n 6) and Yemi Adebisi and Rukayat Atanda (n 2).

¹⁰ *ibid* Yemi Adebisi and Rukayat Atanda (n 2).

¹¹ See 'Lantern Books Campaign against Piracy', available online at: <http://www.punchng.com/business/capital-market/lantern-books-campaign-against-piracy/> accessed 29 October 2012.

criminal activity; divestment and loss of foreign direct investment of multinational corporations in the printing business; and brain drain of authors and capital flight of investors seeking places that are more conducive for profit.¹² Furthermore, as a result of loss of income that should have accrued to authors had piracy of their works not occurred, the interest and productivity of authors have waned, and this has ultimately been a strong disincentive of creativity in the country.¹³ The overall impact has been a drastic decline in Nigeria's gross domestic product and worsening of the prevailing economic trauma due to the global economic recession.

It would be wrong to focus on the main economic consequences of piracy in the printing industry without examining the moral and social repercussions. It is indisputable that pirates do not pay taxes to the government and they do not pay royalties to writers and authors, but reap the fruit of other peoples' labour. This is not only criminal but also immoral. Their activities discourage prolific writers from writing, leading to a dearth of necessary books and instructional materials prepared within the cultural and social contexts of Nigeria. This in turn forces the country to depend on expatriate authors to feed the education sector.¹⁴ Foreign educational materials, especially those for use in pre-primary, primary and secondary levels, are not bad if only they are written in a context that is relevant to the social and cultural understanding and consciousness of pupils and learners.

Furthermore, it is well known that pirated materials are generally of poor quality, but society is not accustomed to reacting to pirated books the same way it reacts to counterfeit drugs, food or drink which threatens health, life or general well-being. Yet, piracy in the book printing industry poses its own peculiar harm to consumers. With the myriad of misprints, omitted pages, pages printed upside down, blurry, faint or illegible lettering, loose binding making the book vulnerable to a short lifespan, the intellectual, psychological and educational health of consumers is greatly imperilled. The jeopardy may not be as immediate or as apparent, but piracy in the book printing industry poses nonetheless a clear and present danger in Nigeria. As noted by Sheik Hafizur Rahman Karzon and Farhana Helal Mehtab, 'Intellectual Property Rights (IPRs) are legal mechanisms to protect the right of inventors, and the interest of consumers. (...) A strong system of IP protection (...) ensures that consumers are getting genuine goods and services'.¹⁵

¹² Copyright piracy not only constitutes a hindrance to creativity and productivity, but also undermines personal and national economic development. Authors and right owners who are unable to endure successive losses arising from piracy of their books might migrate to a more conducive environment to continue their work. This is what is referred to as 'brain drain'. The situation is worsened for some writers, who obtain bank loans to finance publication of their works and then lose the opportunity to recoup on investment or pay back the loan facility. See 'Nigerian Copyright Commission Takes Piracy Zero-Tolerance Policy to Alaba Market', available online at: <http://www.copyright.gov.ng/index.php/news-and-events/105-nigerian-copyright-commission-takes-piracy-zero-tolerance-policy-to-alaba-market> accessed 29 October 2012.

¹³ In the words of M F Ekpo, erstwhile Director General of the Nigerian Copyright Commission, 'Piracy remains one of the most pervasive abuses to copyright in the world today. It leads in the first instance to a destruction of the incentives for creativity, and ultimately damages the economy.' See Ekpo (n 5).

¹⁴ See 'Piracy, Threat to Book Publishing' (n 1).

¹⁵ Sheik Hafizur Rahman Karzon and Farhana Helal Mehtab, 'Intellectual Property Rights Enforcement in Bangladesh: An Overview and Determination of the Extent of Its Becoming TRIPS-Compliant' (2010) 21 Dhaka U L J 59.

The Nigerian Government until recently appeared to have resigned itself to fate, perhaps because of the magnitude of the problem.¹⁶ However, the NCC has prepared a draft regulation directed at bringing some order to the prevailing atmosphere of lawlessness and chaos in the printing industry and at the same time arresting the wanton piracy in the industry in the country.

III. REGULATORY INTERVENTION IN THE PRINTING INDUSTRY

The proposed Regulation for the printing industry is one of the steps being taken to drastically reduce infringement of protected works through illegal and unauthorized reproduction. The Regulation is expected to complement and tighten existing statutory provisions in the Copyright Act.

A. HIGHLIGHT OF THE COPYRIGHT ACT

Under the Copyright Act of Nigeria¹⁷:

Copyright is infringed by any person who without the licence or authorization of the owner of copyright:

- (a) does, or causes any other person to do an act the doing of which is controlled by copyright;
- (b) imports or causes to be imported into Nigeria any copy of a work which, if it had been made in Nigeria, would be an infringing copy (...);
- (c) exhibits in public any article in respect of which copyright is infringed (...);
- (d) distributes by way of trade, offers for sale, hire or otherwise or for any purpose prejudicial to the owner of the copyright, any article in respect of which copyright is infringed (...);
- (e) makes or has in his possession plates, master tapes, machines, equipment or contrivances used for the purpose of making infringed copies of the work; (...)¹⁸

It is clear from these provisions that book piracy in all its manifestations, production in the country and the importation of pirated versions of protected work, exhibition in public or offer for sale or distribution of pirated copies, as well as maintenance of premises equipped with machines and contrivances for making infringed copies of protected works, are illegal under the law. Thus bookstores, booksellers and even libraries, where pirated printed materials are displayed or sold, are within the ambit of the law.

¹⁶ The Government at different levels in Nigeria, local, state and federal, is perceived as contributing to the problem in the printing industry in Nigeria. See the Newspaper interview with Wahab Lawal, President, Chartered Institute of Professional Printers of Nigeria by Okechukwu Nnodim, 'Govt Under-Utilizing Local Printing Capacity' *Saturday Punch* (Nigeria October 20, 2012) 49.

¹⁷ Copyright Act, 2004.

¹⁸ *ibid* section 15 (1) (a)-(e).

Categorically, the Copyright Act provides that publishers, printers, producers or manufacturers of works in which copyright subsists shall keep a register of all works produced by them showing the name of the author, the title, year of production and the quantity of the work produced.¹⁹

The shortcoming of this provision is that it requires the keeping of certain information in a register without more. The provision requires dogged enforcement for it to be meaningful. The Draft Regulation for the Printing Industry²⁰ is a marked improvement of the provisions of the Copyright Act.

B. HIGHLIGHT OF THE DRAFT REGULATION FOR THE PRINTING INDUSTRY

The Regulation is made pursuant to the powers vested in the NCC to make regulations under Section 45(4) of the Copyright Act. It has six main sections covering approval for printing of certain works, the obligation to keep records, the inspection of premises, offences, fees and interpretation:

Section 1 Approval for printing of certain works: All persons engaged in the business of printing of works in which copyright subsists, shall unless exempted, obtain approval from the NCC for:

- printing of jackets, sleeves, inlays, and other packaging meant for sound recordings, films, and other copyright works; reproduction of artistic works in print; and printing of fiction and non-fiction books for commercial distribution;
- approval shall also be required for importation of above items.

Section 2 Obligation to keep records:

- Further to the provisions of Section 14 of the Copyright Act, all persons carrying on the business of printing works in which copyright subsists shall keep records of:
 - (a) a copy of the job order;
 - (b) a production register indicating-Title of work, Type of work, Author of the work, Date of production and Quantity produced;
 - (c) evidence of authorization of the owner of copyright in the work;
 - (d) sample of work printed or reproduced to be kept for a period of 6 months from date of production.
- Records must be made available to Copyright Inspectors at any time.

¹⁹ ibid section 14.

²⁰ Copyright (Printing of Works) Regulations 2012.

Section 3 Inspection of premises: All persons carrying on the business of printing works in which copyright subsists shall grant access to Copyright Inspectors to carry out inspection of their premises. Security agencies, right owners, experts, professional organizations etc. may accompany the Copyright Inspectors.

Section 4 Offences: Failure to obtain approval, keep or produce records on demand, falsification of records or giving misleading information open to civil and criminal liabilities. Liabilities may be imposition of fines or terms of imprisonment or both.

Sections 5 and 6: Fees and interpretation.

The Regulation is quite broad in scope and certainly extends to printers of actual works in which copyright subsists or items of packaging of the works. The first section is clear on the point that those engaged in the business of printing works in which copyright subsist must be permitted or granted approval by the NCC. The clear inference is that the onus is on businesses to scrutinize or examine whether copyright subsists in the work they are to print.

It is unclear from this provision if this approval is a way of licensing through the NCC. If this is so, one wonders what role, if any, the actual owners of rights in the works are assigned in the approval process, especially since the approval is to be paid for. Will the NCC become a collecting entity on the behalf of right owners or be obliged to pay a certain percentage or royalty on charges for approval? This question arises because the necessity for approval to print works in which copyright subsists should primarily be to protect right owners by minimizing infringement of their rights through illegal printing. The basis of the Regulation ought not to be primarily to raise revenue for the NCC.

Section 2 of the Regulation requires that records must be properly kept by the printing businesses. The expected records to be kept include a copy of the job order, a production register, evidence of authorization of the owner of copyright in the work (permitting reprint or reproduction) and a sample of each work printed or reproduced to be kept for a period of not less than six months from the date of production. Importantly, the production register must indicate stated items such as title of the work, type of the work, author of the work, date of production and quantity of the work produced.

The requirement to keep records of the job order and production register targets printers who take orders to print work from those who have no rights at all in the works. It also could minimize sharp practices whereby printers produce an excess of the quantity ordered or declared to clients. Failure to produce the records or the production of inaccurate or inconsistent records raises a clear presumption of infringement. Lofty as these provisions are, the major challenge will be enforcement of these provisions, especially how to discover whether records have been deliberately falsified. Another issue also concerns the requirement to keep a sample of the work produced for a period of six months. A longer period may be necessary to afford more meaningful scrutiny, verification or opportunity for challenge by right owners or those who place an order for the printing. Right owners may not be aware of the infringement of their works by the printers within six months. A period of a year or more may thus be more appropriate.

Section 3 mandates all persons carrying on the business of printing of works in which copyright subsists to grant access to copyright inspectors empowered to enter any premises used

for printing and inspect their records. The key challenge here is that many of the implicated businesses are in non-descript premises and tucked away in street corners or even in private homes. It might thus be difficult, if not impossible, to know of their existence. Besides, inspectors may not be able to catch sharp crooked printers, who in addition to falsifying records, may have destroyed evidence of infringing reproduction.

Section 4 of the Regulation contains important provisions for the prosecution and punishment of those who breach its provisions. If adequately enforced, the prescribed penalties should drastically reduce the damage done to copyright works and right owners by unscrupulous printers in the printing industry.

IV. PROSPECTS AND CHALLENGES OF THE REGULATION

The Copyright (Printing of Works) Regulation 2012 is a welcome intervention from the NCC. The Regulation has the potential to tackle piracy in the printing industry at the production stage. It will also enhance restructuring in the printing industry with the possibility of compelling those carrying on the business of printing works in which copyright subsists to undertake internal reorganization to ensure compliance with the Regulation. Equally, the Regulation will most likely facilitate enforcement of rights by authors and right owners. Once they know the provisions put in place to protect their interests, they can easily demand accountability from their printers and publishers. As observed earlier, penalties provided for in the Regulation would have a deterrent effect. The Regulation will also facilitate the creation of a database for the purpose of planning, research and statistics in the industry as printers seek approval for their job orders.

The major challenge of the Regulation is perhaps its inadequate capacity for its enforcement. The existence of several printing outfits, many of which are substandard and poorly managed, constitutes a major hindrance to formal control or regulation of the printing industry. A major challenge thus faces the Government through the NCC to ensure appropriate or adequate regulation of the industry's activities, especially the small one-man outfits where the most significant copyright infringement occurs.

Another challenge is how to tackle fraud, corruption and collusion among management and staff of printing and publishing firms. This can be aligned with how to overcome the challenge of ignorance and non-cooperation on the part of authors, owners of copyright and licensees in following procedures and formalities for placing printing orders. As a matter of fact, many so-called stakeholders and right owners are accomplices in piracy of protected works. For instance, Literamed Publications, a foremost leader in African book publishing, especially children's book publications, issued a statement recently. The statement observed that some parents, school administrators, bookshops and other stakeholders in the book publishing market, who should be partners in fighting against book piracy, have joined in the onslaught against protection of copyright in books by unwittingly or deliberately buying and circulating pirated books.²¹ Some of these stakeholders purchase pirated versions of

²¹ See 'Lantern Books Campaign against Piracy', available online at: <http://www.punchng.com/business/capital-market/lantern-books-campaign-against-piracy/> accessed 29 October 2012.

recommended texts and patronize unregistered printers, whose charges are likely to be reduced, instead of approaching reputable printers and publishers.

Enforcement of the Regulation is also prone to loss of focus. The Regulation and its enforcement must primarily be directed at arresting pirates in the printing industry and must not become purely a means to generate funds for the Government.

Besides, the huge demand for pirated materials must be addressed through poverty alleviation programmes and public enlightenment. The general misconception and misunderstanding that counterfeiting and piracy are innocent infractions must be dispelled, so that people realize the danger and the harmful effects of piracy on social welfare and economic well-being.²² To serve as a good example, governments at the local, state and federal levels in Nigeria must patronize reputable, registered local printers and publishers. Cross border piracy of copyright works or illegal importation of protected works must also be urgently addressed.

V. ENHANCING EFFECTIVENESS OF THE REGULATION TO CURB PIRACY

It seems clear from the arguments and observations above that it is not enough to have the Regulation in place; for the Regulation to achieve its goals, challenges to its effective enforcement must be addressed. As rightly noted by a former Minister of Justice and Attorney-General of Nigeria, 'the mere provision of a vibrant legal framework for the protection of copyright may not in itself guarantee a successful regime. The hallmark of an effective regulatory system is its ability to enforce compliance'.²³ It is therefore high time that matters provided for in the Copyright Act and the Printing of Works Regulation are 'accorded practical expression within the administrative and legal framework of the copyright system'.²⁴ To this end a number of suggestions are offered below.

- (a) In the first instance, there is a need to improve infrastructural development and power supply in the country. The cost of running average printing outfits, especially the cost incurred in generating power and procuring printing raw materials, is prohibitive and directly contributes to the high cost of genuine books.²⁵ It is equally necessary to create an enabling environment in which printing and publishing firms, small, medium and large, can thrive and compete. This is likely to result in a drastic reduction of production cost and consequently, the cover prices of books. Lower prices of original books of better quality will encourage patronage, which might drive substantial numbers of book pirates out of business. In a similar vein, it might be necessary to provide incentives to printers and publishers to make low-priced editions of educational materials as a disincentive to piracy of standard books.

²² Karzon and Mehtab (n 15) 64.

²³ Abdulahi Ibrahim, 'Keynote address by the Hon. Attorney General of the Federation and Minister of Justice' in J O Asein and E S Nwauche (eds) (n 5) 27.

²⁴ *ibid.*

²⁵ This is the view of Olu Obafemi, Chairman of the Reproduction Rights Society of Nigeria (REPRONIG), see Yemi Adebisi and Rukayat Atanda (n 2).

- (b) As observed by Karzon and Mehtab, 'In most developing countries public consultation on IP issues, and local expert and business community engagement are either absent or underdeveloped'.²⁶ Campaigns and enlightenment must thus be undertaken to sensitize users, printers and distributors of 'checklists' and indices they must look out for in properly reproduced books and printed material. This can be likened to labels on consumable items such as ingredients, components etc. The campaigns must also be used as a strategy to secure public sympathy against piracy by creating sufficient consciousness on how it can jeopardize the growth and development of the country as a whole or occasion personal losses that can only be realized in the long run.

The NCC and some other stakeholders in the printing industry in Nigeria are making commendable efforts in this regard, but more aggressive publicity against piracy need be done across the country rather than concentrating in Lagos state and a few other big cities. Stakeholders and law enforcement agencies, the police, the Nigerian Custom Service, the Economic and Financial Crimes Commission (EFCC), the Standards Organization of Nigeria (SON) and so on must actively unite and fight together to achieve the goal of eliminating piracy. In fact there is an urgent need among nations to evolve far-reaching strategies and measures against piracy. Nigeria should reach out to authorities in China and Taiwan and other Asian countries involved to tighten and enforce their copyright laws. This is one area where the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO) can be of immense help in facilitating dialogue, reaching of consensus and collaboration in checking international piracy in the book industry, especially as it affects Nigeria. Hence collaboration must not be inter-agency, but must equally be international.

- (c) Authors or anyone who place orders for printing must insist that the outfit obtain approval in compliance with the Regulation and must complain if approval cannot be produced to satisfy them of compliance within a reasonable time. Where authors fail to do so, they will forfeit any protection of the law in case of infringement or fraud committed without prejudice to the power of NCC to prosecute such outfits independently. Wide publicity must be given to the prosecution of errant printers for deterrent effects.²⁷ This must, however, be without prejudice to the right of authors and owners of intellectual property rights to independently initiate civil or criminal prosecution and seek judicial reliefs against pirates and those who infringe their rights.²⁸

²⁶ Karzon and Mehtab (n 15) 65.

²⁷ The NCC started showing some promises in this sense only in the last 12 months. See 'NCC Secures 27 Piracy Convictions', available online at: <<http://www.copyright.gov.ng/index.php/news-and-events/96-ncc-secures-27-piracy-convictions>> accessed 29 October 2012.

²⁸ Possible relief include order for search/inspection and seizure, application for delivery up or conversion rights, damages and injunction, and accounts for profits. See Sections 18 and 25, Copyright Act (n 16). See also Tanya Aplin and Jennifer Davis, *Intellectual Property Law: Text, Cases and Materials*, (Oxford University Press 2009) 779ff; W R Cornish, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* (3rd ed Sweet and Maxwell 1996) 54ff.

- (d) There is a need to open a complaint desk at NCC to receive complaints against printers accused of short-changing clients. This will be complementary to the NCC carrying out constant unscheduled visits and inspection of records at printing outlets. Covert operations must be carried out as well as surveys of markets to discover, trace and raid printing outlets suspected of operating in contravention of the Regulation.²⁹ The NCC should attempt to compile, maintain and regularly update a database of registered and reputable printers across the country. Interested persons could check this database before placing a printing job order. The database may also have a section, where printing orders for which approval has been sought or granted by NCC, may be posted. Prospective authors or those who place orders for printing may check if the printing business or outfit to which they contracted their work complied with legal requirements and is susceptible to copyright compliance inspection.
- (e) It may be necessary to throw the net of the Regulation wider to include retailers, distributors and bookshops circulating copies of works believed to have been printed in contravention of the Regulation or in breach of copyright. This will be consistent with the provisions of the Copyright Act which regards as infringement exhibition in public of any article in respect of which copyright is infringed or distribution by way of trade, offer for sale, hire or otherwise or for any purpose prejudicial to the owner of the copyright, any article in respect of which copyright is infringed.³⁰

As a long-term strategy it is imperative for the Government to formulate a national intellectual property policy and integrate the same in the national economic planning and the development agenda of the Government in Nigeria.

VI. CONCLUSION

This paper acknowledges that the printing industry has historically been a lucrative and economically productive sector in Nigeria. The economic downturn in the country, along with uncontrolled piracy following sporadic growth in the printing industry, has been the bane of the sector. The unsavoury economic effects of piracy on the printing industry and its devastating economic consequences necessitate the adoption of drastic measures to arrest the situation. Although belated, the measure was finally included in the proposed Regulation of the printing industry through the Copyright (Printing of Works) Regulation 2012. The paper gives a highlight of the Regulation, pointing out its strength and weaknesses, its prospects and challenges. It finds that with effective implementation, the proposed Regulation has the potential to make measurable positive impact on copyright-based industry in Nigeria, to drastically reduce piracy and to promote the resuscitation of the printing industry as an economic powerhouse of the country.

It must be noted, however, that the overall impact of the Regulation, if effectively enforced, will only be felt over a reasonable period of time because of long years of neglect and the results of piracy and recklessness in the printing industry are far-reaching. Focus on the magnitude of the problem or an attempt to achieve so much within a small space of time will

²⁹ See for example Vincent Ujumadu, 'Publishers, Police Raid Book Pirates in Onitsha', *Vanguard* (Nigeria September 14 2012) 14.

³⁰ See Nnodim (n 16) and Copyright Act (n 17).

have a discouraging effect. The NCC and policymakers in the country must also continue to engage with other measures that may be complementary to the proposed Regulation to enhance its effectiveness, in this particular instance perhaps, public enlightenment and sensitization campaigns.

A couple of years ago the Nigerian Government launched an ambitious economic development plan called Vision 20 2020. The main objective of the plan is to make the Nigerian economy among the world's 20 biggest economies by the year 2020. To realize this objective, the Government has shifted its attention to various sectors of the economy identified as having the potentials to facilitate the realization of the laudable objectives of Vision 20 2020. One of the sectors with this potential in Nigeria is the printing industry. It is compulsory, therefore, for the Government to properly address the problems of piracy and hasten the return of the industry to its vibrant, economically lucrative and GDP boosting position of the 1980s.

BIBLIOGRAPHY

Books

Aplin T And Davis J, *Intellectual Property Law: Text, Cases and Materials*, (Oxford University Press 2009)

Asein J O and Nwauche E S (eds), *A Decade of Copyright Law in Nigeria* (Nigerian Copyright Commission 2002)

Cornish W R, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* (3rd ed Sweet and Maxwell 1996)

Journal article

Karzon H R and Mehtab F H, 'Intellectual Property Rights Enforcement in Bangladesh: An Overview and Determination of the Extent of Its Becoming TRIPS-Compliant' (2010) 21 Dhaka U L J

Internet sources

Adebisi Y and Atanda R, 'Book Piracy: Fraudulent, Frustrating' <<http://www.dailyindependentnig.com/2012/09/book-piracy-fraudulent-frustrating/>>

Adelekan A, 'Tackling Book Piracy' <<http://www.nigerianbestforum.com/blog/?p=76484/>>

Akpuh P, 'Book Piracy: Publishers are Culpable-Don' <<http://www.thenigerianvoice.com/nvnews/59289/i/book-piracy-publishers-are-culpable-don.html>>

Lateef A, 'Piracy, Threat to Book Publishing' <<http://www.nigerianbestforum.com/generaltopics/?p=8228>>

Udogun H, 'Piracy, Threat to Book Publishing' <<http://www.dailyindependentnig.com/2012/09/book-piracy-fraudulent-frustrating/>>

Nigerian Copyright Commission:

'Copyright Commission impounds 10,000 Cartons of Pirated Books Worth N1.5billion' <<http://www.copyright.gov.ng/index.php/83-featured-articles/85-nigerian-copyright-commission-impounds-pirated-books-worthN1.5billion>>

'NCC impounds Three Containers of Pirated Books' <<http://www.copyright.gov.ng/index.php/news-and-events/120-ncc-impounds-three-containers-of-pirated-books>>

'Nigerian Copyright Commission Takes Piracy Zero-Tolerance Policy to Alaba Market' <<http://www.copyright.gov.ng/index.php/news-and-events/105-nigerian-copyright-commission-takes-piracy-zero-tolerance-policy-to-alaba-market>>

'NCC Secures 27 piracy convictions' <<http://www.copyright.gov.ng/index.php/news-and-events/96-ncc-secures-27-piracy-convictions>>

Newspapers

Nnodim O, 'Govt Underutilising Local Printing Capacity' *Saturday Punch* (Nigeria 20 October 2012)

Ujumadu V, 'Publishers, Police Raid Book Pirates in Onitsha', *Vanguard* (Nigeria 14 September 2012)

8 PATENT RIGHTS AND THEIR ECONOMIC IMPACTS: THE CASE OF THE TURKISH PHARMACEUTICAL INDUSTRY

***Dr Ummuhan Gökovalı**

ABSTRACT

The impact of patent protection on pharmaceutical innovation has been a controversial issue. The TRIPS Agreement entered into force in 1995 as a multilateral trade agreement, and has been the subject of an incessant debate on the extension of intellectual property rights in pharmaceutical innovation, particularly in developing countries. This study investigates the evolution of the pharmaceutical sector in Turkey, with special reference to developments after the TRIPS Agreement entered into force. To this end, it explores several performance criteria, along with patenting behaviour in the pharmaceutical sector in Turkey. An analysis of the data reveals that the country distribution as well as firm distribution of patents in Turkey is in line with the global distribution of pharmaceutical production, trade and ranking of the firms. This analysis also indicates that the domestic pharmaceutical sector has declined over the years and this trend became more visible post-TRIPS.

Keywords: *pharmaceutical sector, TRIPS Agreement, pharmaceutical patents, pharmaceutical firms*

I. INTRODUCTION

Firms are reliant on a variety of protection mechanisms for their innovations such as secrecy, first mover advantages and patents. The use of these mechanisms differs according to the sectors. In the pharmaceutical sector, patents are frequently used for the protection of innovations. In this way, firms intend to offset their expenditures, which may include not only expenses related to research and development (R&D) of pharmaceutical products, but also expenditures related to safety requirements and fees for the registration of medicinal products by the national drug authorities.¹ Hence, firms enjoy exclusive rights in terms of production, supply, distribution and to some extent control over price for the duration of the patent term.

In 1994, the Uruguay Round negotiations led to the adoption of the Agreement establishing the World Trade Organization (WTO), which came into force on 1 January 1995. As part of the multilateral package, Members each accept all the Agreements as a single package, including the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The TRIPS Agreement sets out universal rules for the protection of inventions in all technological fields, including the pharmaceutical sector. Since the TRIPS Agreement entered into force, there has been continuous debate over the implications of applying the intellectual property standards established by the Agreement to developing countries. The debate largely

* **Dr Ummuhan Gökovalı** (Turkey) is Associate Professor in the Department of Economics at Muğla University. She earned her B.Sc. degree in Economics from the Faculty of Political Science, Ankara University, Turkey and her Master's degree from Oklahoma State University, United States. She gained her PhD degree from the Middle East Technical University, Turkey, with her thesis entitled 'Patent Applications and Grants and Their Economic Analysis for Turkey, 1985-1998'. She lectures on the economics of intellectual property rights and econometrics at undergraduate level and applied econometrics and technology policies at graduate level. She has published numerous articles on the topics of intellectual property rights, economics of innovation, tourism, and the feminization of poverty.

¹ Kukrus and Kartus, 'Patent Protection of Pharmaceutical Products in the Globalizing World Economy' (2005) TUTWPE, (n 136).

focuses on the effects such extensions have on pricing and accessibility of drugs, and the structure of the pharmaceutical sector and public health, especially in developing countries. It is argued that without patent protection, there is no incentive for investment in the discovery and development of pharmaceuticals, not only in developed countries but also in developing countries.

There are three claims opposing this argument. Firstly, an efficient patent protection system for pharmaceutical products leads to higher returns for companies as pharmaceutical prices rise beyond research, development and production costs combined^{2 3 4}, and pharmaceutical prices in developing countries are often higher than production costs.^{3 4 5 6} Carey et al.⁷ reports that the return on equity of the five biggest US-based pharmaceutical firms has averaged 30 per cent a year, which is far higher than that of the top 500 companies since 1998.

Secondly, patent protection, at least up to the present, has failed to facilitate access to new medicines, where the market is estimated to be small⁸, or to medicines for diseases in the developing world.⁹ Pharmaceutical firms have failed to invest in the discovery of new medicines, where this has not been profitable. Only 16 out of 1393 new chemical entities marketed between 1975 and 1999 were targeted at diseases in poor countries.¹⁰ Instead of investing in the development of pharmaceuticals for diseases commonly found in poor countries, firms invest in higher priced medicines and similar versions of existing medicines or monopoly extensions for new uses of old medicines.¹¹ Moreover, the number of marketing authorizations granted, which may be taken as an indicator of pharmaceutical innovation, has fallen both in the European Union and in the United States.¹² Further, applications for marketing authorization for new active substances have fallen in the European Union as well.¹³

² Carey et al., 'Drug Prices: What is Fair?' (2001) *Business Week*, December 10:60-68.

³ WHO, 'Access to Medicines' (2005) WHO Drug Information, 19 (3), 236-241.

⁴ Malpani and Kamal-Yanni, 'Patents Versus Patients: Five years after the Doha Declaration' (2006) Oxfam Briefing Paper, November.

⁵ Mintzberg, 'Patent Nonsense: Evidence Tells of an Industry Out of Social Control' (2006) Canadian Medical Association Journal 175 (4), available online at:

<<http://www.cmaj.ca/cgi/content/full/175/4/374>>

⁶ For example, the cost of patent-protected antiretroviral treatments was over US\$10,000 per patient per year when it was first introduced (WHO, 2005). At the time, this was far above the reach of the vast majority of HIV patients in developing countries. When the generic version was introduced into the market in 2001 and more competition was allowed with the other entrance of generic manufacturers, the price dropped to US\$350 per patient per year (WHO, 2005). This price dropped even further to US\$136 per patient per year on account of the competition from Indian generic producers (Malpani and Kamal-Yanni, 2006).

⁷ Carey et al., 'Drug Prices: What is Fair?' (2001) *Business Week*, 60-68.

⁸ WHO 'Access to Medicines' (2005) WHO Drug Information, 19 (3), 236-241.

⁹ Malpani and Kamal-Yanni, 'Patents Versus Patients: Five Years after the Doha Declaration' (2006) Oxfam Briefing Paper, November.

¹⁰ Trouiller et al., 'Drug Development for Neglected Diseases: A Deficient Market and a Public-Health Policy Failure' (2002) *Lancet*, 359:2188-2194.

¹¹ Mintzberg 'Patent Nonsense: Evidence Tells of an Industry Out of Social Control' (2006) Canadian Medical Association Journal 175 (4), available online at:

<<http://www.cmaj.ca/cgi/content/full/175/4/374>>

¹² CRA 'Innovation in the Pharmaceutical Sector' (2004) Belgium ENTR/03/28.

¹³ *ibid.*

Thirdly, the majority of innovative drugs are developed by government-funded research institutes. According to the 2000 US Congress report, 15 out of 21 innovative drugs introduced between 1965 and 1992 were developed applying knowledge or techniques from federally funded research.¹⁴ The most significant pharmaceutical discoveries of the 20th century, penicillin, insulin and the polio vaccine, for example, are derived from the laboratories of 'not-for-profit' institutions.¹⁵

The main purpose of this study is to investigate the impact of the TRIPS Agreement on the Turkish pharmaceutical sector. To this end, several performance criteria and self-generated patent data at the firm level are used and evaluated. This data demonstrates to what extent the TRIPS Agreement has impacted the Turkish pharmaceutical sector. Section two provides a brief historical overview of the latest developments in the international regulation of pharmaceutical patents. Section three provides a brief outline of global trends in the pharmaceutical industry, whilst section four explores trends in pharmaceutical firms in Turkey. Finally, section five examines various policy implications and provides concluding remarks.

II. LATEST DEVELOPMENTS IN THE INTERNATIONAL REGULATION OF THE PHARMACEUTICAL SECTOR

The Agreement Establishing the World Trade Organization (WTO), which came into force in 1 January 1995, was the result of the 1986–94 Uruguay Round negotiations, signed at the Marrakesh ministerial meeting in April 1994. The WTO not only created trade advantages for its Members, but also created obligations to provide certain intellectual property rights and procedures for their enforcement under the TRIPS Agreement. The TRIPS Agreement is one of the covered agreements of the WTO and as such is binding on all Members. TRIPS establishes minimum standards for intellectual property rights for Members, including patent protection of 20 years starting from the application date for a process or product patent, according to the established criteria of novelty, inventiveness and usefulness. Before TRIPS, patent protection of pharmaceutical products was often absent or less than 20 years under national legislation. Many countries provided patent protection for processes only before TRIPS.

The TRIPS Agreement sets universal rules for the adoption of intellectual property rights, but also includes some flexible rules specific to developing and least developed countries.¹⁶ It specifically allows for a transition period for Members to accommodate their own intellectual property right systems and developmental needs. The transition period for developing countries was five years for process patents and ten years for product patents in the areas of technology not subject to patent protection before the TRIPS Agreement. These technology areas include pharmaceuticals and agro-chemicals.¹⁷ The transition period for least developed countries was ten years and subsequently in 2001 the Doha Declaration¹⁸ extended

¹⁴ Mintzberg 'Patent Nonsense: Evidence Tells of an Industry Out of Social Control' (2006) Canadian Medical Association Journal 175 (4), August <<http://www.cmaj.ca/cgi/content/full/175/4/374>>

¹⁵ *ibid.*

¹⁶ The TRIPS Agreement flexibilities provide for compulsory licences with the freedom to determine the grounds upon which licences are granted and the determination of what constitutes national emergency or other circumstances of extreme urgency and parallel importation (WTO, 2001).

¹⁷ WHO 'Access to Medicines' (2005) WHO Drug Information, 19 (3), 236-241.

¹⁸ WTO Members accepted a special Ministerial Declaration at the WTO Ministerial Conference in Doha concerning the TRIPS Agreement in 2001. The Doha Declaration states that Members recognize

the transition period for least developed countries from 2006 to 2016 for obligations related to patents, marketing rights and data protection for pharmaceutical products.¹⁹

The transitional period provided for developing countries under the TRIPS Agreement does not mean that pharmaceutical inventions were not protected during the transitional period. Under the TRIPS Agreement, Members are obliged to have adequate infrastructure to receive and store patent applications for new drugs. This means that countries should establish a 'mail box' for patent applications of pharmaceutical and agricultural chemical products.²⁰ These applications are to be examined until the end of the transition period (at the latest in 2005 for developing countries and 2006 for least developed countries) according to the patentability criteria and to be viewed as if they were being applied on the filing date of application.²¹ The TRIPS Agreement provides that for inventions covered by mail box protection, exclusive marketing rights should be granted for a maximum duration of five years after obtaining marketing approval or until the patent is either granted or refused, whichever period is shorter.^{22,23}

It is argued that the main outcome of the TRIPS Agreement is to introduce strong patent protection for developing and least developed countries, thus changing 'the distribution of financing so that a greater share is shifted to poorer countries'.²⁴ In another study, it is stated that the TRIPS Agreement may result in a small net revenue increase of pharmaceutical firms hence, rather than a redistribution effect of the TRIPS Agreement on poorer countries '(t)he same increase in incentive could be implemented in an alternative fashion with a positive welfare effect'.²⁵

The obligations under the TRIPS Agreement applicable to all Members have been enhanced by other rules as well. National authorities generally require registrants to submit data relating to a drug's quality, safety, efficacy and its physical and chemical characteristics. Test data must be submitted to obtain marketing approval of pharmaceutical and agrochemical

the importance of protection of intellectual property rights for the development of new medicines, but also 'recognize the concerns about its effects on prices' (WTO, 2001). Specifically, Members announced that patent rules restrict access to medicines, especially for those in developing countries. The Doha Declaration states that 'the TRIPS Agreement does not and should not prevent Members from taking measures to protect public health'. Although the Doha Declaration aimed to mitigate the harmful effects of the TRIPS Agreement on pharmaceutical patents, it has not been successful in doing so. It is argued that the behaviour of rich countries weakened the Declaration's effects (Malpani and Kamal-Yanni, 2006).

¹⁹ 'WTO Declaration on the TRIPS Agreement and Public Health' Ministerial Conference Fourth Session, (2001) Doha, 9-14 November WT/MIN (01)/DEC/W/2.

²⁰ Velazquez and Boulet, 'Globalization and Access to Drugs: Implications of the WTO/TRIPS Agreement' (1999) World Health Organization.

²¹ *ibid.*

²² *ibid.*

²³ Implementation of this provision needs two criteria. Firstly, a patent must have been granted for the same product in another Member country subsequent to the entry of the WTO Agreement into force. The second criterion is that the product must have obtained marketing approval in such other Member.

²⁴ Lanjouw and Jack, 'Trading Up: How Much Should Poor Countries Pay to Support Pharmaceutical Innovation' (2004:5) CGD Brief, November, Vol 4 issue 3.

²⁵ Jack and Lanjouw 'Financing Pharmaceutical Innovation: How Much Should Poor Countries Contribute?' (2005:65) The World Bank Economic Review, 19(1), 45-67.

products.²⁶ Pharmaceutical firms attempted to protect this data and claimed that since the effective duration of patent protection is less than 20 years, they needed additional time for protection. Further, firms claim that data exclusivity not only constitutes an important incentive for the research and development of new medicines, but is also an important tool where there are no patents or where the patents are invalidated. Hence, many countries grant exclusive rights for data protection. Data exclusivity provides additional market protection for the company by precluding health authorities from accepting applications for generic medicines during the period of exclusivity, thus delaying the accessibility of generic medicines. This period is currently six or ten years²⁷ in Europe plus the time it takes to register and market the generic medicine i.e. an additional one to three years.²⁸

When the TRIPS Agreement came into force, several Members adopted the exclusivity approach. Most Members permitted their national authorities to rely on test data submitted by the first applicant to approve subsequent applications on similar products.²⁹ Some countries (e.g. Argentina, Singapore, Chinese Taipei and Hong Kong, China) allowed national authorities to rely on a similar product having been approved or commercialized in a foreign country.³⁰ In such systems, the main motivation is to allow competition, so that the price is lowered and more people have access to pharmaceuticals. If subsequent applicants repeat the long and costly testing, this would delay the entry of the drug on to the market; in addition, competition from small and medium-sized enterprises would be prevented since these firms lack the necessary resources to undertake such testing.³¹ Another motivation in the application of such a system arises from an ethical concern. When subsequent applicants repeat the long and costly testing process, part of that process requires testing of those medicines on animals and further on humans, which is unethical and unnecessary.

Data protection rules sometimes invalidate the rules in legislation relating to the duration of patent protection. The TRIPS Agreement recognizes a transitional period for the adoption of patent rules for pharmaceutical products for developing and least developed Members. Before the TRIPS Agreement came into force, those Members that granted process patents only had the opportunity to produce generic versions of the pharmaceutical product by inventing a different method or by reverse engineering. Pharmaceuticals patented before developing countries had implemented their TRIPS Agreement obligations were excluded from patent protection, thus allowing generic competition for least developed and developing Members.³² In these countries, a data exclusivity system, in case of its adoption, may partially substitute for patent protection, hence invalidating the transitional period.³³ Further, allowing

²⁶ Correa 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the TRIPS Agreement' (2002) South Centre, Switzerland, Printed by Sadag.

²⁷ Six years in Austria, Denmark, Finland, Ireland, Portugal, Spain, Greece, Poland, Czech Republic, Hungary, Lithuania, Latvia, Slovenia, Slovakia, Malta, Estonia, Cyprus, Bulgaria, Romania and also Norway, Liechtenstein and Iceland; and ten years in Belgium, Germany, France, Italy, Luxembourg, the Netherlands, Sweden and the United Kingdom (EGA: 2012).

²⁸ EGA <<http://www.egagenerics.com/igpa.htm>> accessed 13 September 2012.

²⁹ Correa 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the TRIPS Agreement' (2002) South Centre, Switzerland, Printed by Sadag.

³⁰ *ibid.*

³¹ *ibid.*

³² WHO 'Access to Medicines' (2005) WHO Drug Information, 19 (3), 236-241.

³³ Correa 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the TRIPS Agreement' (2002) South Centre, Switzerland, Printed by Sadag.

product patents results in strong protection where it blocks the production of generic versions of patented pharmaceutical products.

III. GLOBAL TRENDS IN THE PHARMACEUTICAL INDUSTRY

Owing to the critical importance of the pharmaceutical sector from the perspective of public health and the death or survival of human beings, most countries focus their attention on the development of this sector. The distribution of pharmaceutical production across OECD countries shows that the United States has dominated global production in the pharmaceutical sector over the years. The United States produces approximately half of all pharmaceutical products (the share accounts for around 46 per cent) followed by France (12.9), Italy (9.4), the United Kingdom (8.5) and Germany (8.3) as of 2002.³⁴ These countries have a consistently continuous higher share of pharmaceutical production compared to other countries over the years. Notably, the aforementioned data is specific to OECD countries, which excludes information on pharmaceutical production in countries such as India, China, Korea etc.

The distribution of exports across OECD countries is broadly similar to that of production. Germany, the United Kingdom, the United States, Switzerland and France had the highest share of pharmaceutical exports as a percentage of total OECD exports between 1985 and 2001.³⁵ The distribution of the largest firms around the world is similar to that of production among countries. Table 8.1 provides a ranking of the 15 largest pharmaceutical companies in 1990, 2006 and 2008. Companies originating from the United States, the United Kingdom, Germany and Switzerland dominated worldwide drug sales along with market shares. Merck, Bristol and Glaxo had the highest share in 1990, whereas Johnson & Johnson, Pfizer and Bayer had the highest share in 2006 (in terms of health care revenue). In 2008, although to some extent the ranking has changed, there were no significant changes to the list. Pfizer, along with Wyeth, Johnson & Johnson and Hoffmann-La Roche, were ranked as the top three in 2008. Mergers and acquisitions are dominant in the pharmaceutical sector, and the 1990s and the following years have witnessed large mergers in this sector.³⁶ With regard to mergers and acquisitions, most of the dominant firms in 1990 continued to prevail in 2006 and 2008 likewise.

³⁴ OECD Health Data, October
<<http://stats.oecd.org/wbos/default.aspx?DatasetCode=HEALTH>> 16 January 2008.

³⁵ *ibid.*

³⁶ Sanofi-Synthelabo (the product of a merger in 1999) merged with Aventis (which was formed from a merger between Hoesch and Rhone-Poulenc in 1999) in 2004. Novartis (a merger of Ciba-Geigy and Sandoz in 1996), AstraZeneca (a merger of Astra and Zeneca in 1996), Pfizer (a merger of Pfizer and Warner-Lambert) and Pharmacia (Pharmacia merged with Upjohn and Monsanto in 2003) and GlaxoSmithKline (emerging from GlaxoWellcome [Glaxo merged with Wellcome, SmithKlineBeecham in 2000]) are other examples of mergers (CRA, 2004:106, 115). There were some other important mergers and acquisitions in 2007 and 2009. AkzoNobel sold Organon BioSciences to Schering-Plough Corporation in 2007 <<http://www.rsc.org/chemistryworld/Issues/2007/May/Organon14BillionDollar.asp>> (1 May 2012). In 2009 Pfizer acquired Wyeth company <http://www.pfizer.com/investors/shareholder_services/wyeth_transaction.jsp> (1 May 2012) and Merck & Co. was merged with Schering-Plough, with the new company taking the name of Merck & Co <<http://en.wikipedia.org/wiki/Schering-Plough>> (1 May 2012).

Table 8.1: The Largest Pharmaceutical Companies (1990, 2006 and 2008)

1990		2006		2008	
Company	Country	Company	Country	Company	Country
Merck	United States	Johnson & Johnson	United States	Pfizer with Wyeth	United States
Bristol/Squibb	United States	Pfizer	United States	J&J	United States
Glaxo	United Kingdom	Bayer	Germany	Hoffman-La Roche	Switzerland
Johnson & Johnson	United States	GlaxoSmithKline	United Kingdom	Novartis	Switzerland
Smith Kline Beecham	United Kingdom	Novartis	Switzerland	GlaxoSmith-Kline	United Kingdom
Ciba-Geigy	Switzerland	Sanofi-Aventis	France	Sanofi Aventis	France
American Home Products	United Kingdom	Hoffmann-La Roche	Switzerland	AstraZeneca	United Kingdom/ Sweden
Hoechst	Germany	AstraZeneca	United Kingdom	Abbott Lab	United States
Lilly	United States	Merck & Co.	United States	Merck& Co.	United States
Bayer	Germany	Abbott Laboratories	United States	Bristol-Myers Squibb	United States
Roche	Switzerland	Wyeth	United States	Eli Lilly and Co.	United States
Pfizer	United States	Bristol-Myers Squibb	United States	Boehringer Ingelheim	Germany
Sandoz	Switzerland	Eli Lilly and Co.	United States	Takeda Pharmaceutic-al Co.	Japan
Rhone Poulenc	France	Amgen	United States	Bayer	Germany
Upjohn	United States	Boehringer Ingelheim	Germany	Amgen	United States

Source: Sanford C. Bernstein and Co. in B. Achilladelis and N. Antonakis (2001:570) for the year 1990; <http://en.wikipedia.org/wiki/Top_50_pharmaceutical_companies> accessed 5 June 2008 for the year 2006; and on 1 May 2012 for the year 2008 (latest available data).

Overall, the global distribution of production, trade and pharmaceutical firms reflects the dominant role of some countries and firms. These countries and firms further enhanced their dominant role owing to at least two recent developments in the international arena. Firstly, the TRIPS Agreement provided a legal basis for the worldwide protection of pharmaceutical patents, which in turn gave exclusive rights for the production and distribution of pharmaceutical products. In this respect, those Members and firms producing pharmaceutical products and the holders of those patent rights stood to gain the most from the TRIPS Agreement. Secondly, the merger and acquisition of pharmaceutical firms further enhanced their position. Firms that were dominant in the 1990s became even more so in the first decade of the 21st century. Considering that production and distribution of pharmaceutical products are in the hands of few countries and some firms control the world markets and receive most of the generated revenue, there may be some significant implications for the determination of

worldwide prices and thus access to pharmaceuticals, especially for those with low purchasing power.

IV. THE PHARMACEUTICAL SECTOR IN TURKEY

Products that entered the Turkish market prior to 1995 were not protected by patent and hence were subject to competition by generic equivalents. As regards its obligations under the TRIPS Agreement, Turkey benefited from the transition period available to developing countries with respect to pharmaceutical patenting. However, as of 1 January 1999, Turkey started granting product and process patents which had been filed under the mailbox provision pursuant to Article 70.8 TRIPS since the entry into force of the WTO Agreement in 1995. Hence, Turkey did not take full advantage of the flexibilities contained in the TRIPS Agreement.

Turkey began granting data exclusivity rights to pharmaceutical products in 2005.³⁷ A data exclusivity period is six years beginning from the date of market rights granted for the first time within a country in the Customs Union. For the products which benefit from patent protection, six-year data exclusivity rights are limited to the protection term of the patent (Licensing Regulation of Medicinal Products for Human Use).³⁸ Test results and knowledge cannot be made publicly available by the national authority under the Turkish patent regulation (No. 551).

With the establishment, starting in 1952, of production plants, both domestic and with foreign investment, there was an increase in the production of pharmaceutical preparations, which were previously manufactured in pharmaceutical laboratories between 1928 and 1950.³⁹ Turkey now has the technological capacity to produce broad ranging pharmaceuticals, except in the area of biotechnology and a few new pharmaceutical production technologies.⁴⁰ There are approximately 300 entities, and among 49 manufacturing facilities, 13 of them are multinational firms.⁴¹ Net trade in this sector is always negative, and the export to import ratio is decreasing over the years. However in 2010 and 2011, an upward trend becomes apparent, as reflected in Table 8.2.

³⁷ These rights are valid only if: (i) The original product has market rights in a country within the border of customs union beginning from 1 January 2001 and that there is no application of generic market rights for that product in Turkey until 1 January 2005; and (ii) The original product that will have the market rights for the first time at the end of 1 January 2005 is within a country in the border of customs union that will benefit from the data exclusivity rights.

³⁸ IS <<http://www.istanbulsaglik.gov.tr/w/sb/ecz/mevzuat/mevzuatpdf/bturuhhsat.pdf>> accessed 2 May 2012.

³⁹ IEIS <<http://www.ieis.org.tr>> accessed 2 May 2012.

⁴⁰ *ibid.*

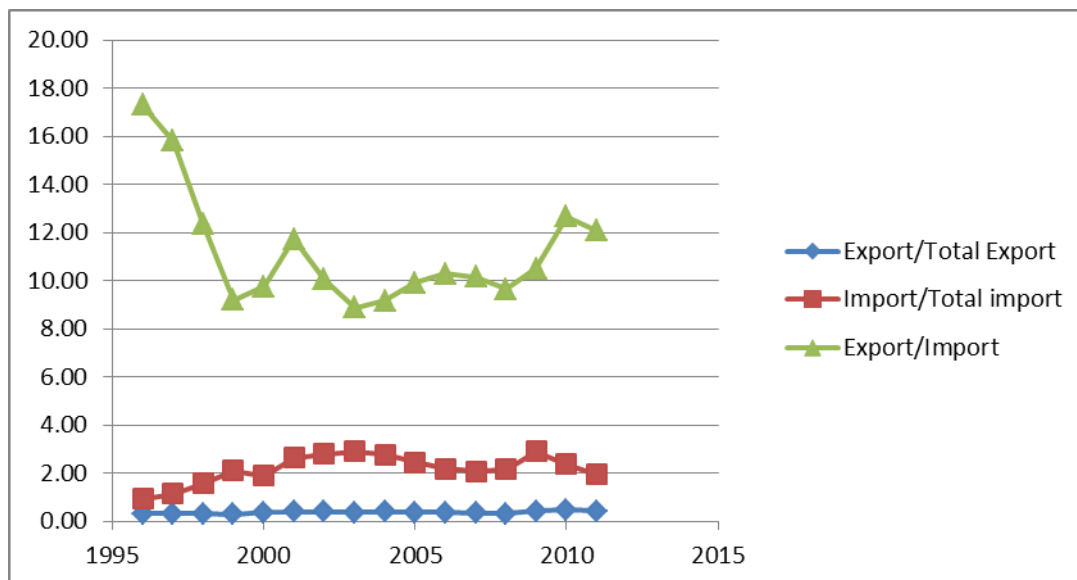
⁴¹ *ibid.*

Table 8.2: Trade in the Pharmaceutical Sector

Year	Export/Total export percentage	Import/Total import percentage	Export/Import percentage
1996	0.31	0.94	17.30
1997	0.33	1.13	15.80
1998	0.33	1.57	12.38
1999	0,30	2.11	9.19
2000	0.36	1.90	9,75
2001	0.41	2.63	11.73
2002	0.40	2.79	10.05
2003	0.38	2.91	8.89
2004	0.39	2.78	9.16
2005	0.38	2.44	9.93
2006	0.37	2.17	10.30
2007	0.33	2.07	10.15
2008	0.32	2.16	9.66
2009	0.42	2.90	10.51
2010	0.49	2.38	12.66
2011	0.42	1.95	12.07

Source: TUIK: <<http://www.tuik.gov.tr>>

Graph 1: Trade Indicators in the Pharmaceutical Sector



There have been some important developments in the Turkish pharmaceutical sector. Firstly, the size of the pharmaceutical sector with foreign entry into the Turkish pharmaceutical market has been increasing over the years. Table 8.3 lists the largest pharmaceutical firms ranked among the top 500 firms in Turkey. Roche, Glaxo, Fako, Ilsan, Eczacıbaşı, Abdi İbrahim, Deva and Bilim İlaç are consistently among the 500 top firms over the years. Ciba Geigy merged with Sandoz to become Novartis, which is also among the largest 500 companies.

The second development in the Turkish pharmaceutical sector is the acquisition of domestic firms by multinational corporations (MNC), especially after 1999, once Turkey began to grant pharmaceutical patents. Fako's percentage of ownership dropped to 10 per cent in 2004 and was acquired in its entirety by Actavis in 2006, whereas its percentage of ownership was 100 per cent until 2004. Ilsan's percentage of ownership was 100 per cent in 1995 and dropped to 1 per cent in 2000. Deva was purchased in 2006 by the partnership created by GEM (Global Equities Management), and EastPharma company was incorporated to manage the venture. The percentage of Deva's ownership was 47.42 per cent in 2006 and dropped to 17.8 per cent in 2012. Citigroup Venture Capital International (CVCI) and fellow investor Partners in Life Sciences (PiLS) bought Biofarma in 2007. Until 2007, Biofarma was a 100 per cent domestically owned firm.

Furthermore, one of the largest domestic companies, Eczacıbaşı, sold its majority share (75 per cent) in its generics business to Zentiva (which originates from Czech Republic, however, Sanofi Aventis is Zentiva's biggest shareholder with approximately a 25 per cent share) in 2007. The majority share of I.E. Ulagay was purchased by the Italian Menarini group in 2001 and from 2007 the share of I.E. Ulagay's ownership dropped to 12 per cent. On 25 April 2012, Mustafa Nevzat, one of the top domestic pharmaceutical companies, was sold to the US company Amgen.

Table 8.3: Largest Pharmaceutical Companies among the Top 500 Firms in Turkey

1995		2000		2004		2006	
Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms
Roche	75	Novartis	62	Eis Eczacıbaşı (TR)	77	Abdi İbrahim (TR)	77
Eis Eczacıbaşı (TR)	81	Eis Eczacıbaşı (TR)	67	Abdi İbrahim (TR)	78	Bayer	128
Ciba Geigy	155	Roche	69	Ilsan	112	Bilim (TR)	131
Fako (TR)	161	Abdi İbrahim (TR)	95	Roche	139	Novartis	154
Abdi İbrahim (TR)	174	GlaxoWellcome	108	Sanovel (TR)	170	Sanovel (TR)	165
Sandoz	185	Fako (TR)	133	Bilim (TR)	171	Nobel (TR)	196
Deva (TR)	209	Deva (TR)	134	Fako	173	Fako	212
Bilim (TR)	253	Bilim (TR)	171	Novartis	181	Sandoz	233
Bayer	282	Ilsan	205	Mustafa Nevzat	183	Roche	313
I.E.Ulagay (TR)	306	Sanovel (TR)	265	Nobel (TR)	191	Deva	317

Patent Rights and their Economic Impacts: the Case
of the Turkish Pharmaceutical Industry

1995		2000		2004		2006	
Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms	Company name	Ranking among the largest 500 firms
Ilisan (TR)	318	Bayer	283	Deva (TR)	228	Biofarma (TR)	379
Dogu	343	I.E.Ulagay (TR)	333	Glaxosmithkline	235	Santa Farma (TR)	445
GlaxoWellcome	376	Sanofi Dogu	369	Santa Farma (TR)	323	I.E. Ulagay	482
Abfar (TR)	495	Nobel (TR)	403	Biofarma (TR)	440		
		Santa Farma (TR)	416	Kocak Farma (TR)	475		

Source: ISO, Top 500 Companies in Turkey in CD format.

The third development trend in the pharmaceutical sector can be distinguished by examining some of the performance criteria of domestically owned and foreign-owned firms. Table 8.4 lists the performance indicators for pharmaceutical firms ranked among the top 500 firms in Turkey for several years. The concentration ratio of the four largest firms (according to sales from production) is consistently higher than 40 per cent, indicating an oligopolistic market structure in the pharmaceutical sector.⁴² Profit to sales, equity and assets ratios of domestic firms were higher than those of foreign firms in the years 1995 and 2006 and lower in the years 2000 and 2004. The figures in Table 8.4 show a striking trend in the relative performance of domestic firms over the years. The table shows the declining profit to sales, equity and assets ratios for domestic firms, whereas the reverse is true for foreign firms. These trends are more distinct especially after the TRIPS Agreement entered into force.

Table 8.4: The Share of Private and Foreign Pharmaceutical Firms

Year	Company	Profit/Sales percentage	Profit/Equity percentage	Profit/Assets percentage
1995	Domestic	11.15	21.58	10.89
	Foreign	2.23	10.84	2.90
	Concentration Ratio-4 firms	43.91		
2000	Domestic	5.70	17.97	5.91
	Foreign	7.50	34.92	10.01
	Concentration Ratio-4 firms	48.33		
2004	Domestic	7.62	9.36	5.97
	Foreign	9.31	16.54	8.91
	Concentration Ratio-4 firms	42.85		
2006	Domestic	4.67	10.87	4.6
	Foreign	3.32	5.04	2.24
	Concentration Ratio-4 firms	48.76		

Source: Calculated from ISO, top 500 Companies in Turkey in CD format.

⁴² The concentration ratio is calculated using data for pharmaceutical firms ranked within the top 500 firms.

Lastly, a trend towards development in the pharmaceutical sector can be observed in patents granted in Turkey. Table 8.5 shows the country distribution of pharmaceutical patenting activities in Turkey. The share of Turkey in pharmaceutical patents is negligible (no country bias is observable in the case of the pharmaceutical sector). The number of resident patent applications and grants is so small that the share only accounts for about 1 per cent of applications and grants in total. The United States, Germany, Switzerland and United Kingdom have the highest share in applications and grants. This trend is broadly similar to the global distribution of production and export share of countries in the pharmaceutical sector.

Table 8.5: Distribution of Pharmaceutical Patents among Countries, 1995-2006

<i>Countries</i>	Applications		Grants	
	<i>Frequency</i>	<i>Percentage</i>	<i>Frequency</i>	<i>Percentage</i>
Belgium	64.0	3.3	47.0	4.3
Canada	15.0	0.8	11.0	1.0
Switzerland	213.0	11.0	110.0	10.1
Germany	332.0	17.2	192.0	17.6
Denmark	150	0.8	14.0	1.3
Spain	15.0	0.8	10.0	0.9
France	113.0	5.8	82.0	7.5
United Kingdom	176.0	9.1	92.0	8.4
Ireland	23.0	1.2	15.0	1.4
Italy	47.0	2.4	28.0	2.6
Japan	60.0	3.1	41.0	3.8
Netherlands	54.0	2.8	31.0	2.8
Sweden	108.0	5.6	73.0	6.7
Turkey	15.0	0.8	10.0	0.9
United States	614.0	31.7	288.0	26.4
Other Countries	70.0	3.6	47.0	4.3
Total	1934.0	100.0	1091.0	100.0

Source: Calculated by the author from raw data kindly provided by the Turkish Patent Institute (TPI).

Table 8.6 illustrates the distribution of patenting activities in the pharmaceutical sector among firms in Turkey. In the table, firms are grouped according to mergers and acquisitions of firms occurring in the 1990s. GlaxoSmithKline, Sanofi-Aventis, Roche, AstraZeneca and Pfizer have the highest share of patent applications, and Sanofi-Aventis, GlaxoSmithKline, AstraZeneca, Roche and Pfizer have the highest share of patents granted. The trend of applications and patents granted is broadly similar to the worldwide ranking of pharmaceutical firms. In sum, country and firm distribution of patents granted in Turkey is similar to the global distribution of production, trade and pharmaceutical firms. There are more similarities than differences in the distribution of firms in the pharmaceutical sector in Turkey and throughout the world, and the similarities are more visible, especially after the TRIPS Agreement entered into force.

Table 8.6: Distribution of Pharmaceutical Patents among Firms in Turkey, 1995-2006

Firms	Applications		Grants	
	Frequency	Percentage	Frequency	Percentage
Others	630	32.6	345.0	31.6
GlaxoSmithKline (United Kingdom)	191	9.9	102	9.3
AstraZeneca (United Kingdom)	136	7.0	85	7.8
Roche (Switzerland)	147	7.6	76	7.0
Pfizer (United States)	117	6.0	75	6.9
Sanofi-Aventis (France)	182	9.4	112	10.3
Eli Lilly (United States)	104	5.4	65	6.0
J&J (United States)	50	2.6	37	3.4
Novartis-Sandoz (Switzerland)	64	3.3	32	2.9
Bayer (Germany)	50	2.6	30	2.7
Beohringer (Germany)	35	1.8	27	2.5
Abbott (United States)	44	2.3	25	2.3
Merck (United States)	41	2.1	24	2.2
Schering (United States)	35	1.8	14	1.3
Akzo Nobel	37	1.9	21	1.9
Procter&Gamble (United States)	58	3.0	10	0.9
Wyeth (United States)	7	0.4	7	0.6
Bristol-Myers Squibb (United States)	6	0.3	4	0.4
Total	1934.0	100.0	1091.0	100.0

Source: Calculated by the author from raw data, TPI.

Taking Tables 8.5 and 8.6 together, it is clear that foreign firms primarily hold Turkish patents. The so-called spillover effects of patents may not have occurred in the Turkish market, since there was no increase in domestic applications. This could be attributed to the lack of the necessary indigenous infrastructure developed by the domestic pharmaceutical sector, and hence the inability to follow international leaders. On the other hand, the high propensity to patent in the Turkish pharmaceutical sector by non-residents may indicate that these firms have enough legal power given by patent rights to produce, import and export patented drugs and set the prices.⁴³

V. CONCLUSIONS AND POLICY IMPLICATIONS

The TRIPS Agreement set global standards for patent protection, including in the pharmaceutical sector. The examination of the global trend in the pharmaceutical sector shows that production and trade are clearly concentrated in the hands of a few countries and MNCs. With the mergers and acquisitions of firms, dominant firms in the 1990s continued to dominate through the first decade of the 21st century as well. New regulations mandated by the TRIPS Agreement set universal standards around the world, which further strengthened the position of pharmaceutical firms. With these new regulations and strict rules, developing countries have

⁴³ Thirty pharmaceutical firms (among them are Abbott, Abdi Ibrahim, Roche, Bayer, Glaxo Smith Klein, Pfizer, Lilly, Novartis) were accused of selling drugs with higher prices to the Turkish government in 2007.

less room for policy implementations compared to the years before the TRIPS Agreement came into effect. This is the case for Turkey as well.

The analysis of Turkey's pharmaceutical sector shows that the distribution of dominant countries and firms is in line with the worldwide distribution of pharmaceutical production among countries and firms. It also shows that there has been a decline in the economic performance of Turkish firms, while the reverse is true for foreign firms, and this trend is more observable post-TRIPS. Further, with regard to mergers and acquisitions, the share of domestic firms in the Turkish pharmaceutical sector has been declining over the years. As far as patents are concerned, the share of non-residents in Turkey in patenting activities is high, such that the domestic share is negligible. By obtaining patents, firms are assured of gaining a foothold in the Turkish market. No other firms can produce, export or import a product or process that is patent protected. When the patenting trend and firm level indicators are considered together, it may be argued that firstly, domestically owned firms are unable to compete on the same terms with foreign-owned firms. Essentially, this may result in a dependence on imports and production by foreign-owned firms; secondly, these trends have serious implications for firms' long-term pricing strategy and access to drugs.

Before TRIPS, pharmaceutical products could be produced and imitated, but after the Agreement came into force this was no longer possible. However, this does not signify that there is no scope for the adoption of policies. There are at least two areas in which the Government can have a significant effect on the development of the Turkish pharmaceutical sector. Firstly, Turkey can and should enlarge its production of the generic version of drugs and export to less developed countries. It is proposed that the Turkish patent regulation (No: 551) should be amended, according to the options and flexibilities provided for in the TRIPS Agreement, allowing compulsory licensing for pharmaceutical products, with the aim of exporting to least developed and developing countries that lack the capacity to produce those products.⁴⁴

Canada and Norway opted to change their law, in order to allow compulsory licensing for the export of pharmaceutical products to countries that lack the capacity to produce them. Turkey could do the same. A new Turkish Patent Law was prepared and the draft law was delivered to the Government to be submitted to the Turkish Parliament. The draft provides for compulsory licensing for the export of pharmaceutical products to developing countries lacking capacity⁴⁵, which is in accordance with WTO rules⁴⁶. These amendments, which not only benefit countries that cannot produce pharmaceuticals, also allow for the development of the pharmaceutical sector. The pharmaceutical sector would develop by enhancing production,

⁴⁴ TUSIAD 'Fikri Mülkiyet Hakları Alanında Gündemdeki Konular: İş Dünyası için Yol Haritası' <http://www.tusiad.org/_rsc/shared/file/fikri.pdf> accessed 2 May 2012.

⁴⁵ TPI 2012.

⁴⁶ The WTO decision on 30 August 2003 waives countries' obligations under a provision of the TRIPS Agreement. TRIPS Article 31(f) states that production under compulsory licensing must be predominantly for the domestic market, which limits the ability of countries that lack the capacity to produce pharmaceutical products to import such products from countries where pharmaceuticals are patented. The statement by WTO Director-General Supachai Panitchpakdi on 30 August 2003 indicated that the system will allow 'poorer countries to make full use of the flexibilities in the WTO's intellectual property rules in order to deal with the diseases that ravage their people' <http://www.wto.org/english/news_e/pres03_e/pr350_e.htm> accessed 10 September 2013.

employment and exports; build human capital and physical capital indigenous capacity; and allow investment in production and R&D facilities.

The second area that the Government should continue to promote is the collaboration of university and business, which began almost ten years ago. While promoting the pharmaceutical sector, it is necessary to monitor and regulate, when necessary, the price of pharmaceuticals. Empirical evidence worldwide shows that the prices of patented drugs are much higher than those of drugs without patent protection. Hence, it is necessary to monitor and regulate patented drugs with the aim of decreasing drug expenditures as a country and access to medicines of those who have less purchasing power.

BIBLIOGRAPHY

Achilladelis B and Antonakis N, 'The Dynamics of Technological Innovation: The Case of the Pharmaceutical Industry' (2001) *Research Policy* 30, 535–588

Carey J, Barrett A, and Weintraub A, 'Drug Prices: What is Fair?' (2001) *Business Week* December 10, 60-68

Correa C M, 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the TRIPS Agreement' (2002) South Centre, Switzerland, Printed by Sadag

CRA, 'Innovation in the Pharmaceutical Sector' (2004) Belgium ENTR/03/28
EGA, http://www.egagenerics.com/images/factsheet/EGA_factsheet_03.pdf,
accessed 3 September 2012

Jack W and Lanjouw J O, 'Financing Pharmaceutical Innovation: How Much Should Poor Countries Contribute?' (2005) *The World Bank Economic Review*, 19(1), 45-67.
IEIS, <<http://www.ieis.org.tr>>, accessed 2 May 2012

IS, <<http://www.istanbulsaglik.gov.tr/w/sb/ecz/mevzuat/mevzuatpdf/bturuhhsat.pdf>>, accessed 2 May 2012

Kukrus A and Kartus R, 'Patent Protection of Pharmaceutical Products in the Globalizing World Economy' (2005) *TUTWPE*, No: 136

Lanjouw J O and Jack W, 'Trading up: How Much Should Poor Countries Pay to Support Pharmaceutical Innovation' (2004) *CGD Brief*, November, 4(3)

Malpani R and Kamal-Yanni M, 'Patents Versus Patients: Five years after the Doha Declaration' (2006) *Oxfam Briefing Paper*, November

Mintzberg H, 'Patent Nonsense: Evidence Tells of an Industry out of Social Control' (2006) *Canadian Medical Association Journal* 175 (4), August
<<http://www.cmaj.ca/cgi/content/full/175/4/374>>

OECD Health Data, October <<http://stats.oecd.org/wbos/default.aspx?DatasetCode=HEALTH>>, accessed 16 January 2008.

TPI <http://www.tpe.gov.tr/dosyalar/taslaklar/Patent_Kanun_Taslagi.pdf> accessed 2 May 2012

Trouiller P, Olliaro P, and Torreele E, 'Drug Development for Neglected Diseases: A Deficient Market and a Public-Health Policy Failure' (2002) *Lancet*, 359:2188-2194

TUSIAD 'Fikri Mülkiyet Hakları Alanında Gündemdeki Konular: İş Dünyası için Yol Haritası' <http://www.tusiad.org/_rsc/shared/file/fikri.pdf> accessed 2 May 2012

WHO, 'Access to Medicines' (2005) *WHO Drug Information*, 19 (3), 236-241

WTO, 'Declaration on the TRIPS Agreement and Public Health' (2001) Ministerial Conference Fourth Session, Doha, 9-14 November WT/MIN (01)/DEC/W/2

Velasquez G and Boulet P, 'Globalization and Access to Drugs: Implications of the WTO/TRIPS Agreement' (1999) WHO

9 THE AMERICA INVENTS ACT OF 2011 AND THE EMERGING PUBLIC INFOSTRUCTURE OF PATENTS

*Kali Murray

ABSTRACT

This paper considers the emergence of *infostructure* as an element of international intellectual property law. It first examines the emergence of a *public infostructure* in patent law. It next examines how recent patent reform in the United States incorporates requirements that support the public infostructure. Finally, it considers the normative consequences of the public infostructure for international IP law.

Keywords: *infostructure, circulation, publication, America Invents Act, patent reform, right to information*

I. INTRODUCTION

It is sometimes forgotten that a patent is a text; that is, a patent, like a novel, a poem, or a play, is written and is read. A disclosed patent, like a novel, a poem, or a play, has its own version of chapters (the abstract, the detailed description of the invention) and its own version of verse (the claims), and even its own versions of pictures (the drawings). A disclosed patent, also like all of these other forms, is intended to be read by an interested audience.¹ The reading of a patent, though, is an unusual kind of reading. The reading of a patent is assumed to happen in public insofar as the reading of a disclosed patent is understood to happen in circulation. By circulation, it is meant that it is likely that a patent is intended to be read by an epistemic audience that understands – and can consequently act upon – this text. An ideal reader, then, can comprehend a disclosed patent within a previous world of social knowledge in a given field or scientific community.²

Normative consequences in international, regional and national patent law flow from this notion that a patent is a circulating text. Initially, at the international, regional, and national levels, it means that the procedural requirements associated with disclosure requirements of patent law can be understood to impose far more substantive duties on the patentee than is commonly realized. The Supreme Court of Canada, in *Teva Canada Ltd v Pfizer Canada, Inc.*³, has recently invalidated a patent on the drug popularly identified as Viagra because the patent

* **Ms Kali Murray** (United States) is Assistant Professor at Marquette University Law School and a member of its Intellectual Property Programme. Among other publications, she has recently published *A Politics of Patent Law: Crafting the Participatory Patent Bargain* (Routledge Press 2012). She would like to thank Associate Dean Matthew Parlow for his support of her attendance at the Colloquium and Martha Chikowore, Xiaoping Wu, and Maegan McCann for their work on this paper.

¹ The author draws on the metaphor of circulation from the description given of public libraries in the initial form in the United States during the 18th and 19th centuries. Tom Glynn, 'The New York Society Library: Books, Authority and Publics in Colonial and Early Republican New York' (2005) 40 *Libraries and Culture* 493, 494 ('The idea of a public library as it is currently understood - a tax-supported, circulating collection, freely available to everyone in a community - is a relatively recent development').

² Kali Murray, *A Politics of Patent Law: Crafting the Participatory Patent Bargain* (Routledge 2012).

³ *Teva Canada Ltd v Pfizer Canada Inc*, 2012 SCC 60 (2012).

failed to sufficiently disclose the contents of the respective invention.⁴ The disclosed patent thus establishes the duties of the patentee to its public and furthermore suggests that public international law such as the Patent Cooperation Treaty, as Antony Taubman has noted, has played a vital role in establishing a publicly available resource of information that is 'freely knowable and accessible'.⁵

Additionally, the circulation of the disclosed patent suggests that the circulation of a granted patent is itself an act invested with public consequence. In many respects, this view of a patent as a circulated text thus suggests the growing commitments of international, regional and national patent law to viewing patent law as public law. Indeed, the informational burden of an improperly granted patent may impose significant burdens on the circulation of information within a given research or scientific community.⁶ This communicative burden, along with others such as the public health and competitive harms associated with a granted patent, has ensured the claim that patent law is understood to have public consequence. Of course, the claim that patent law is understood to have 'public consequence' does not necessarily support the claim that patent law is public law, since patent law has been typically understood to be private law; that is, a law that solely adjudicates competitive injury that may occur between two private actors about a private dispute over ownership.

This is not to say, however, that patent law is not *becoming* public law. The public consequence of the disclosed patent is being addressed within an increasing maturation of public international intellectual property law and constitutional politics at the national and regional levels. The maturity of these two trends suggests that patent law in the 21st century can no longer be neatly divided into public and private models of administration and adjudication. The emergent public law of patent law has also been shaped by a generally unremarked trend in patent law: the evolution of sophisticated administrative practices at the international, regional, and national levels in the examination and issuance of patents is generating a range of information beyond the disclosed patent. Indeed, patent administration is building an independent public infrastructure of information that exists *separately* from the disclosure of any individual patent. The author terms this public infrastructure the patent infostructure, as it differs from other claims of infrastructure commons, insofar as it speaks to the information that is generated by governmental entities through their administration of patent law.⁷ The infostructure exists both as information generated by the patent examination and

⁴ *ibid* 70 ('As noted above, this Court made it clear in *Consolboard* that the specification, which includes the claims and the disclosure, must define the "precise and exact extent" of the privilege being claimed, so as to ensure that the public can, *having only the specification*, make the same use of the invention as the inventor.')

⁵ Antony Taubman, 'The Public Domain and International Intellectual Property Law Treaties' (2008) Australian National University College of Law Research Paper No. 07-17, 2.

⁶ *Golan v Holder*, US 132 S Ct 873, *907-908 (2011) J Breyer dissenting opinion: ('Taken together, these speech-related harms (e.g., restricting use of previously available material; reversing payment expectations; and rewarding rent seekers at the public's expense) at least show the presence of a First Amendment interest. And that is enough. For present purposes, I need not decide whether the harms to that interest show a violation of the First Amendment. I need only point to the importance of interpreting the Constitution as a single document - a document that we should not read as setting the Copyright Clause and the First Amendment at cross-purposes').

⁷ David Levine defines public infrastructure as an 'essential set of goods and services drawn from the set of public works traditionally supported or directed by the public sector, including the operations of government itself'. David S Levine, 'Secrecy and Unaccountability: Trade Secrets in Our Public Infrastructure' (2007) 59 Fla L Rev 135, 141. Here, there is a departure from the informational

issuance process, as well as the electronic and tangible infrastructure, such as databases, registries, and search tool devices (for instance classification systems) that produce those devices. The informational infrastructure of patented information is then a core component of public patent law and thus may impact the development of international, regional, and national patent law.

The informational infrastructure of patent law, though, is by no means a settled collection of administrative and legal choices. The recent patent reform in the United States, however, provides a unique opportunity to consider how the informational infrastructure is emerging as a key concern of patent law in its new environment. The remainder of this paper considers one element of the informational infrastructure supported by the recent United States Congressional passage of the Leahy-Smith America Invents Act of 2011 (the AIA), which amended key elements of the Patent Act of 1952, with relevant comparisons to other infostructure regimes in international intellectual property law.⁸

II. PUBLIC INFOSTRUCTURE AND THE AMERICA INVENTS ACT OF 2011

The American Invents Act is notable abroad for its harmonization of inventorship requirement under Section 102(a) of the Act. Its consequences, however, for the generation of an informational infrastructure are considerable and have been less examined within the relevant literature upon its enactment. A paradigmatic example of this is Section 122 of the Patent Act, which was amended to permit the submission of information by third parties during the examination of a patent. Section 122(e) thus expands the informational infrastructure of the patent in two key ways. Firstly, it permits third parties to participate in what has been to this point a relatively closed examination process of a claimed invention. Secondly, Section 122(e) generates additional information such as the epistemic content of the associated social world of the patentee and other community members at the time of the patent.

As amended, Section 122(e) of the Patent Act permits 'any third party to submit for consideration and inclusion in the record of a patent application, any patent, published patent application, or other printed publication of potential relevance to the examination of the application' if such submission is made in writing: (1) six months after the application is published; (2) after the date of any first rejection of any claim during the examination; and (3) after the notice of allowance has been submitted by a patentee.⁹ Section 122(e) further requires that any submission describe the relevance of each submitted document.¹⁰ The legislative history of the American Invents Act suggests that Congress intended to lessen the barriers presented to competitors or other interested parties in presenting information to the

infrastructure as defined by Brett Fischmann, who claims that the informational infrastructure should be defined as having three characteristics, including its non-rival nature, its substantial benefits or value, and its wide variance in downstream uses. Brett Fischmann, 'Infrastructure Commons' (2005), *Mich St L Rev* 121, 134. This paper contends that the infostructure is derived from government action that expands the content of, and access to, readily available information.

⁸ Leahy-Smith America Invents Act, Pub L No. 112-29, 125 Stat 284 (16 September 2011).

⁹ 35 U.S.C. §122(e)(1)(2012). Section 122 was made effective on 16 September 2012. Pub L No 112-29, § 8, §20(j), 125 Stat 284 (effective 16 September 2012). The basic structural content of §122 was initially included in 35 C.F.R. § 1.99. See H Rep No 112-98, pt.1, at 49 (2011).

¹⁰ 35 U.S.C. § 122(e)(2)(2012).

United States Patent and Trademark Office (USPTO) during the examination of a patent.¹¹ The USPTO issued its final rule, 'Changes to Implement the Preissuance Submissions by Third Parties Provision of the Leahy-Smith America Invents Act', on 17 July 2012, which outlined the primary administrative changes, to be codified in Section 1.290 of Title 37 of the Code of Federal Regulations, that would be required for the USPTO to initiate changes as a result of Section 122(e).¹² The USPTO emphasized two key elements of the rule in its final rules statement. Firstly, third party access submissions under Section 122(e) would be encouraged by the development of a dedicated electronic interface that permitted immediate publication of the relevant information.¹³ Secondly, although Section 122(e) granted a wide range of third parties the right to submit a pre-issuance submission, the examiner was not required to consider a listed document in its patent examination, nor may a third party respond to an examiner's treatment of an application.¹⁴

The inclusion of Section 122(e) in the American Invents Act, then, demonstrates both the potential of the emerging infostructure within patent law, as well as its current limitations. Section 122(e) permits third parties to engage with the examination of the patent before its ultimate issuance, thus fostering the deliberative content associated with a circulated patent. Its inclusion suggests that issued patents should be reflective of the pre-existing base of knowledge associated with a given epistemic community. The legal commitment to circulated knowledge is reinforced by an electronic or physical infrastructure that supports transparent access to the disclosed patent and its examination. The limitations of Section 122(e) are also equally apparent. Section 122(e) only permits public access to a secondary role in the pre-issuance, since examiners are not required to respond fully to documents submitted by third party submitters. A partial response to that concern is the wide range of post-issuance proceedings that are permitted under the American Invents Act, including substantial *inter partes* review and post-grant review. This is not a wholly sufficient response, however, since the pre-issuance submission requirements have the potential to generate objective information independent of any contested dispute by any given set of parties. Thus, Section 122(e) can only be seen as a useful start in ensuring the development of a sustainable patent infostructure.

¹¹ H Rep No 112-98 ('After an application is published, members of the public - most likely, a competitor or someone else familiar with the patented invention's field - may realize they have information relevant to a pending application. The relevant information may include prior art that would prohibit the pending application from issuing as a patent. Current USPTO rules permit the submission of such prior art by third parties only if it is in the form of a patent or publication, but the submitter is precluded from explaining why the prior art was submitted or what its relevancy to the application might be. Such restrictions decrease the value of the information to the examiner and may, as a result, deter such submissions. The Act improves the process by which third parties submit relevant information to the USPTO by permitting those third parties to make statements concerning the relevance of the patents, patent applications, and other printed publications that they bring to the USPTO's attention'.)

¹² Changes to Implement the Preissuance Submissions by Third Parties Provision of the Leahy-Smith America Invents Act (17 July 2012) (to be codified at 37 C.F.R. pt. 1.290).

¹³ *ibid* 42512. The publicly available database is now available at:
<<http://www.uspto.gov/patents/process/file/efs/index.jsp>>

¹⁴ *ibid* 42513. The Patent Act of 1952 also places a mandatory responsibility on the Director of the USPTO to provide for the 'full deployment of the automated search systems of the Patent and Trademark Office so that such systems are available for use by the public, and shall assure full access by the public to, and dissemination of, patent and trademark information, using a variety of automated methods, including electronic bulletin boards and remote access by users to mass storage and retrieval systems'. 35 U.S.C. § 41(i)(2)(2012).

Indeed, a more sophisticated infostructure is embodied within the European Patent Convention. Article 115¹⁵ preceded the passage of Section 122 of the America Invents Act and thus offered an affirmative model for protection of the patent infostructure. Article 115 provides that 'following the publication of the European patent application, any third party may, in accordance with the Implementing Regulations, present observations concerning the patentability of the invention to which the application or patent relates' but like Section 122, it qualifies that participation by stating '[t]hat person shall not be a party to the proceedings'.¹⁶ A truly substantive right to participate in the proceedings would be likely to provide for a more fully deliberative principle associated with Article 115.

Despite the limitations, however, the European Patent Convention contains a number of substantive requirements that support a more robust infostructure than in the United States. Two particular types of regulations demonstrate the more sophisticated approach embodied in the European Patent Convention. Firstly, while under Article 115, a third-party submitter is not permitted to be a party to a proceeding in terms of submission, this particular right is subsumed within Article 113(a) of the European Patent Convention, which provides for a generalized right to be heard in relation to the relevant proceedings.¹⁷ Secondly, Articles 127-132¹⁸ of the European Patent Convention provide for a range of responsibilities, including the requirement to maintain a patent registry, to permit inspection of the files, to produce an official journal related to the proceedings of the Office, and to exchange information with a variety of national and international offices. These articles affirm an important subsidiary impact of patent regulation: its generation of informational assets other than the patent itself.

Indeed, Article 127 places a mandatory obligation on the European Patent Office to make the European Patent Register 'open for public inspection'. Article 127, thus, suggests an affirmative obligation of preservation and furthermore that the obligation is to be conducted in such a way that permits open access to the relevant records of the Office.¹⁹ Article 127, to be sure, fails to extend this requirement to other types of informational assets besides the Registry; however, this Article does provide a basis for refinement in the future. Thus, in many respects, the European Patent Convention offers a more sophisticated protection of the infostructure, although it too could be substantially revised and improved in the future.

III. THE PATENT INFOSTRUCTURE OF PATENT LAW: ITS CONSEQUENCES

Understanding the patent infostructure as an independent entity, with its own set of rights and duties, differentiates from the public consequences that emerge from the circulated text of the patent. The circular text derived its value from its singular nature; its reproduction was intended in some respect to be passed along from individual reader to individual reader. A primary goal of the patent infostructure is to provide access to patents and their related prosecution in an aggregated manner. Indeed, it may be suggested that aggregated information

¹⁵ Convention on the Grant of European Patents, [2007], Article 115.

¹⁶ *ibid.*

¹⁷ Convention on the Grant of European Patents, [2007], Article 113(a) ('The decisions of the European Patent Office may only be based on grounds or evidence on which the parties concerned have had an opportunity to present their comments.').

¹⁸ Convention on the Grant of European Patents, [2007], Articles 127-132 (providing for obligations to provide information to the public and member States).

¹⁹ Convention on the Grant of European Patents, [2007], Article 127.

pertaining to a set of patents will become more important to the public than a single text. Current industry practices suggest that patent valuation (the assessment of a given patent's commercial value in exchange)²⁰ and patent mapping (the practice of analysing aggregated patents)²¹ are becoming central to commercial patent practice. Thus, the independent importance of an informational infostructure may undermine the singularity of the circulated text of a patent. Moreover, third-party participation in patent decision-making is likely to be sustained on different grounds than participation which depends on the circulated text of a patent. While the generation of a participatory public builds on the circulated text of the patent as ideal, insofar as its circulation of the patent to a committed epistemic public is key to its representative claims, it suggests that there may be an important independent interest in the preservation and stewardship of the patent infostructure itself.

The generation of an informational infostructure is a significant normative consequence for patent law at the international, regional, and national levels. Specifically, it suggests that in the preservation and stewardship of a patent infostructure, patent public law may be linked more closely to the types of administrative practices and proceedings that accompany complex property systems such as property and environmental regimes. Carol Rose in an essay on public infrastructure and its impact on property rights, suggests that what we see as private activity (the generation of property) should be seen in the context of a public infrastructure (the building of publicly supported roads); Rose suggests that '[c]ommerce and trade are possible without publicly supported roads or publicly supported property rights - but public infrastructure makes these activities much easier, much more fluid, much cheaper, much more expansive, and hence vastly more productive'.²² While the circulated text of a patent has always generated its own claims of public consequence in patent law, the independent recognition of an emerging public infostructure suggests that patent administrators need to be cognizant of their responsibilities to ensure informational access to patent decision-making.

It also suggests, in particular that the emergence of the public infostructure could be potentially linked to a right to information embedded within current national, regional and international law. The emergence of a public infostructure of patents, however, suggests another appropriate linkage in this area: national, regional and international transparency regimes that seek to provide access to governmental functions by an interested public. The right to information has typically arisen within two statutory contexts: more generally, within right to information regimes, in which a government must produce information to interested publics and more specifically within the context of an environmental regime. These national, regional and international transparency regimes can vary in significant respects as to the strength of this informational right. A strong right to information statute can impact patent administrative regimes. For instance, the Indian Patent Office publishes and maintains its patent publication and accompanying proceedings as part of its responsibilities under the India Right to Information Act of 2005.²³

²⁰ See generally William Murphy, John Orcutt, and Paul Remus, *Patent Valuation: Improving Decision Making through Analysis* (Wiley 2012) (discussing varieties of patent valuation).

²¹ See generally Michelle Fattori, Giorgio Pedazzi and Roberta Turra, 'Text Mining Applied to Patent Mapping: A Practical Business Case' (2003) 25 World Patent Information (discussing patent mapping strategies).

²² Carol Rose, 'Big Roads, Big Rights: Varieties of Public Infrastructure and their Impact on Environmental Resources' (2008) 50 Arizona L Rev 409, 432.

²³ India Right to Information Act 2005 Section 1(a). Section 1(a) of India Right to Information Act of 2005 provides that '[e]very public authority shall—(a) maintain all its records duly catalogued and

A right to information can also arise out of environmental law. Typically, analyses of the relationship of patent law and environmental law have focused on commodification engendered by patent claims on the availability of shared resources within indigenous cultures. Consequently, it has been suggested that Articles 15 and 16 of the Convention on Biological Diversity should inform the appropriate response in this area. For example, Peter Sand has identified in the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters ('the Aarhus Convention') two types of access rights, 'passive access' rights contained within Article 4 that permit citizens to seek environmental information, and 'active access' rights contained within Article 5 that impose duties on governments to collect, disclose and disseminate information.²⁴ The public infostructure of patent law - if we draw on the basic lessons from international environmental and informational law - necessarily then can consist of basic access rights to aggregated patent information of the infostructure, as well as basic responsibilities on the part of the government to engage to collect, disclose and disseminate aggregated patent information of the infostructure.

IV. CONCLUSION

The public infostructure of patents is a new concept in the United States. Indeed, for interested third parties, Section 122(e) of the American Invents Act is a comparatively weak provision insofar as it invests them with minimal ability to challenge examiner decision-making as to the epistemic content of a patent before its issuance. Lessons from across the global international intellectual regime, such as those provisions contained within the European Patent Convention or the preservation obligations placed on the Indian Patent Office, suggest an emerging awareness of the public infostructure of patents. The public infostructure seeks in its ideal state an increased deliberation during the examination of a patent, preservation and stewardship of all relevant resources associated with patent infostructure, and transparent access to the relevant material of the public infostructure. Section 122(e) provokes, though, because it indicates a tentative step in the patent law of the United States towards the recognition of public infostructure of patent law in two key respects - its commitment towards the generation of additional epistemic information during the prosecution of a patent, as well as the transparent access to that specific information throughout the prosecution of a patent. Patent reform, however, is not intended to obtain a patent ideal and hopefully, Section 122(e) points to ways that a public infostructure of patent law at the international, regional, and national levels can be sustained.

indexed and in a manner and form which facilitates the right to information under the Act and ensures that all records that are appropriate to be computerized are within a reasonable time and subject to availability of resources, computerized and connected through a network all over the country on different systems so that access to such records is facilitated.'

²⁴ Peter H Sand, 'The Right to Know: Freedom of Environmental Information in Comparative and International Law' (2012) 20 *Tulane J Intl and Comp L* 203, 217. I also identify a third type of informational choice within the patent regime, namely, a deep systematic transparency that actually places a burden upon the regulator to engage in participatory procedures. This can be seen within environmental law, when an agency must engage in a sustained analysis of the risks associated with a given set of environmental projects.

BIBLIOGRAPHY

35 U.S.C. § 122(e)(1)-(2)(2012)

Changes to Implement the Preissuance Submissions by Third Parties Provision of the Leahy-Smith America Invents Act (July 17, 2012) (to be codified at 37 C.F.R. pt. 1.290)

Convention on the Grant of European Patents, Articles 113, 115, 127- 132

Fattori M, Pedazzi G and Turra R, 'Text Mining Applied to Patent Mapping: A Practical Business Case' (2003) 25 World Patent Information

Fischmann B, 'Infrastructure Commons' (2005), Mich St L Rev 121

Glynn T, 'The New York Society Library: Books, Authority and Publics in Colonial and Early Republican New York' (2005) 40 Libraries and Culture 493

Golan v Holder, _ US_, 132 S Ct 873, *907-908 (2011) (Breyer J.) (dissent)

H Rep No 112-98

India Right to Information Act 2005

Leahy-Smith America Invents Act, Pub L No 112-29, 125 Stat 284 (16 September 16, 2011)

Levine D S, 'Secrecy and Unaccountability: Trade Secrets in our Public Infrastructure' (2007) 59 Fla L Rev 135

Murphy W, Orcutt J and Remus P, *Patent Valuation: Improving Decision Making Through Analysis* (Wiley 2012)

Murray K, *A Politics of Patent Law: Crafting the Participatory Patent Bargain* (Routledge 2012)

Rose C, 'Big Roads, Big Rights: Varieties of Public Infrastructure and their Impact on Environmental Resources' (2008) 50 Arizona L Rev 409

Sand P H, 'The Right to Know: Freedom of Environmental Information in Comparative and International Law' (2012) 20 Tulane J Intl and Comp L 203

Taubman A, 'The Public Domain and International Intellectual Property Law Treaties' (2008) Australian National University College of Law Research Paper, No. 07-17

Teva Canada Ltd v Pfizer Canada Inc, 2012 SCC 60 (2012)

10 PROTECTION REGIME FOR WELL-KNOWN LOCAL PRODUCTS IN VIET NAM

*Dr LE Thi Thu Ha

ABSTRACT

Intellectual property rights are one of the means used to protect local innovation and to preserve traditional knowledge. Countries can apply different forms of intellectual property protection for well-known local products such as collective marks or certification marks and geographical indications. The choice will depend on the nature of these intellectual property right instruments and the trade customs of each country. Viet Nam, a country with diversified agriculture commodities, is home to a wide variety of well-known local products. Viet Nam has built a legal framework for the protection of these products and accepted both systems for the protection of well-known local products. However, these activities have resulted in limited outcomes. This paper provides a definition of 'well-known local product' and how it is protected in trade. It suggests that geographical indications are the most suitable form of protection. The experience of Viet Nam illustrates that this instrument presents some notable challenges for both producers and consumers. Improving approaches to geographical indications in Viet Nam, and perhaps learning from the trademark systems in other countries, could further the development and protection of local products.

Keywords: *Viet Nam, well-known local product, intellectual property, geographical indication, certification mark, collective mark*

I. INTRODUCTION

In an era of trade liberalization, consumers are increasingly concerned about a product's origin.¹ The production of well-known local products has been represented in many studies in developed countries as a tool for producing differentiation, increasing sector competitiveness and a way to help small-scale farmers reach new markets.² Well-known local products are widely recognized not only by quality, but also by the intrinsic value of their traditional knowledge, also known as 'a sense of place'. The latter results in increased consumer demand for local products at both national and international levels. However, such products have been traded as low quality and low economic value goods in developing countries.³ Additionally, new competitors in this market cater to consumer demand by imitating and reproducing local products, leading to a decline in the profit of the owner of local products and impacting negatively on their reputation, which causes significant injury to the region.

* Dr LE Thi Thu Ha (Viet Nam) is a lecturer and researcher in the field of International Economics and Intellectual Property at the Foreign Trade University (Viet Nam). She holds a doctorate in Intellectual Property and a Master's degree in Laws from the University of Tours (France). She has conducted research and published articles in international and national academic journals and workshops.

¹ Robert D Schooler, 'Product Bias in Central American Common Market' 2 *Journal of Marketing Research* 394; Jean Claude Usunier, 'Relevance in Business Research: The Case of Country-of-Origin Research in Marketing' 3 *European Management Review* 60. See also Antonio Berenguer, 'Protection of Geographical indications' (Paper for the International Workshop Global Reach, Local Products, 2007).

² Daniele Giovannucci, Elizabeth Barham, Rich Pirog, 'Defining and Marketing "Local" Foods: Geographical Indications for US Products' (2009) *Journal of World Intellectual Property*, special issue on Geographical Indications 6.

³ Thomas DeCarlo, Rich Pirog, and Veronica Franck, *Consumer Perceptions of Place-Based Foods, Food Chain Profit Distribution, and Family Farms* (Leopold Centre for Sustainable Agriculture 2005).

Intellectual property rights can be used to protect local innovation and to preserve traditional knowledge.⁴ Countries can apply different forms of intellectual property protection for well-known local products such as collective marks, certification marks and geographical indications. The choice depends on the nature of these intellectual property instruments and the trade customs of each country.

Viet Nam is a country with diversified agriculture commodities, being home to a wide variety of well-known local products. Viet Nam has built a legal framework for the protection of these products and accepted both systems for the protection of well-known local products. These activities, however, have resulted in limited outcomes.

Global consumption trends demonstrate the potential development of well-known local products. Nowadays, trust and a product's origins shape the buying decisions of consumers throughout the world, including in Viet Nam. Consumers in Europe and the United States, a country well-known for its fast food and convenience food, are reducing their consumption of industrial fast food products and returning to traditional ones.⁵ A survey of US consumers in 2005⁶ showed that 72 per cent of respondents considered that geographical features such as land and climate influence the taste and quality of foods and 56 per cent of respondents indicated that they were willing to pay prices between 10 to 30 per cent higher for local specialties. In addition, a mid-2008 survey⁷ showed that nearly nine out of ten consumers (89 per cent), indicated that they would prefer supermarkets to sell fruits from local farms and over two thirds (69 per cent) said that they were willing to pay more to buy such products.

The results of these surveys indicate that consumption trends of agricultural products originating from localities are increasing. Similarly, manufacturers and enterprises also tend to encourage consumers to buy these items. WalMart, the global supermarket chain, reserved a section on its website to advertise traditional local products, especially food, fruit and vegetable products. Likewise, Tesco Corporation (UK) has recently launched a carbon labelling scheme to encourage consumers to buy products deriving from localities.⁸

According to the results of one published study on 'the new consumption trends'⁹, the major consumption trend in Viet Nam is the use of traditional and customary foods, which means that consumers tend to seek food of high quality and guaranteed origin at localities. The quality and origin of goods are the primary concern of people in big cities such as Hanoi city (94 per cent).¹⁰

⁴ George Giraud, 'Les produits alimentaires regionaux ont-ils une place au sein de la globalisation: une approche de marketing pour l'Europe' (1999) 8 *Agroalimentaria* 29.

⁵ Daniele Giovannucci, Elizabeth Barham, Rich Pirog (n 3) 8-10.

⁶ Thomas DeCarlo, Rich Pirog, and Veronica Franck (n 4).

⁷ Deloitte Development, *Deloitte Food Safety Survey* (Deloitte Development 2008).

⁸ Weatherall et al., 'In Search of the Concerned Consumer: UK Public Perception of Food, Farming and Buying Local' (2003) *Journal of Rural Study* 233.

⁹ The Viet Nam Business Studies and Assistance Centre (BSA) conducted the study on consumption trends on 17 April 2009.

¹⁰ Research by AC Nielsen company in Viet Nam on Vietnamese consumption habits (AC Nielsen Viet Nam 2009). Available online at: <<http://www.nielsen.com/intl/vn/news-insights/reports.html>>

During the study, the author conducted a quick consumer opinion interview focusing on food shopping habits by direct interview method.¹¹ Nearly 90 per cent of respondents indicated that specialty products (having reputation) of localities were invariably their first choice when buying food. However, most of the respondents also expressed concern over the true origin of products. Consumption trends indicate increasing consumer concern with the less tangible aspects of products such as reputation and origin.

II. DEFINING WELL-KNOWN LOCAL PRODUCTS

Researchers assessing local food systems use or record a number of different definitions of a well-known local product. One of the more widely circulated and popular defining parameters is the concept of 'specialty product'. This general term is used to indicate products and commodities of specific quality due to natural conditions, people and traditions of places of origin.

A 'well-known local product' differs from a 'specialty product' in the sense that a 'well-known local product' is not only manufactured in the locality¹², but must also have dominant features determined by geographical conditions of production places. This concept is similar to the concept of 'typical local product' as discussed by Angela Tregear¹³, the concept 'Terroir' represented by Tim Josling¹⁴ or a popular term *dac san* in Viet Nam. In this paper, well-known local products indicate products originating from a specific area and having a quality or specific characteristics compared with other products of the same kind, which are essentially linked to natural conditions, traditions, culture and people in the production and manufacture areas.

To define characteristics of well-known local products, the author of this paper conducted a simple study asking consumers why they chose well-known local products. The consumers were able to reply on the basis of multiple choice answers.¹⁵ A well-known local product is defined by some characteristics based on this survey's results as follows:

Special quality: well-known local products have a very special taste or special characteristic that differs from products of the same kind originating from other geographical areas. These products have generally been cultivated in the areas for a long time and adapted to the geographical conditions. For some special products, their quality is unique. The case of *Thanh Ha* lychee¹⁶ is the best illustration of a unique taste that is 'perfumed, authentic and difficult to be explained by word'.¹⁷

¹¹ The interviewees were mainly women who undertake housework in families. Locations of interview were markets, trade centres, supermarkets in five big cities in Viet Nam (Hanoi, Haiphong, Thanh Hoa, Hochiminh city and Phan Thiet) with a total of 146 consumers.

¹² Local, for the purposes of this paper, is defined as community or a region.

¹³ Angela Tregear, 'From Stilton to Vimto: Using Food History to Rethink Typical Products in Rural Development' (2003) 43 *Sociologia Ruralis* 91.

¹⁴ Tim Josling, 'The War on *Terroir*: Geographical Indications as a Transatlantic Trade Conflict' (2006) 57 *Journal of Agricultural Economics* 337.

¹⁵ To define characteristics of well-known local products, the author of this paper conducted a simple study by asking consumers why they chose well-known local products based on multiple choice answers. The answers were as follows: recognized reputation (98 per cent); specific quality (96 per cent); geographical origin (87 per cent); traditional and cultural (81 per cent); and specific characteristics (75 per cent).

¹⁶ *Thieu Lychee* from Thanh Ha is a well-known local fruit in the North of Viet Nam.

¹⁷ This is a well-known Vietnamese local idiom.

Recognized reputation: these products have been well-known for such a long time that reputation is one of the criteria to identify well-known local products. Their reputation is handed down from generation to generation among the common people from the old days. Examples include *Tam Xoan Hai Hau* fragrant rice¹⁸ that is 'very famous all over the Tonkin', *Thanh Ha* lychee associated with 'products to the Chinese King' and *Phu Quoc* fish sauce associated with the 'national spirit of the nation'.¹⁹

Geographical origin: the best way to distinguish well-known local products from others of the same kind is the link of these products with specific geographical origins. Thus, most of Viet Nam's well-known local products are origin-based products.

Cultural identity: these products with a long tradition and history often blend the benefits of the location and authenticity of production expertise that could represent an identity, culture or symbol of the region. When consumers buy the product, they feel the representation of the culture or the spiritual value of the region.

Taking into consideration the above, consumers all over the world tend to return to well-known local products.²⁰ Owing to the commercial benefits of these products, they are often counterfeited, which negatively affects the product quality, reputation and characteristics.

Viet Nam is a country with a rich history and huge potential for high quality specialty products with a good reputation. MALICA research (Markets and Agriculture Linkages for Cities in Asia) lists 265 specialties that are voted by consumers and reach standards of prestige and specificity. According to recent statistics from the Viet Nam National Office of Intellectual Property (NOIP), based on each locality's reports on well-known local products, Viet Nam has 220 specialty products with place names nationwide, ranging from food to consumer products such as ceramics and handicrafts.²¹ This paper is based on data provided by the NOIP of Viet Nam.

III. ANALYSING CURRENT PROTECTION REGIMES OF WELL-KNOWN LOCAL PRODUCTS IN VIET NAM

As stated above, well-known local products are sought after by consumers because of their high quality and value. Owing to economic features, these items are easily sold in the market and counterfeited to cheat consumers. One solution to prevent counterfeiting is to establish a stronger foothold in the market; manufacturers' rights must be afforded proper legal protection, which requires the registration of intellectual property right protection for these specialty products. Vietnamese law allows the registration of local specialty product protection in the form of geographical indications and trademarks (collective trademarks and certification trademarks).

A. REGISTRATION AS A GEOGRAPHICAL INDICATION:

A geographical indication shall be protected if it meets the following conditions:
(i) the product bearing the geographical indication originates from the territory,

¹⁸ *Tam Xoan Hai Hau* is a well-known type of rice from the North of Viet Nam.

¹⁹ These are well known Vietnamese local idioms.

²⁰ Babcock, Bruce and Roxanne Clemens, 'Geographical Indications and Property Rights: Protecting Value-Added Agricultural Products' (Midwest Agribusiness Trade Research and Information Centre Briefing Paper 04-MBP, Iowa State University 2004).

²¹ Viet Nam NOIP, *Protecting Geographical Names for Specialty Products* Hanoi 2007 p 4.

locality or country indicated by such geographical indication; (ii) the product bearing the geographical indication, of which the reputation, or characteristic qualities are due essentially to the geographical environment of the territory, locality or country indicated by such geographical indication.²²

This provision is consistent with the TRIPS Agreement.²³ Apart from direct geographical names such as *Buon Ma Thuot*²⁴, *Binh Thuan*²⁵, *Tan Cuong*²⁶, other signs such as the *Shan Tuyet*, the name of a variety of tea²⁷, *Phu Quoc*²⁸, the name of an island, or *Cho Dao*²⁹, the name of a fair, or images and symbols, may be considered geographical indications. Vietnamese law also stipulates that only visible signs may be registered as geographical indications. Signs such as sound, colour or taste are not regarded as geographical indications.³⁰

The relationship among quality characteristics, product reputation and geographical origin is crucial for well-known local products. The reputation of a product bearing a geographical indication shall be determined by the degree of consumer trust in the product, which is reflected by the extent of the wideness for which it is known and selected by consumers. The quality and characteristics of the product bearing a geographical indication shall be defined by one or several qualitative, quantitative or physical, chemical, and microbiological perceptible norms that shall be testable by technical means or experts with appropriate testing methods.³¹

Geographical conditions relevant to geographical indications shall include natural and human factors attributable to the reputation, quality and characteristics of the product bearing the geographical indication. Natural factors consist of climate, hydrograph, geology, terrain, ecological systems and other natural conditions. Human factors consist of skills and expertise of producers, along with traditional production processes of the locality.³²

However, the registration files concerning geographical indications in Viet Nam that include quality description that are more qualitative than quantitative fail to fully represent information regarding product characteristics. In fact, most descriptions of geographical indications lack convincing evidence as to which element of the geographical area determines the product's characteristics. Almost all the product descriptions of natural features fail to present the connection between geographical conditions and product characteristics.³³

²² Viet Nam Intellectual Property Law 2005, Article 79.

²³ Le Thi Thu Ha, *Protection of Geographical Indications in Vietnam, in the Context of Vietnam's International Economic Integration* (Information and Communication Publishing House 2011) p 28.

²⁴ *Buon Ma Thuot* is a Vietnamese geographical indication for coffee.

²⁵ *Binh Thuan* is a Vietnamese geographical indication for dragon fruits.

²⁶ *Tan Cuong* is a Vietnamese geographical indication for green tea.

²⁷ *Shan Tuyet Moc Chau* is a Vietnamese geographical indication for green tea.

²⁸ *Phu Quoc* is a Vietnamese geographical indication for fish sauce.

²⁹ *Cho Dao* is a Vietnamese geographical indication for rice.

³⁰ Article 45.2, Circular No. 01/2007 of the Ministry of Science and Technology dated 14 February 2007 guides the implementation of Decree No. 103, stipulating and instructing the execution of some articles of the Law on Intellectual Property in detail.

³¹ Viet Nam Intellectual Property Law 2005, Article 81.

³² Viet Nam Intellectual Property Law 2005, Article 82.

³³ Interview with experts from the Department of Geographical Indications – NOIP of Viet Nam.

One salient aspect of Vietnamese law is that the right to file an application for a geographical indication shall belong to the State. The State may allow organizations and individuals manufacturing the product bearing the geographical indication, collective organizations representing such organizations and individuals, or the administrative authorities of the locality indicated by the geographical indication to exercise the right to file an application for the geographical indication. Persons who exercise such right shall not become the owners of the geographical indication.³⁴

Under this provision, it is challenging for organizations or individuals to decide who has the right to apply for a geographical indication. Well-known local products in Viet Nam are mainly agricultural or handicraft products manufactured and traded by individual households on a small-scale basis. Producers in European countries have hundreds of years of experience in developing geographical indications. Moreover, they play an important role in actively establishing the professional organization and investing time, effort and money in developing geographical indications. It is extremely problematic determining which organization may register and take responsibility for managing a geographical indication. State administrative authorities that have no rights attached to the manufacture and trade of the products exercise the right of registration of geographical indications.³⁵ This is why the incorrect implementation of protection for geographical indications does not bring the expected results.

The criterion to check and build the control system also presents obstacles as the specific criteria determination phase has not been completed. The specific criteria strongly influence a product's market. In assessing whether a product is a counterfeit of a geographical indication or an imitating good, the Vietnamese authorities have no concrete basis to differentiate counterfeits from products bearing real geographical indications.³⁶ Moreover, a quality control process has not been set up, and the criteria of usage for geographical indications have not been properly established.

The non-issuance of certificates of usage rights means that geographical indications are not actually protected in the market. Although geographical indications are legally defined, they are not protected in the market. Therefore, national registration is merely name recognition. No appropriate authority controls the attachment of signs and production places to products. This lack of control is problematic for the management and development of geographical indications in the market and is largely ineffective for the protection of geographical indications.

As of June 2012, 57 applications for the registration of geographical indications protection were submitted to the Viet Nam NOIP, of which 30 geographical indications (26 Vietnamese ones and four foreign ones) have been registered.³⁷ Though geographical indications are a relatively new concept in Viet Nam, the protection of well-known local products in the form of geographical indications has posed many problems.

³⁴ Viet Nam Intellectual Property Law 2005, Article 88.

³⁵ In the cases of Coffee *Buon Me Thuot*, grape fruit *Doan Hung*, anise *Lang Son*, fish sauce *Phan Thiet*, orange *Vinh*, and tea *Tan Cuong*, *ShanTuyet Moc Chau*.

³⁶ *Phu Quoc v Tuong Lai Co Ltd*. Available online at: <<http://www.honghanh.com.vn/vi-vn/chuyenmuc-736-tin-tuc-tintuc-5042-bao-ho-cach-nao.aspx>> accessed 10 June 2012.

³⁷ Statistics published by Viet Nam NOIP. Available online at: <http://www.noip.gov.vn/web/noip/home/vn?proxyUrl=/noip/cms_vn.nsf/%28agntDisplayContent%29?OpenAgent&UNID=A622377900F694A4472578E8004E9901> accessed 2 October 2012.

B. REGISTRATION AS A TRADEMARK

In accordance with international law (Article 15.1 of the TRIPS Agreement), Vietnamese law provides for the registration of signs indicating the geographical origin of goods as trademarks if the signs have been widely used and recognized in the name of trademarks or registered as collective or certification marks.³⁸

1. Registration as a normal trademark

Products bearing place names shall be protected in the form of trademarks if the signs have been widely used and recognized.³⁹ Since 2005, there have been a number of trademark applications for products bearing place names in Viet Nam, however, most were rejected to avoid indications of source becoming private property.⁴⁰ The NOIP also recommends local authorities to disallow the registration of place names as trademarks.⁴¹ Besides, the NOIP has also investigated and listed place names used to designate local products and actively refuses the registration of trademarks containing place names for products of the same kind.⁴²

Thus although in principle Vietnamese law allows the registration of trademarks using place names (Article 74.2), the above recommendation of the NOIP has rendered this provision ineffective in practice.

2. Registration as a collective mark

The registration for the protection of geographical indications seemingly requires meticulous and costly preparation to build up a scientific basis in order to determine the given characteristics and specific quality features. Many localities have therefore chosen the option of registering well-known local products as collective marks and certification marks.

A collective mark is a mark used to distinguish the goods or services of members of an organization from those of non-member entities.⁴³ A geographical sign shall be registrable as a collective mark if it is a visible sign and capable of distinguishing goods or services of the trademark owner from those of others.⁴⁴ Under this provision, traditional services such as a cultural or tourism service may be protected as collective marks and certification marks.

Essentially, collective marks are considered a legal 'rescue' measure for well-known local products to avoid widespread usage that can damage their reputations as well as quality. Since trademark management is mainly performed by collective organizations, and State management agencies no longer have responsibility after registration, a product's reputation and quality will be negatively impacted if collective organizations fail to perform this role effectively. In particular, the

³⁸ Viet Nam Intellectual Property Law 2005, Article 74.2(e).

³⁹ Viet Nam Intellectual Property Law 2005, Article 74.2(e).

⁴⁰ In fact, many trademarks that are Vietnamese place names have been registered for protection before the Law on Intellectual Property 2005 came into force such as Hanoi beer, Sai Gon beer, Da Lat wine, Ben Tre coconut candy, Sa Dec shrimp chips, Dong Trieu pottery, and Yen Phu sticky rice wine.

⁴¹ Viet Nam NOIP, *Protecting Geographical Names for Specialty Products* (n 19) 14.

⁴² *ibid* 22.

⁴³ Viet Nam Intellectual Property Law 2005, Article 4.17.

⁴⁴ Viet Nam Intellectual Property Law 2005, Article 72.

management and exploitation of collective marks in Viet Nam still suffer from the following shortcomings.

Firstly, like geographical indications, there are difficulties in determining which collective organizations may register the names and manage collective marks. This is because well-known local products bearing collective marks are mainly agricultural or handicraft products produced and traded by individual households on a small scale. In addition, goods bearing collective marks are produced by various facilities with different manufacturing and processing methods in areas of different climate and soil characteristics, sometimes with inhomogeneous and degenerate varieties. As a result, the quality of the goods may vary extensively.

Secondly, the nature and quality of products bearing collective marks have not been scientifically determined. Therefore, it is difficult to define criteria and processes to control collective mark usage. The definition of characteristics in the regulation on the use of trademarks lacks sufficient scientific basis for distinguishing between goods from different geographical areas. Moreover, since collective organizations have not focused on promotional activities providing information on collective marks and warnings of imitative products bearing collective marks in the mass media, products not originating from those places are still commercialized as collective marks.

This highlights the greatest inadequacy in managing collective marks bearing place names. The function of a collective mark is to inform the public of the product's quality and characteristics and to protect consumers. However, Vietnamese management organizations' use and control of collective marks does not fulfil the quality assurance function. This lack of management can eventually lead to the loss of meaning of that place name and eventually the loss of the inherent quality of products bearing that place name.

Thirdly, quality and other requirements for products applied by collective organizations may not truly reflect the specific quality of products. The limited number of users influences the ability to register and use a collective mark.

In short, the collective mark registration and protection mechanism in Viet Nam is not appropriate for specialty products of all kinds because it fails to guarantee the nature and specific quality of products. The mechanism of collective mark usage management is also unsuitable for the purpose of ensuring and maintaining product characteristics. Hence, collective mark registration for specialty products is ineffective in producing the desired effects in Viet Nam.

At present, there have been some 100 applications for the protection of products bearing place names as collective marks and 50 products, including processed food, vegetables, roots, fruits and handicrafts, are registered.⁴⁵

3. Registration as certification marks

A certification mark is a mark that is authorized by the owner to other organizations or individuals for use of their goods or services in order to certify characteristics in respect of origin, materials, method or mode of goods manufacture, or service provision, quality, accuracy, safety or other definable characteristics of the goods or services bearing that mark.⁴⁶

⁴⁵ Viet Nam NOIP, Annual report 2011.

⁴⁶ Viet Nam Intellectual Property Law 2005, Article 4.18.

The main difference between collective marks and certification marks is that users of a collective mark form a 'club', consequently leading to the power abuse of organizations or some individuals in the organizations.⁴⁷ Certification marks may be used by anybody who complies with the defined standards. The usage is voluntary and based on the ability to satisfy the requirements for origin criteria and product characteristics. Certification mark owners and users are independent in terms of economic benefits, which correspondingly avoids a restriction on competition as seen with the use of collective marks.

An important requirement for the registration of a certification mark is that the entity which applies for registration is 'competent to certify' the products concerned. Thus, the owner of a certification mark must be the representative of the products to which the certification mark applies. This serves as an important safeguard for the protection of the public against misleading practices. As an effective legal form of the protection of product origin indications, it should be encouraged.

In addition, for the application for registration of certification marks as geographical origin, the approval of appropriate State authorities is needed.⁴⁸ Although this regulation relates to the State management of the place name usage, this is a substantial obstacle in terms of procedures, resulting in an 'application-approval' mechanism in the registration of trademarks. This also limits the number of organizations and individuals registering certification marks.

A major limitation of certification marks is that the quality and other requirements for products bearing trademarks are set up and applied by certification mark owners. The quality and other requirements set up and applied by the mark owners might not represent the specific quality of local products. The control and certification of products' characteristics are not carried out synchronously from the phase of production to the phase of product launch. The certification of product characteristics and quality is only based on the results of probable testing. As of June 2012, according to the list of certification marks that were granted protection degrees by the NOIP, Viet Nam issued 19 certification mark protection degrees for specialty products.⁴⁹

What are the factors determining the success of these regimes in the protection of well-known local products in Viet Nam? Through research on the practical protection of well-known Vietnamese local products and comparison with the experiences of geographical indications of the European Union and certification mark protection of the United States⁵⁰, the following general conclusions may be drawn.

Firstly, the most vital element to the success of a well-known local product is the capacity of collective management organizations. According to Viet Nam's Law on Intellectual Property, the applicants for registration and the managers of well-known local products must be organizations,

⁴⁷ *WIPO Intellectual Property Handbook: Policy, Law and Use*. Available online at: <<http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf>>

⁴⁸ Article 37.7, Circular No. 01/2007 stipulates that '[f]or a mark certifying a geographical origin, in addition to the mark use regulation and necessary documents evidencing the right of mark registration, the application must also be enclosed with the local administration's permission for the applicant to register a certification mark containing signs indicating a geographical origin (geographical name, symbol or map of the area or locality) for goods and services bearing the mark'.

⁴⁹ Viet Nam NOIP, Annual report 2011 (n 42).

⁵⁰ Le Thi Thu Ha (n 20) pp 264-298.

associations or enterprises established by local governments or appropriate State authorities representative of the collective and individual manufacturing and trading of local specialty products.

In principle, collective organizations must be strong and prestigious enough to undertake the responsibility to manage and operate the collective brand, and must have the rights attached to the manufacture and trading of brand products. In addition, collective organizations must master the product's production and trading, have a good command of the market and knowledge of organizing and managing the business.⁵¹ Such an organization is rarely found in most Vietnamese localities.

Well-known Vietnamese local products are often registered first by local authorities, and then collective organizations are established to manage, inspect and control local products. The determination of rights and obligations of members entitled to use collective marks is also difficult. Since the manufacturing and trading process of products is spontaneous and individual, the profits members earn before joining the group vary extensively. Participation in a unified organization leads to conflicting interests among the members; it is hard to find a common voice, which turns out to be problematic in collective brand usage management. The activities of brand management organizations are ineffective; therefore, members clearly do not see the benefits of brand use, which leads to involuntary participation and non-compliance with brand use regulations.⁵²

Secondly, it is necessary to define the nature and quality of products and the relationship between products and geographical areas, in order to formulate standards and processes controlling brand use. This is also the basis for the selection of product protection forms.

The identification of the above factors not only requires professional experience and perceptible recognition, but also requires the skill of analysing and applying science to technical standards before registration. The specific descriptions of well-known Vietnamese local products are mainly represented with perceptible norms that fail to express the specific qualities of the products. In fact, apart from the certification of products originating from a named area, the management of geographical indications and collective and certification marks has not produced a mechanism to ensure the specific quality of products bearing trademarks. The consequence is that consumers and even management agencies can hardly distinguish between branded products and other ones. This is also extremely detrimental to owners since they have spent a lot of effort and costs to obtain intellectual property protection that then must drop out of the market because of the impossibility of management and inspection.

⁵¹ Amy Cotton and David Morfesi, 'Key Ingredients for Geographical Indications: Collectivization and Control' available online at:

<http://www.uspto.gov/web/offices/dcom/olia/globalip/gi_protection_wipo.htm>

M G Coerper, 'The Protection of Geographical Indications in the United States of America, with Particular Reference to Certifications Marks'. Available online at: <<http://www.iprsonline.org/ictsd/docs>> See also OECD, 'Appellations d'origine et indications géographiques dans les pays membres de l'OECD: implications économiques et juridiques', Working Party on Agricultural Policies and Markets of the Committee for Agriculture Joint Working Party of the Committee for Agriculture and the Trade Committee, COM/AGR/APM/TD/WP (2000) 15/FINA.

⁵² Viet Nam NOIP, 'Registration, Management and Exploitation of Collective Marks for Well-Known Local Products', Workshop on the Management of Collective Marks', Hanoi 2008.

IV. RECOMMENDATIONS

Based on the characteristics of the three forms of protection mentioned above, the protection form suitable for each product category and characteristics of each locality is described below.

A. CONDITIONS FOR PROTECTION AS CERTIFICATION MARKS

For products protected as certification marks, products in a market with potential development and many manufacturers and entrepreneurs in the same area with uncontrolled quality, trademarks and designs are required. This kind of certification mark is particularly suitable for well-known local products, whose reputation and prestige are declining and are susceptible to counterfeiting and imitating.

Most manufacturers and traders of products using certification marks are unaware of the necessity to preserve the prestige and quality of products from their locality. These manufacturers often encounter difficulties in finding manufacturers who are willing to build up the general trademark for a certain product to ensure the standards and requirements for techniques and quality, along with raising funds for the joint development of general brands.

With this form of protection, the preparation for the conditions for implementation is not as complicated, costly or dependent on specialized units as the protection form of collective marks and geographical indications. The time required is shorter in comparison with geographical indications. It is possible to manage the origin and quality of products through the control of trademark use and the inspection of characteristics of branded products.

To avoid a monopoly and to control the ability to certify trademark owners, new regulations should be added. If certification agencies do not comply with given standards or refuse the use of a certification mark of an organization or an individual meeting the standards without legitimate reasons, the organization or individual concerned should be able to file an objection or request to revoke certification marks.⁵³

B. CONDITIONS FOR PROTECTION AS COLLECTIVE MARKS

The types of products protected as collective marks are relatively similar to those protected as certification marks. However, unlike certification marks, manufacturers and traders of products, whose products are protected as collective marks, are aware of the necessity to preserve the prestige and quality of products from their localities. They voluntarily take part in building general brands for products to ensure certain characteristics (such as origin, standards, requirements for technique and quality) and contribute funds to jointly set up and develop general trademarks.

The procedures and preparation for applying for protection of well-known local products in the form of collective marks are not overly complicated and costly. In addition, the preparation and application time required is short. State agencies do not participate extensively in the management of this form of protection; rather, the collective organizations that own the mark take the responsibility.

⁵³ Amy Cotton, David Morfesi (n 48).

C. CONDITIONS FOR PROTECTION AS GEOGRAPHICAL INDICATIONS

It can be said that this is the highest protection form for well-known local products. This form of protection requires the cooperation, participation and coordination of many management and professional agencies, along with the active cooperation of manufacturers and traders of products bearing geographical indications. This form of protection guarantees the ability to entitle the usage to all subjects capable of using geographical indications, which creates the premise for the quality and origin management of products bearing geographical indications.

For well-known local products protected as geographical indications, certain compulsory conditions exist. In addition to the conditions relating to certification and collective marks mentioned above, products must have a reputation or specific quality arising from natural and human conditions of named production places, and a long tradition.

Furthermore, the conditions relating to this form of protection demand manufacturers' awareness of the necessity to preserve the prestige and quality of their local products. Manufacturers must also be capable of gathering other manufacturers to voluntarily build up geographical indications for local products, and mobilizing funds to jointly set up and develop geographical indications. In addition, local governments or collective organizations representing the State⁵⁴ should manage geographical indications to control the product quality of local manufacturers. They must invest in building the geographical indication management system and establish product development policy, and also be willing to support the construction and development of geographical indications in terms of expertise and funds.

Thus, although the registration for intellectual property protection of local specialties as geographical indications will require much time, money and preparation effort, and demand the participation of both local governments and manufacturers, it is the highest protection form for local specialty products.

V. CONCLUSION

This study has shown that Viet Nam is rich in well-known local products that are highly appreciated by consumers. This represents considerable potential for agricultural and rural development in Viet Nam. However, the trading of these products is threatened on account of ineffective management. Intellectual property protection could be effective in maintaining a product's quality and developing its reputation.

Well-known local products in Viet Nam could be registered for protection as collective marks, certification marks or geographical indications. Each of these forms of protection has different advantages and disadvantages. The success of a well-known local product primarily depends on the capacity of collective management organizations. As well-known local products are agricultural or handicraft products manufactured and traded by individual households on a small scale, producers need guidance from local authorities on the management of collective brands. Furthermore, government policies should be implemented supporting specific programmes and projects, and producers need enhanced awareness to help them actively partake in the development of well-known

⁵⁴ The State shall not directly execute its power to administer geographical indications but empower such authority to a local government or a collective organization acting as a representative for the interests of all other organizations and individuals that are authorized users of the geographical indication.

local products. An in-depth study focusing on marketing collective brands should be undertaken as part of an effective strategy to commercialize these products in Viet Nam.

BIBLIOGRAPHY

Berenguer A, 'Protection of Geographical Indications' (Paper for the International Workshop Global Reach, Local Products, 2007)

Coerper M G, 'The Protection of Geographical Indications in the United States of America, with Particular Reference to Certifications Marks'. Available online at:
<<http://www.iprsonline.org/ictsd/docs>>

Cotton A and Morfesi D, 'Key Ingredients for Geographical Indications: Collectivization and Control'. Available online at:
<http://www.uspto.gov/web/offices/dcom/olia/globalip/gi_protection_wipo.htm>

DeCarlo T, Pirog R, and Franck V, *Consumer Perceptions of Place-Based Foods, Food Chain Profit Distribution, and Family Farm* (Leopold Centre for Sustainable Agriculture 2005)

Deloitte Development, *Deloitte Food Safety Survey* (Deloitte Development 2008)

Giovannucci D, Barham E, Pirog R, 'Defining and Marketing "Local" Foods: Geographical Indications for US Products'(2009) *Journal of World Intellectual Property*, Special issue on GIs 6

Giraud G, 'Les produits alimentaires regionaux ont-t'ils une place au sein de la globalisation: une approche de marketing pour l'Europe' (1999) 8 *Agroalimentaria* 29

Josling T, 'The War on *Terroir*: Geographical Indications as a Transatlantic Trade Conflict' (2006) 57 *Journal of Agricultural Economics* 337

Le T T H, *Protection of Geographical Indications in Vietnam, in the Context of Vietnam's International Economic Integration*, Information and Communication Publishing House, August 2011

OECD, 'Appellations d'origine et indications géographiques dans les pays membres de l'OECD: implications économiques et juridiques', Working Party on Agricultural Policies and Markets of the Committee for Agriculture Joint Working Party of the Committee for Agriculture and the Trade Committee, COM/AGR/APM/TD/WP (2000) 15/FINA

Schooler R D, 'Product Bias in Central American Common Market' 2 *Journal of Marketing Research* 394

Angela Tregear, 'From Stilton to Vimto: Using Food History to Rethink Typical Products in Rural Development' (2003) 43 *Sociologia Ruralis* 91

Jean Claude Usunier, 'Relevance in Business Research: The Case of Country-of-Origin Research in Marketing' 3 *European Management Review* 60

Vietnam AC Nielsen 2009. Available online at: <<http://www.nielsen.com/intl/vn/news-insights/reports.html>>

Vietnam NOIP, Annual report 2011

Vietnam NOIP, 'Registration, Management and Exploitation of Collective Mark for Well-Known Local Products', Workshop on Management of Collective Marks Hanoi 2008

Weatherall et al., 'In Search of the Concerned Consumer: UK Public Perception of Food, Farming and Buying Local' (2003) *Journal of Rural Study* 233

WIPO Intellectual Property Handbook: Policy, Law and Use. Available online at:
<<http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf>>

ANNEXES

**ANNEX I 2012 WIPO-WTO COLLOQUIUM FOR TEACHERS OF INTELLECTUAL
PROPERTY: PROGRAMME SCHEDULE**

**ANNEX II 2012 WIPO-WTO COLLOQUIUM FOR TEACHERS OF INTELLECTUAL
PROPERTY: LIST OF PARTICIPANTS**



WTO OMC

WORLD TRADE ORGANIZATION



WIPO

WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

COLLOQUIUM

WIPO-WTO/COL/ACAD/12/INF 1
ORIGINAL: ENGLISH
DATE: JUNE 2012

WIPO-WTO Colloquium for Teachers of Intellectual Property

organized by
the World Intellectual Property Organization (WIPO)

and
the World Trade Organization (WTO)

Geneva, June 11 to 22, 2012

PROGRAMME

prepared by the International Bureau of WIPO and the WTO

Each session was opened with an introductory presentation by a representative of the WIPO or the WTO Secretariat. Ample time was provided for comments and questions from participants. In certain sessions, Geneva-based delegates were invited to give their perspectives. Time slots of 15 minutes each were interspersed into the provisional programme in order to accommodate participants' presentations.

Venue: June 11 to June 15, 2012, WIPO New Building (NB) Conference Room 3

Monday, June 11, 2012

9.00 – 9.15 Administrative Formalities

9.15 – 9.45 Welcome address by:

Mrs. Carlotta Graffigna, Executive Director, World Intellectual Property Organization (WIPO) Academy and Intellectual Property Human Capital Development, WIPO

Mr. Antony Taubman, Director, Intellectual Property Division, World Trade Organization (WTO)

9.45 – 10.15 Introduction of Participants

10.15 – 10.30 Coffee Break

THEME 1
(Moderator:
Mrs. Carlotta
Graffigna)

OVERVIEW OF INTERNATIONAL LAW AND POLICY IN
INTELLECTUAL PROPERTY IN 2012

10.30 – 11.00 Speakers: Mr. Marcelo Di Pietro, Director, WIPO Academy

11.00 – 11.30 Mr. Antony Taubman, WTO

11.30 – 12.00 Discussion

12.00 – 12.15 Speakers: Mr. Marumo Nkomo, Participant from South
Africa
(Recent Development of IPR Regimes in Africa)

12.15 – 12.30 Mr. Shahin Bayramov, Participant from
Azerbaijan
(IP Aspects of Azerbaijan's WTO Accession)

12.30 – 12.45 Discussion

12.45 – 14.00 Lunch Break

14.00 – 16.30 **THEME 2** INTELLECTUAL PROPERTY AND ECONOMIC
(Moderator: Mr. DEVELOPMENT
Marcelo Di
Pietro)

14.00 – 14.45 Speakers: Mr. Sacha Wunsch-Vincent, Senior Economic
Officer, Economics and Statistics Division, WIPO

14.45 – 15.30		Mrs. Jayashree Watal, Counsellor, Intellectual Property Division, WTO
15.30 – 15.45		Mr. Mounir Balloumi, Participant from Tunisia (<i>Domestic Institutions, IPRs and Development in Tunisia</i>)
15.45 – 16.15	Discussion	
16.15 – 16.45	Coffee Break	
16.45 – 17.30		Visit to WIPO Library

Tuesday, June 12, 2012

9.00 – 12.30	THEME 3 (Moderator: Mrs. Karen Lee Rata)	COPYRIGHT OVERVIEW: THE CURRENT INTERNATIONAL LANDSCAPE AND COPYRIGHT FLEXIBILITIES AND DEVELOPMENT
9.00 – 9.45		Speakers: Mr. Hannu Wager, Counsellor, Intellectual Property Division, WTO
9.45 – 10.30		Mr. Paolo Lanteri, Assistant Legal Officer, Copyright Law Division, WIPO
10.30 – 10.45		Mr. Hisham Tahat, Participant from Jordan (<i>Protecting IPRs on the Internet from the Perspective of Internet Service Providers</i>)
10.45 – 11.15	Discussion	
11.15 – 11.30	Coffee Break	
11.30 – 12.30		<i>Copyright Exercises</i>
		Speaker: Mr. Hannu Wager, WTO
12.30 – 14.00	Lunch Break	
14.00 – 17.30	THEME 4 (Moderator: Mr. Tshimanga Kongolo)	TRADEMARK AND INDUSTRIAL DESIGNS: THE CURRENT INTERNATIONAL LANDSCAPE
		(i) Law, Policy and Development
14.00 – 14.45		Speakers: Mr. Wolf Meier-Ewert, Counsellor, Intellectual Property Division, WTO
14.45 – 15.00		Ms. Plamena Popova, Participant from Bulgaria (<i>Parallel Imports and Trademark Law in Bulgaria</i>)

15.00 – 15.15	Discussion	
15.15 – 15.30	Coffee Break	
		(ii) Trademarks: The Evolving International Landscape
15.30 – 16.00		Speaker: Mr. Marcus Höpperger, Director, Trademark Law Section, Trademark and Design Law Division, Brands and Designs Sector, WIPO
		(iii) Industrial Designs: Evolving International Landscape
16.00 – 16.30		Speaker: Mr. Marcus Höpperger, WIPO
		(iv) International Registration and Promotion of Madrid System
16.30 – 17.00		Speaker: Mr. Jongan Kim, Director, Information and Promotion Division, International Trademark Registry, Brands and Designs Sector, WIPO
		(v) International Registration and Promotion of Hague System
17.00 – 17.30		Speaker: Ms. Betty Magdalena Berendson, Senior Information Officer, Information and Promotion Section, International Designs Registry, Brands and Designs Sector, WIPO
17.30– 18.00	Discussion	

Wednesday, June 13, 2012

9.00 – 12.30	THEME 5 (Moderator: Mrs. Thu-Lang Tran Wasescha)	GEOGRAPHICAL INDICATIONS: THE CURRENT INTERNATIONAL LANDSCAPE
		(i) Overview of the Current Work in WIPO
9.00 – 9.45		Speakers: Mrs. Marie Paule Rizo, Head, Design and Geographical Indication Law Section, Law and Legislative Advice Division, Brands and Designs Sector, WIPO
9.45 – 10.00		Ms. Ha Le Thi Thu, Participant from Viet Nam (<i>Protection of Well-Known Local Products in Viet Nam</i>)
10.00 – 10.15	Discussion	
10.15 – 10.30	Coffee Break	

		(ii) Overview of the TRIPS Provisions and Current Work in the WTO
10.30 – 11.00		Speakers: Mrs. Thu-Lang Tran Wasescha, Counsellor, Intellectual property Division, WTO
11.00 – 11.30		Mr. Tomas Baert, TRIPS Council delegate from the European Union
11.30 – 12.00		Mr. David Kilham, TRIPS Council delegate from Australia
12.00 – 12.30	Discussion	
12.30 – 14.00	Lunch Break	
14.00 – 17.45	THEME 6 (Moderator: Mrs. Karen Lee Rata)	PATENTS: THE CURRENT INTERNATIONAL LANDSCAPE
		(i) Law, Policy and Development
14.00 – 14.45		Speakers: Mr. Philippe Baechtold, Director, Patents and Innovation Division, Innovation and Technology Sector, WIPO
14.45 – 15.30		Mrs. Jayashree Watal, Counsellor, Intellectual Property Division, WTO
15.30 – 15.45		Ms. Kali Nicole Murray, Participant from the United States <i>(The Patent Civil Society and Post-Issuance Patent Disputes in the United States - New Choices?)</i>
15.45 – 16.00		Mr. Piotr Kostanski, Participant from Poland <i>(The Re-Definition of Patent Limitations in Polish Law - Scientific Privilege)</i>
16.00 – 16.15	Discussion	
16.15 – 16.30	Coffee Break	
		(ii) Patent Cooperation Treaty (PCT)
16.30 – 17.15		Speaker: Mr. Matthew Bryan, Director, Patent Cooperation Treaty (PCT) Legal Division, Innovation and Technology Sector, WIPO
17.15 – 17.45	Discussion	

Thursday, June 14, 2012

9.00 – 11.15	THEME 7 (Moderator: Mrs. Martha Chikowore)	INTELLECTUAL PROPERTY AND COMPETITION POLICY
9.00 – 9.45		Speakers: Mr. Nuno Pires de Carvalho, Director, Intellectual Property and Competition Policy Division, Global Issues Sector, WIPO
9.45 – 10.30		Mr. Robert Anderson, Counsellor, Intellectual Property Division, WTO Mr. Pierre Arhel, Counsellor, Intellectual Property Division, WTO
10.30 – 10.45		Mr. Douglas Alvarado-Castro, Participant from Costa Rica <i>(Implementation of Intellectual Property Rights in Central America via Competition Policy)</i>
10.45 – 11.15	Discussion	
11.15 – 11.30	Coffee Break	
11.30 – 13.00	THEME 8 (Moderator: Mrs. Karen Lee Rata)	INTELLECTUAL PROPERTY AND TRANSFER OF TECHNOLOGY AND LICENSING
11.30 – 12.00		Speakers: Mr. Matthew Rainey, Director, Innovation and Technology Sector, WIPO
12.00 – 12.20		Mrs. Xiaoping Wu, Counsellor, Intellectual Property Division, WTO
12.20 – 12.35		Mr. Aleck Ncube, Participant from Zimbabwe <i>(Establishing a Technology Transfer Office at the National University of Science and Technology)</i>
12.35 – 13.00		<i>Introduction of Case Study on IP and Transfer of Technology and Licensing</i> Moderator: Mr. Ali Jazairy, Head, Innovation and Technology Transfer Section, Innovation Division, Innovation and Technology Sector, WIPO
13.00 – 14.30	Lunch Break	

14.30 – 17.30	THEME 8 Cont'd	<i>Intellectual Property and Transfer of Technology and Licensing: Exercise</i>
14.30 – 15.00	Speaker:	Mr. Ali Jazairy, WIPO
15.00 – 15.30	Welcome Address by:	
	Mr. Francis Gurry, Director General, WIPO	
15.30 – 16.00		<i>Intellectual Property and Transfer of Technology and Licensing: Exercise</i>
	Speaker:	Mr. Ali Jazairy, WIPO
16.00 – 16.15	Coffee Break	
16.15 – 17.00		<i>Intellectual Property and Transfer of Technology and Licensing: Exercise</i>
	Speaker:	Mr. Ali Jazairy, WIPO
17.00 – 17.30	Discussion	

Friday, June 15, 2012

9.00 – 12.30	THEME 9 (Moderator: Mr. Roger Kampf)	INTELLECTUAL PROPERTY AND PUBLIC HEALTH
	(i)	Presentations by participants
9.00 - 9.15	Speakers:	Mr. Zouli Jiang, Participant from China <i>(Conflict between WTO IPRs and Right to Health - From the Perspective of the Developing Countries)</i>
9.15 - 9.30		Ms. Ummuhan Gokovali-Medettin, Participant from Turkey <i>(Patent Rights and Their Economic Impacts: the Case of Turkish Pharmaceutical Industry)</i>
9.30 - 9.45		Mr. Chikosa Banda, Participant from Malawi <i>(Utilizing Patents as Tools for Coordinating R&D in Drugs for Neglected Disease)</i>
9.45 - 10.15	Discussion	
10.15 - 10.30	Coffee Break	
10.30 - 10.45	Speakers:	Mr. Pedro Marcos Nunes Barbosa, Participant from Brazil <i>(Patents and Data Exclusivity)</i>

10.45 - 11.00		Mr. Yogesh Pai, Participant from India (<i>A Competition Law Approach to Examining India's First Compulsory License Order</i>)
11.00 - 11.15		Mr. Withoon Taloodkum, Participant from Thailand (<i>Judicial Review of Pharmaceutical Compulsory Licensing in Thailand</i>)
11.15 - 11.45	Discussion	
11.45 - 12.30	Round Table Discussion	
	Speakers:	Mr. Roger Kampf, Counsellor, Intellectual Property Division, WTO
		Mr. Peter Beyer Senior Advisor, Department of Public Health, Innovation and Intellectual Property, World Health Organization
		Mr. Hans Georg Bartels, Senior Program Officer, Global Challenges Division, Department for Traditional Knowledge and Global Challenges, Global Issues Sector, WIPO
12.30 – 14.00	Lunch Break	
14.00 - 17.30	THEME 9 (Cont'd) (Moderator:. Roger Kampf)	INTELLECTUAL PROPERTY AND PUBLIC HEALTH
		(ii) Implementation of Paragraph 6 of the Doha Declaration
14.00 - 14.45		Speaker: Mr. Roger Kampf, WTO
14.45 - 15.00	Discussion	
15.00 - 15.15	Coffee Break	
		(iii) IP and Public Health: Current Work and Debate
15.15 - 15.45		Speakers: Mr. Hafiz Aziz ur Rehman, Legal and Policy Advisor, Médecins Sans Frontières
15.45 - 16.15		Mr. Guilherme Cintra, International Federation of Pharmaceutical Manufacturers' Association
16.15 - 16.30		Mr. Peter Beyer, WHO
16.30 - 16.45		Mr. Hans Georg Bartels, WIPO

16.45 - 17.00 Mr. Roger Kampf, WTO

17.00 - 17.30 Discussion

Venue: June 18- June 22, 2012, WTO Training Room, 3rd Floor, 15, Chemin des Mines

Monday, June 18, 2012

9.00 – 12.45 **THEME 10** **INTELLECTUAL PROPERTY AND GENETIC**
(Moderator: **RESOURCES, PROTECTION OF TRADITIONAL**
Ms. Xiaoping **KNOWLEDGE AND FOLKLORE**
Wu)

(i) Recent Work in WIPO

9.00 – 9.45 Speakers: Mr. Wend Wendland, Director, Traditional
Knowledge Division, Department for
Traditional Knowledge and Global
Challenges, Global Issues Sector, WIPO

9.45 – 10.00 Ms. Sharon Le Gall, Participant from
Trinidad and Tobago
*(Developing a Caribbean Regional
Framework for the Protection of Traditional
Knowledge, Traditional Cultural Expressions
and Genetic Resources)*

10.00 – 10.15 Discussion

10.15 – 10.30 Coffee Break

(ii) Relationship between the TRIPS Agreement and
CBD, Protection of Traditional Knowledge and
Folklore: Current Work in WTO

10.30 – 11.00 Mrs. Xiaoping Wu, WTO

11.00 – 11.30 Mr. Homero Larrea, TRIPS delegate from
Ecuador

11.30 – 12.00 Ms. Karin Ferriter, TRIPS delegate from the
United States

12.00 – 12.15 Ms. Pierrette Essama Mekongo, Participant
from Cameroon
*(The Protection of Genetic Resources and
Traditional Knowledge Through the Fight
Against Biopiracy)*

12.15 – 12.45 Discussion

12.45 – 14.00 Lunch Break

14.00 – 16.30	THEME 11 (Moderator: Ms. Martha Chikowore)	ENFORCEMENT OF INTELLECTUAL PROPERTY
14.00 – 14.45		Speakers: Mrs. Eun Joo Min, Head, Legal Development Section, WIPO Arbitration and Mediation Center, Global Issues Sector, WIPO
14.45 – 15.30		Mr. Roger Kampf, WTO
15.30 – 15.45	Discussion	
15.45 - 16.00	Coffee Break	
16.00 - 16.15		Mr. Luis Rodriguez, Participant from Mexico (<i>Customs Enforcement in IP Infringement</i>)
16.15 – 16.30		Mr. AbdulwasIU Yusuff, Participant from Nigeria (<i>Combating Piracy Through Effective Regulation of the Printing Industry in Nigeria - Prospects and Challenges</i>)
16.30 – 16.45		Ms. Natalia Nikitina, Participant from Russia (<i>Judicial Enforcement of IPRs in Russia</i>)
16.45 – 17.15	Discussion	

Tuesday, June 19, 2012

9.00– 10.00	THEME 9 (Cont'd)	INTELLECTUAL PROPERTY AND PUBLIC HEALTH <i>Exercises on IP and Public Health: Group Reports and Discussions</i>
		Moderator: Mr. Roger Kampf, WTO
10.00 – 11.00	THEME 1 (Cont'd) (Moderator: Mrs. Xiaoping Wu)	OVERVIEW OF INTERNATIONAL LAW AND POLICY IN INTELLECTUAL PROPERTY IN 2012
		(ii) IPRS in Free Trade Agreements
10.00 – 10.30		Speakers: Mr. Raymundo Valdes, Counsellor, Intellectual Property Division, WTO

10.30 – 10.45 Mr. Deok Young Park, Participant from Korea (*IP Related Issues of Korea's FTAs*)

10.45 - 11.00 Discussion

11.00 – 17.30 Excursion to "Nestlé", Vevey

Wednesday, June 20, 2012

9.00 – 12.00 **THEME 12 PROTECTION OF BIOTECHNOLOGY AND NEW VARIETIES OF PLANTS**
(Moderator: Ms. Xiaoping Wu)

9.00 – 10.00 Speakers: Mr. Peter Button, Vice Secretary-General, International Union for the Protection of New Varieties of Plants (UPOV)

10.00 – 10.30 Mrs. Xiaoping Wu, WTO

10.30 – 10.45 Discussion

10.45 – 11.00 Coffee Break

11.00 – 11.15 Speakers: Ms. Nurul Barizah, Participant from Indonesia (*Revision of the Indonesian Plant Varieties Protection Act: Between Commitments to Meet International and Bilateral Obligations and Protection of Farmers' Rights*)

11.15 – 11.30 Mr. Mohammad Towhidul Islam, Participant from Bangladesh (*Food Security and the TRIPS Agreement: Implication and Challenges for Bangladesh*)

11.30 – 12.00 Discussion

12.00 – 12.30 Visit to the WTO Library

12.30 – 14.00 Lunch Break

14.00 – 17.15 **THEME 13 DISPUTE RESOLUTION**
(Moderator: Mrs. Martha Chikowore)

(i) WTO Dispute Settlement and the TRIPS Agreement

14.00 – 14.45 Speaker: Mr. Antony Taubman, WTO

14.45 – 15.15 Discussion

15.15 – 15.30		<i>Exercises on WTO Dispute Settlement: Introduction of Cases</i>
		Moderators: Mr. Antony Taubman, WTO Mr. Wolf Meier-Ewert, WTO
15.30 – 15.45	Coffee Break	(ii) WIPO Arbitration and Mediation Centre: Alternative Dispute Resolution of Intellectual Property Disputes, including Internet Domain Name Disputes
15.45 – 16.30		Speakers: Mr. Berly Lelievre-Acosta, Legal Staff, Domain Name Dispute Resolution Section, WIPO Arbitration and Mediation Center, Global Issues Sector, WIPO
16.30 – 16.45		Ms. Celia Lerman, Participant from Argentina (<i>Domain Name Dispute Resolution: What Can Argentina Learn From WIPO's Experience?</i>)
16.45 – 17.15	Discussion	

Thursday, June 21, 2012

9.00 – 13.00	THEME 14 (Moderator: Mr. Marcelo Di Pietro)	INTELLECTUAL PROPERTY AND CLIMATE CHANGE
9.00 – 9.45		Speakers: Mr. Antony Taubman, WTO
9.45 – 10.30		Ms. Yesim Baykal, Consultant, Global Challenges Division, Department of Traditional Knowledge and Global Challenges, Global Issues Sector
10.30 – 11.00		Ms. Claudia Assmann, Economics and Trade Branch, United Nation Environment Programme
11.00 – 11.15	Coffee Break	
11.15 – 13.00		Intellectual Property and Climate Change: Panel Discussion Moderator: Mr. Antony Taubman, WTO Commentator: Mrs. Yesim Baykal, WIPO
11.15 – 11.45		Panelists: Mr. Pedro Roffe, Senior Associate, International Centre for Trade and Sustainable Development (ICTSD)

Mr. Thaddeus Burns, Senior Counsel, IP &

11.45 – 12.15		Trade, EMEA & Latin America, General Electric (GE)
12.15 – 13.00		Open discussion
13.00 – 14.00	Lunch Break	
14.00 – 16.00	THEME 15	TEACHING, TRAINING AND RESEARCH IN THE FIELD OF INTELLECTUAL PROPERTY AND TEACHING PEDAGOGY
	(Moderator: Mrs. Martha Chikowore)	(i) Notification and Other Information Flows in WTO
14.00 – 14.30		Speaker: Mrs. Xiaoping Wu, WTO
		(ii) WIPO Academy and Explanation of Documents and Demonstration of IP Materials on WIPO Website
14.30 – 15.00		Speaker: Mrs. Martha Chikowore, Training Officer, Academic Institutions Program, WIPO Academy
		(iii) Teaching Pedagogy
15.00 – 15.30		Speaker: Mr. Jacques de Werra, Professor of Intellectual Property Law/Contract Law At the Law School of the University of Geneva
15.30 – 16.00	Discussion	
16.00 – 16.15	Coffee Break	
16.15 – 17.30	THEME 13 (Cont'd)	<i>Exercises on WTO Dispute Settlement: Group Reports and Discussions</i>
		Moderators: Mr. Antony Taubman, WTO
		Mr. Wolf Meier-Ewert, WTO

Friday, June 22, 2012

9.00 – 10.30	THEME 16	ROUND TABLE ON INTELLECTUAL PROPERTY TEACHING
9.00 – 9.20	(Moderator: Mr. Marcelo Di Pietro)	Speakers: Mrs. Karen Lee Rata, Head, Academic Institutions and Executive Program, WIPO Academy
9.20 – 9.40		Mr. Gerardo Thielen-Graterol, Counsellor, Institute for Training and Technical Co-operation, WTO

9.40 – 10.30	Open discussion
10.30 – 10.45	Coffee Break
10.45 – 12.00	Evaluation of the Colloquium
12.00 – 12.30	Closing Remarks by:
	Mr. Rufus Yerxa, Deputy Director-General of the WTO
	Mr. Marcelo Di Pietro, WIPO Academy
	Mr. Antony Taubman, WTO



COLLOQUIUM

WIPO-WTO/COL/ACAD/12/INF 2
ORIGINAL: ENGLISH
DATE: JUNE 2012

WIPO-WTO Colloquium for Teachers of Intellectual Property

organized by
the World Intellectual Property Organization (WIPO)

and
the World Trade Organization (WTO)

Geneva, 11 to 22 June 2012

LIST OF PARTICIPANTS

prepared by the International Bureau of WIPO and the WTO

2012 LIST OF PARTICIPANTS

ARGENTINA

Celia LERMAN (Ms), Intellectual Property Professor and Researcher, Universidad Torcuato Di Tella, Buenos Aires

AZERBAIJAN

Shahin BAYRAMOV, Assistant Professor, Azerbaijan State Economic University, Baku

BANGLADESH

Mohammad TOWHIDUL ISLAM, Associate Professor, Department of Law, University of Dhaka, Dhaka

BRAZIL

Pedro Marcos NUNES BARBOSA, Professor, Pontificia Universidade Catolica (PUC RIO), Rio de Janeiro

BULGARIA

Plamena POPOVA (Ms), Assistant Professor, University of Library Studies and Information Technologies, Sofia

CAMEROON

Pierrette ESSAMA MEKONGO (Ms), Lecturer in Law, University of Yaoundé II, SOA, Yaoundé

CHINA

Zuoli JIANG, Professor, Shandong University Law School, Jinan

COSTA RICA

Douglas ALVARADO CASTRO, Professor, Universidad Escuela Libre de Derecho and Universidad Braulio Carrillo, San José

INDIA

Yogesh PAI, Assistant Professor of Law, Ministry of HRD Chair on IPR, National Law University, Jodhpur

INDONESIA

Nurul BARIZAH (Ms), Head of Intellectual Property Centre, Airlangga University, Surabaya

JORDAN

Hisham TAHAT, Legal Expert, Telecommunications Regulatory Authority, Muscat

MALAWI

Chikosa BANDA, Lecturer and Head of Foundational Law, University of Malawi, Zomba

MEXICO

Luis RICARDO RODRIGUEZ, Professor, Tecnológico de Monterrey/Escuela de Graduados de Administracion Publica, Nuevo León

NIGERIA

Abdulwasiu YUSUFF, Senior Lecturer, Obafemi Awolowo University, Ile-Ife

POLAND

Piotr KOSTANSKI, Assistant Professor of Law, Uniwersytet Jagiellonski, Krakow

REPUBLIC OF KOREA

Deok-Young PARK, Professor, Yonsei Law School, Yonsei University, Seoul

RUSSIAN FEDERATION

Natalia NIKITINA (Ms.), Senior Lecturer, Russian Law Academy, Ministry of Justice, St Petersburg

SOUTH AFRICA

Marumo NKOMO, Lecturer, University of Cape Town

THAILAND

Withoon TALOODKUM, Lecturer in Patent Law, University of Phayao, School of Law, Tambon Maeka Amphur Muang Phayao

TRINIDAD AND TOBAGO

Sharon LE GALL (Ms.), Lecturer in Law, University of the West Indies, St. Augustine

TUNISIA

Mounir BALLOUMI, Associate Professor, Faculty of Economics and Management of Sousse, University of Sousse, Sousse

TURKEY

Ummuhan GOKOVALI-MEDETTIN (Ms.), Associate Professor, Economic Department, Mugla University, Kotekli-Mugla

UNITED STATES

Kali Nicole MURRAY (Ms), Assistant Professor of Law, Marquette University Law School, Milwaukee

VIET NAM

Ha LE THI THU (Ms.), Head of IP Department, Foreign Trade University, Hanoi

ZIMBABWE

Aleck NCUBE, Lecturer, National University of Science and Technology, Bulawayo

CONTACT PERSONS

Mrs Martha Chikowore Training Officer - WIPO Academy World Intellectual Property Organization (WIPO) Tel: +41 (0)22 338 8585 Fax: +41 (0)22 740 1417 Email: martha.chikowore@wipo.int	Mrs Karla Brepsant Publications Assistant - Intellectual Property Division World Trade Organization (WTO) Tel: +41 (0)22 739 5496 Fax: +41 (0)22 739 5790 Email: karla.brepsant@wto.org
---	---

World Trade Organization (**WTO**)
Rue de Lausanne 154
CH-1211 Geneva 21
Switzerland

Telephone:

+41 22 739 54 96

Fax:

+41 22 739 57 90

Email:

ipd@wto.org

www.wto.org

World Intellectual Property Organization (**WIPO**)
34, chemin des Colombettes
P.O. Box 18
CH-1211 Geneva 20
Switzerland

Telephone:

+41 22 338 91 11

Fax:

+41 22 733 54 28

www.wipo.int

ISBN: 978-92-870-3898-2



9 789287 038982