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Using GATT-TRIPs to Improve Development Opportunities: A Proposal for Central America

by CECILY ANNE O’REGAN*

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I. Introduction

In a world of unprecedented wealth, almost 2 million children die each year for want of a glass of clean water and adequate sanitation. Millions of women and young girls are forced to spend hours collecting and carrying water, restricting their opportunities and their choices. And water-borne infectious diseases are holding back poverty reduction and economic growth in some of the world’s poorest countries.¹

It is in the shadow of these pressing issues that developed countries, led by the United States, Europe and Japan, labor to ensure that developing countries,² and eventually least-developed countries,³ bring their national

laws into compliance with the General Agreement on Trade and Tariffs (GATT), particularly the section directed to Trade Related Aspects of Intellectual Property Rights (TRIPs). Dissatisfied with GATT-TRIPs, developed countries have increasingly relied on bilateral and regional trade agreements. Trade agreements, such as the Central American Free Trade Agreement (CAFTA), were designed to achieve perceived unfulfilled objectives of GATT-TRIPs. The United States Trade Representative (USTR), whose function it is to develop and coordinate international trade, recognizes the importance of intellectual property to the increased productivity and growth of the U.S. economy. However, this begs the question: at what cost to the developing countries?

One problem faced by developing countries, is that the most valuable asset the country may have is one or more natural resources. Natural resources include materials and components found in the environment, but can also be thought to include biodiversity and traditional knowledge. The importance of natural resources is increasingly recognized as the world faces shortages of food and water and an increasing cost of production of foodstuffs. So, while the developing may have thrown off the dominance of their colonial masters, some would argue that the yoke of the colonial master has been replaced with an exploitation by developed countries of their natural resources.

[Poor countries have been told to preserve their . . . genetic resources on the off-chance that at some future date something is discovered which might prove useful to humanity False [They] are also told that the rich will not agree to compensate the poor for their sacrifices. The poor are not asking for charity. When the rich chopped down their own forests . . . and scoured the world for cheap resources, the poor said nothing . . . Now the rich claim a right to regulate the development of poor countries. And yet any suggestion that the rich compensate the poor adequately is regarded as outrageous. As colonies, [they] were exploited. Now, as independent nations, [they] are to be equally exploited.  


Additionally, developing countries often have fragile economies that are easily, and often profoundly, impacted by the vagaries of weather, social unrest and political corruption. These countries are also often relatively small in size and economy which puts them at a considerable disadvantage in dealing with larger, economically more powerful, developed countries.

Not surprisingly, although the developing countries and least developed countries comprise a majority of the member countries of the WTO, their bargaining power against developed countries is nominal and many would argue ineffective. Certainly the failure to conclude the trade negotiation of the World Trade Organization’s (WTO) Doha Development Agenda, which commenced in November 2001 and has been stalled since 2008, illustrates a significant divide between developed countries and developing countries. Although, the objective of Doha was to lower trade barriers around the world, the developing countries wanted safeguards to protect their economies and to protect poor farmers in the event of an import surge or a price fall. These protections, if agreed to, would have allowed countries to impose a special tariff on certain agricultural goods. The impasse over these protections resulted in the collapse of Doha talks in July of 2008. In particular, there was an irreconcilable disagreement between India, arguing on behalf of the developing countries, and the United States over these safeguard mechanism. That said, some would still argue that even though the Doha Development Agenda remains stalled, the intended effect of Doha—i.e., a reduction in trade barriers—was achieved during the seven year negotiation between 2001 and 2008 because the global economy expanded by 30% and real foreign direct investment increased 25%.

It may seem hopeless that the developing countries can win at the development game under the yoke of GATT-TRIPS, much less any of the bilateral agreements. The bilateral agreements, referred to as TRIPs-plus, often impose an even higher burden on the DC to protect intellectual property.
property rights other than TRIPs. Notwithstanding efforts by non-governmental organizations (NGOs), like GRAIN, it also seems unlikely that the developing countries will avoid the pressure to comply with GATT-TRIPs and any higher intellectual property right requirement that might be imposed by a bilateral TRIPS-Plus trade agreement.

This paper explores whether developing countries can win at the development game from the perspective of Central America, which is a biodiversity hotspot rich in traditional knowledge, using Costa Rica and El Salvador as a vehicle to understand how these issues present themselves in the Central American region. This paper goes on to make recommendations for Central America, which will comply with obligations under GATT and the bilateral trade agreement CAFTA. The force of these two agreements may also enable Central American countries to create a regime that allows them to benefit from stricter IP protection.

II. Current Approaches to Intellectual Property Protection

A. Costa Rica

Costa Rica is a middle-income developing country. Costa Rica has been independent since 1821, and has had a Constitution since 1949. It is a small country, having an area of approximately 51,100 square miles, with a middle-income and extensive tourist facilities. English is a second language for many Costa Ricans, which puts Costa Rica in a position where it can engage with any country doing business in English. Like other Central American countries, Costa is rich in biological diversity. Additionally, Costa Rica has been able to economically benefit from its rich biodiversity by forming INBio, which is the result of an agreement entered into with the multinational chemical company Merck and which provides a mechanism for bioprospecting in Costa Rica, and establishing a robust ecotourism business.

15. Id.
16. Id.
Under Costa Rican law inventions that are capable of being applied in industry are eligible for patents. Consequently a patent of invention may be obtained for a product, a machine, a tool or a manufacturing process, provided the requirements of novelty and patentability are complied with. Costa Rica does not grant patents for discoveries, scientific theories, mathematical methods, computer programs, business methods, surgical methods, diagnostic methods, plant varieties, microbiological process, or anything that is contrary to law, morality, public health, or public safety. Costa Rica performs a substantive examination of any patent application that is filed. Moreover, Costa Rica requires ‘working’ in Costa Rica within four years of filing for a patent application or within three years of grant, whichever is later. Reciprocity for working in another Central-American country could also be relevant under Costa Rican law. Patents may be expropriated when it is in the public’s interest. Applications also require a power of attorney legalized by the nearest Costa Rican embassy.

Trademarks are registrable for 10 years and renewable for similar periods. There are some limitations on the types of marks available including, the color selection and specific letter of the alphabet. If a mark is not used within five years of the registration date, it will be vulnerable to cancellation for non-use. Costa Rica signed a free-trade agreement that included IP provisions with Mexico, El Salvador, Guatemala, Honduras and Nicaragua on November 22, 2011.

B. El Salvador

Like Costa Rica, El Salvador is also a constitutional democracy. The country of El Salvador is approximately 20,742 square miles, making

19. Id.
20. Id.
21. Id.
22. Id.
23. Id.
24. Id.
25. Id.
26. Id.
27. Id.
28. Id.
it significantly smaller than Costa Rica. Unlike Costa Rica, the people of El Salvador are largely mestizo, a mix of Spanish and indigenous people. Although a constitutional democracy, El Salvador struggled through a brutal 12 year civil war from 1980-1992 and has only become a democratic country more recently. El Salvador, like Costa Rica, is rich in biological diversity. In 2007, the United Nations Education, Science and Culture Organization (UNESCO) identified Apaneca-Llamatepec and Xirualtique Jiquitizco, El Salvador as part of the World Network of Biosphere Reserves. Apaneca-Llamatepec is notable because it can be used to assist in the development of shade grown coffee by establishing sustainable coffee production enterprises.

In 2002, the Salvadoran government enacted legislation to improve the legal framework for intellectual property. Judicial enforcement of intellectual property law is the weakest part of IP protection in El Salvador. Following GATT, El Salvador lengthened its patent to a twenty year term, bringing it in conformance with international practice. Pharmaceutical patents have a term of only fifteen years. Similar to the requirements in Costa Rica, inventions involve a great deal of industrial applicability. Restrictions to patentability include an exclusion of patents for discoveries, scientific theories, mathematical methods, business methods, mental steps, surgical methods, diagnostic or therapeutic methods, and anything that is contrary to public policy or morality. Patent applications are also subject to examination, which must be requested in writing. Applicants must provide a power of attorney legalized by the local Consulate of El Salvador. Unlike Costa Rica, El Salvador does not require working, but a compulsory license may be granted in the event of an emergency or for national security reasons.

31.  Id.
32.  Id.
34.  ORG. OF AM. STATES (OAS), Foreign Trade Info. Sys. (SICE), Trade Summary, El. SALVADOR, 103 (2003)
35.  Id.
36.  Id.
37.  Id.
38.  Id.
39.  Id.
40.  Id.
41.  Id.
42.  Id.
In 2002, trademark law was amended to protect against bad faith registration of famous marks.\textsuperscript{43} El Salvador is also a member of the Central American Agreement for the Protection of Industrial Property of 1968.\textsuperscript{44} El Salvador has also signed a Free Trade Agreement with Mexico, Costa Rica, Guatemala, Honduras and Nicaragua on November 22, 2011.\textsuperscript{45}

**III. Strategies for Central America to Meet its Obligations under GATT-TRIPs and any TRIPS-plus Bilateral Agreement in a Manner which Optimizes and Strengthens their own Developing Economies**

A. **Develop a Centralized and Harmonized IP Protection Regime, Eliminate Draconian Procedural Requirements, and Allow for filing Applications in the English Language**

Both Costa Rica and El Salvador have conformed their Intellectual Property (IP) coverage to the minimum standards required as a result of their membership in CAFTA.\textsuperscript{46} However, neither country, nor any of the other countries in the region, are positioned to provide a well-equipped IP office to cost effectively prosecute intellectual property rights for applicants from outside the region. As noted by The Commission on Intellectual Property Rights, “almost all developing countries face shortages of professional staff in their national IP administration.”\textsuperscript{47} Moreover, the countries of Central America have a GDP (purchasing power parity) that ranges from $3.08 billion (USD) for Belize\textsuperscript{48} to $61.43 billion (USD) for Costa Rica.\textsuperscript{49} Combined, however, the countries of Central America have a GDP of $240.72 billion (USD).\textsuperscript{50} This greater GDP for the region, if used collaboratively by the countries, would put the region in a...
stronger negotiating position with respect to developed countries and potentially attract foreign direct investment.

Thus, one proposed strategy would be to follow the European model of providing a centralized office for procurement of intellectual property rights. The Office can be staffed by qualified nationals from each of the regional countries, and offices for different aspects of the process can be set-up in different countries to level the impact. Once an applicant has procured rights, which are granted or allowed under the system, the right can then unbundle into selected national offices. These offices can then collect annual taxes or annuities or form the basis of a regional patent with a single annuity that is shared among the member countries. By establishing a centralized IP registration office for the region, the countries of Central America will be able to achieve an economy of scale for the effort required to manage and examine the applications—whether trademark or patent. Moreover, foreign applicants might be more inclined to pursue IP protection in a single application covering a region having a GDP of $240.72 billion (USD) as opposed to a series of separate applications for countries with a GDP as low as $3.08 billion (USD). A regional solution might also be advantageous if the countries of Central America can align themselves with respect to IP policy.

Another proposal would be to eliminate the legalization processes currently required by the national offices in El Salvador and Costa Rica for such routine documents as a power of attorney. A simplified procedure, such as notarization before an appropriate officer should be sufficient to satisfy any concerns the government officials have for fraud or unauthorized filing. However, requiring the additional step of processing the document through a consulate presents a disincentive for pursuing IP protection.

A regional IP office capable of receiving and examining English language applications, while providing regional protection, would favor an increase in filings from foreign applicants already having an English language specification. This stems from the pooling of resources provided by such a model. Belize is English speaking, Costa Rica is largely

52. COMM’N. ON INTELLECTUAL PROP. RIGHTS, Ch. 6: Patent Reform, INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY 111, 142 (2002).
53. FOREIGN TRADE INFO. SYS., supra note 29.
bilingual, El Salvador aspires to become bilingual in the near term, and other countries, like Nicaragua and Panama, have English speakers to contribute but may not be fully capable of running such an office independently.

B. Provide a Patent Prosecution Highway-type Process based on Patent Prosecution in Selected Countries

The Patent Prosecution Highway (PPH) is an increasingly popular mechanism for streamlining the patent process and costs for applicants. Various countries including the United States, Canada, China, Germany, Japan, Korea, Mexico, Russia, Singapore, Sweden, United Kingdom, and the European Patent Office have entered into a set of initiatives for providing accelerated patent prosecution procedures. Even Nicaragua joined the PPH process by entering into a pilot program with the USPTO on May 25, 2010. By sharing information between the patent offices, and acknowledging patentability determinations made in selected patent offices, this process also permits each participating patent office to benefit from work previously performed by the other patent office. The goal of this process is to reduce examination workload and to improve patent quality. Another benefit is that

[under the Patent Prosecution Highway, an applicant receiving a ruling from [a PPH country] that at least one claim in an application is patentable may request that the USPTO fast track the examination of corresponding claims in corresponding applications. Similarly, if the USPTO determines that at least one claim is patentable, the applicant may request accelerated processing of corresponding applications filed at [the patent prosecution highway country patent office.]]

The Central American countries could coordinate to provide a similar mechanism, for patentable subject matter under Central American law, for fast tracking claims deemed allowable in selected countries through having their own regional patent office.


It would, however, be prudent to balance any PPH-style reciprocity granted against the scope of the subject matter that can be patented. For example, the Commission on Intellectual Property Rights has recommended that the scope of information that can be patented be limited in the developing countries in order to provide a pro-competitive environment.\textsuperscript{58} Moreover, standards for patentability should be established that are commensurate with the inventive contribution made by the inventor and should form a gate through which an applicant must pass before a patent is granted. Additionally, when the subject matter touches or concerns traditional knowledge or local biodiversity then efforts should be made to ensure that patents are not granted covering information already in the local public domain, notwithstanding any indication of allowance in another jurisdiction.

\textbf{C. Develop Regional Technology Transfer/Material Transfer Agreement Arrangements and Strategies with Multi National Corporations and Developed Countries}

Issues surrounding traditional knowledge present a unique challenge to managing intellectual property. Not surprisingly, the view of developed countries toward the value of traditional knowledge is quite different than the view of developing countries.\textsuperscript{59} However, it is at least recognized that traditional knowledge and biodiversity does have the potential to make a valuable contribution toward innovation.\textsuperscript{60} The World Health Organization has stated that “[a]lthough development costs associated with genomics are likely to be high, some applications . . . have already shown to be cost effective compared to current practice. Approaches such as collaboration between developed and the DC, public-private partnerships and establishment of regional and local networks may take the field forward.”\textsuperscript{61} Thus, establishing a strategy for controlling access to the local biodiversity is a prudent course of action.

It has been argued that “[l]ocal governments, not foreign bioprospectors, hold primary responsibility for environmental damage attributable to the collection of biological specimens.”\textsuperscript{62} While local governments do have the power to control the manner in which materials are taken, as well as how their populace is compensated, foreign

\textsuperscript{58} COMM’N. ON INTELLECTUAL PROP. RIGHTS, supra note 52 at 114.  
\textsuperscript{59} Ferguson, supra note 7.  
\textsuperscript{60} CIA World Factbook, Costa Rica, supra note 14.  
\textsuperscript{62} Jim Chen, There’s No Such Thing as Biopiracy . . . and It’s a Good Thing Too, 36 MCGEORGE L.REV. 1, 14 (2005).
bioprospectors are in a position to take advantage of the naïveté of the local government or unfamiliarity with the issues. Therefore, establishing a regional strategy for access to biodiversity and traditional knowledge will provide the greatest benefit to the countries involved and help insulate the countries from unethical negotiation strategies.

Costa Rica has certainly leveraged its appreciation of its natural resources and developed a process for ensuring sustainability.63 The establishment of INBio in Costa Rica provides a model for using and benefitting from natural resources from which other countries can work.64 By controlling access to underlying materials (plants and insects) the benefit from the discoveries serves to overcome the inherent problem with the process of obtaining a patent. Traditional knowledge regarding a therapeutic benefit of plant or animal species has typically been known for an extended period of time by many members of a particular culture or group of people, despite it being potentially subject to refinement over time. This group knowledge negates the concept of patent inventorship. Moreover, additional work is often required to isolate a target compound or active ingredient responsible for the identified therapeutic benefit. Therefore patent inventorship for information that is the subject of traditional knowledge does not fit within the rubric of intellectual property as practiced in developed countries.65

A criticism of the Merck-INBio arrangement is that indigenous communities, which make up two percent of Costa Rica’s inhabitants,66 were excluded from the negotiations with Merck.67 This actual result supports the concern expressed by some that the economic benefit might not necessarily trickle down to the local inhabitants where, for example, the government controls access to the national resource, as in the case of Costa Rica, or worse yet is corrupt. In fact, Article 3 of the Biodiversity Convention does not provide any obligation on the national government to actually benefit its own indigenous populations.68 However, trade agreements have provided a vehicle whereby developed countries encourage the developing and least-developed countries to conforming

64. Zebich-Knos, supra note 17.
their local practice in other areas, such as human rights, and could be used to persuade participating countries to ensure that indigenous people receive the benefit of any arrangement.

D. Leverage Trademark Protection and Geographic Indication to Add Cache and Intangible Value to Goods and Services Available from Central American Countries and Register Geographic and Cultural Indicia Internationally to Prevent Misuse

Trademarks, trademark rights and geographic indications also have the potential to significantly impact the amount of direct foreign direct investment. These also provide “a more powerful economic development lever than trade.”69 Trademark and geographic indications primarily serve to identify goods in the minds of the consumers. By providing strong trademark protection and establishing a geographic indication for goods developed within the developing countries, companies may have “an incentive to invest in making their marks more recognizable and easier to remember.”70 In turn, this could lead to development of and investment in the local economy which will create jobs.

As a first step, all countries in Central America should accede to the 1958 Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (revised in 1967 and 1979).71 The Lisbon Agreement provides that “appellation of origin means the geographical name of a country, region, or locality, which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors.”72 Currently, Costa Rica and Nicaragua are the only Central American countries that are Signatories to the Agreement.73 However, exploiting the ability to associate an appellation of origin to products and services could prove beneficial to the region. For example, the rich Mayan heritage of much of the region, as well as the ability to grow and export commercially desirable products, such as the shade grown organic coffee of El Salvador has been successful in accomplishing this.


70. Id.


The World Bank noted that “shade-grown coffee techniques . . . [could be] a lucrative venture, placing their products on gourmet world coffee markets.”

Countries of Central America should identify useful appellations and register those appellations with the International Bureau as a minimum level of protection. Currently, the only appellation recorded with the International Bureau under the Lisbon Agreement attributable to any country within Central America is Banano De Costa Rica for bananas registered by Costa Rica. The procedure for registration is straightforward and only requires that a “competent national authority” file for the appellation. Once registered, the countries can control use of the appellation by third parties. Although the first appellation granted under the Lisbon Agreement was to Pilsner, the process is probably most familiar with respect to the use of the word ‘champagne’ to designate beverages originating from the delimited territory within the departments of Marne, Aisne, Aube and Seine-et-Marne. While the United States is not a signatory to the Lisbon treaty many U.S. companies, nonetheless, adhere to its principles because of the international nature of their business. Moreover, under CAFTA, “geographical indications are indications that identify a good as originating in the territory of a Party, or a region or locality in that territory, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographic origin.” By identifying and protecting geographical indications of the region, other parties, including the United States, will have to provide a legal means to protect the geographical indications of the other countries.

Although it has been noted that developing countries may “not gain significantly from the application of geographical indications,” providing

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76. Lisbon Agreement, supra note 71.


79. Id. at para. 2.

80. COMM’N. ON INTELLECTUAL PROP. RIGHTS, Ch. 4: Traditional Knowledge and Geographical Indications, INTEGRATING INTELLECTUAL PROP. RIGHTS AND DEV. POLICY 73, 90 (2002).
some level of minimum protection with a strategy would be preferable to no protection. Further targeted regional protection should also be considered, where available.

E. Exclude Trademark or Service Mark Registration of Geographic or Cultural Indicia Indication Alone or in Combination with Another Mark without Permission from the Rights Holder

While trademark and geographic indications serve to identify goods in the minds of the consumers; geographic and cultural indicia should be preserved for use associated with the geography or by the culture. These indicia could then be licensed to larger multinationals for use with their own brand. Starbucks received negative press for opposing Addis Abbas attempts to trademark Ethiopian coffee varieties in the United States.81 Consumers of high-end coffee in developed countries, particularly the United States, would be familiar with the Ethiopian varieties of coffee. It follows that trademark protection is appropriate, and appellation of origin, discussed above, is arguably more important. There is also value to the party selling products associated with the name or appellation where that appellation carries with it an expectation of quality. Thus, a company should not be able to exclude the indigenous population or other parties from using a trademark or geographic indication associated with a particular area.

A mechanism should be provided for remunerating the locals for use of the indicia which provides value to the final product. Companies should not be able to apply for trademark registration of their brand in combination with use of the appellation without permission from the competent national authority to whom the appellation has been registered. This seems particularly appropriate where use of an appellation can result in a 30% premium of price, as in the case of shade grown organic coffee described above.82

F. Provide a Clearly Defined Experimental Use Exception in the Local and Regional Patent Law to Promote Foreign Investment in Research and Product Development

One of the recommendations that the Commission on Intellectual Property Rights had for developing countries was to “[f]acilitate competition by restricting the ability of the patentees to prohibit others

82. Id.
from building on or designing around patented inventions.\textsuperscript{83} One mechanism for achieving such an objective would be to provide a clearly defined experimental use exception. The experimental use exception could then serve to promote foreign direct investment in research and product development. Several experimental use exceptions exist which could provide a model from which a Central American experimental use exception could be designed. A recognized problem for the developing countries is that there is a tight correlation between the per capita wealth of a country and the quantity and quality of its scientific papers, and of its investment in R&D. That is because nations get richer by introducing new technology. A rich country can do that through research, but a poor one can only copy.\textsuperscript{84}

By providing an environment where research can occur without fear of claims of patent infringement, while also providing basic patent protection, Central America would create a climate that fosters foreign direct investment in research.

One requirement that all companies have is the need to perform research and development. Performing research and development allows companies to stay relevant and compete in the marketplace. Research and development, depending on the industry, is a costly affair. Large multinational enterprises (MNE), may be able to risk researching, developing and launching a product irrespective of IP clearance. However, a cost-benefit analysis of funding new products favors developing and launching the product without spending an inordinate amount of time and money on determining whether the company is not running afoul of the IP rights of others. Providing an environment with an attractive cost of living and the ability to research and develop products free from the constraints of IP on the research and development could provide an attractive incentive for multinationals to invest in facilities within Central America. Moreover, there could be an incentive for expatriates to repatriate due to more opportunities. A variety of exemplary research exceptions can form the basis for any research exception implemented by the Central American countries. These exceptions include the Swiss research exception\textsuperscript{85}, the Japanese codified exclusion of research activities, and the more problematic, but informative, case law established in the United States governing experimental use.

\textsuperscript{83} COMM’N. ON INTELLECTUAL PROP. RIGHTS, supra note 52 at 114.


1. **Swiss research exception**

The Swiss research exception is an exemplar exception that could be codified in the Central American region. As discussed in the Gowers Review of Intellectual Property, the Swiss research exception provides guidance for basic elements of a codified research exception by providing that “acts undertaken in the private sphere for non-commercial purposes” are not covered by patents.\(^{86}\) Additionally, “acts undertaken for experimental and research purposes in order to obtain knowledge about the object of the invention, including its possible utilities,” are also not covered by the patent.\(^{87}\) This would be analogous to the exception provided for in the United States under 35 U.S.C. § 271(e) relating to activities engaged in to obtain market approval for pharmaceuticals and biotech formulations. Additional provisions could be included that allow for the use of an invention for teaching in schools, biological materials for purposes of discovering and developing new plant varieties and agricultural activities that are the result of chance.\(^{88}\) The Swiss research exception would clarify the research exception and create an environment where foreign companies could perform research and development in an environment free from a threat of infringement.

2. **Japan’s Codified Experimental Use Exception**

Article 69(1) of the Japanese Patent Act provides that “the effect of the patent rights shall not extend to the working of the patent right for the purposes of experiment or research.”\(^{89}\) This is another model of an explicit exemption of patent rights which encourages research and development and could be employed in the region. The Japanese courts have interpreted section 69(1) to apply towards activities that promote science.\(^{90}\)

To avoid ambiguity it would be prudent to ensure that such an inclusion is set forth in any experimental use exception at the outset. Japan’s definition also does not explicitly exempt acts of testing a device for business purposes. An additional provision, thereby including pharmaceutical testing for pre-market approval, would also be a recommended provision. However, any provision adopted by Central America should clearly provide for such testing at the outset. This could be

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86. Id.
87. Id.
88. Id.
90. Id.
even more important given the possibility that research and development would likely include isolation and identification of bioactive materials from the indigenous biomaterials. However, at a minimum, Japan’s recitation of the experimental use exception is very straightforward and provides a benchmark for Central America to use in developing their own an experimental use section.

3. United States – Limited Experimental Use Based Largely on Case Law; Prior Commercial Use under the America Invents Act

The United States was the first to codify an exception governing regulatory activities for creation covered under 35 U.S.C. § 271(e). Although, the first to provide a law, the actual law governing experimental use has been clarified extensively by case law over the years. 91 Experimental use has traditionally been a very limited defense to patent infringement in the United States. For example, a noncommercial activity “for amusement, to satisfy idle curiosity or for strictly philosophical inquiry” has been allowed. 92 However, courts have been clear to distinguish between non-commercial use for philosophical inquiry and noncommercial use generally, such as that which would be engaged in by a University. 93 Of course whether an activity is ‘commercial’ can still encompass a large territory of activity. Designing around a machine or process, arguably an infringing activity, has been considered to be a noninfringing experimental use in the US. 94 On at least some levels, it makes business sense that a competitor should be able to prepare for marketing a generic drug once the patent has expired. Moreover, the patent laws are designed to provide a limited right to exclude others in exchange for placing information into the public domain and ultimately spurring further innovation. Understanding a patented device or process so that a new device or process can be developed achieves that public policy objective. The use of research tools that do not themselves require regulatory approval also falls outside the experimental use exception. 95

Under the America Invents Act (AIA), as of September 16, 2011, prior commercial use of a method is recognized as a defense against infringement as long as defined conditions are met. 96 However, both

experimental use and prior commercial use could be included in the local laws to provide a basis for defense from the IP rights of others.

G. Develop a Regional Strategy to Protect Farmer’s Rights

Although Farmer’s Rights are not an intellectual property right per se, given the importance of conserving genetic resources, the important contribution that farmers make in developing countries with respect to conserving, improving and making resources available should not be overlooked. Protection of Farmer’s Rights is set forth in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) which provides that each Contracting Party will take measures to protect Farmer’s Rights, including:

(a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture; (b) the right to equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture; and (c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.

The Treaty recognizes that farmers should have the right to “save, use, exchange and sell farm-saved seed/propagating material.” This could be established in a way to protect against the situation that some farmers found themselves in, whereby the makers of genetically altered seeds rely on contractual provisions to prevent farmers from using the seeds from one growing season to another. Additionally it may provide a safe harbor against the trend that makers of genetically altered seeds will pursue neighboring farms for growing crops from seeds that ended up on their property as a result of the natural dispersion process for seeds. The U.K. also introduced defenses in its Patents Act of 1977 designed to protect

97. COMM’N. ON INTELLECTUAL PROP. RIGHTS, Ch. 3: Agriculture and Genetic Resources, INTEGRATING INTELLECTUAL PROP. RIGHTS AND DEV. POLICY 63, 67 (2002).
99. Id.
farmers using traditional techniques for harvesting and livestock reproduction.\textsuperscript{102}

As the world food supply becomes increasingly at risk, the importance of sustainable farming practices is becoming increasingly important and will offer another mechanism for developing countries to advance economically. The World Bank has expressed concern that “the high price of food could lead to developing countries missing their international poverty targets.”\textsuperscript{103}

Honduras has recently begun appreciating the importance of their farmers. Honduras had been told by top economics over twenty years ago to invest in textiles and tourism.\textsuperscript{104} “Growing corn and beans [was] for losers,” they were indelicately told.\textsuperscript{105} However, with the increase in food riots and the world food production at risk, Honduras has made the decision to invest in farming and has made the decision to invest in genetically modified agriculture.\textsuperscript{106} While this is a positive step in some respects because genetically modified crops can have herbicide tolerance, insect resistance, disease resistance and drought resistance, it can also have a potentially significant and negative impact on the local biodiversity by leading to an increase in monoculture.\textsuperscript{107}

The Central American countries should work together to develop a consistent regional strategy that balances biodiversity with agricultural needs and potential. As crops continue to fail in other regions of the world, Central America can poise itself to become a premier provider of agricultural exports. This can be accomplished while ensuring that its own population has access to food.

\section{H. Exclusions to Patentable Subject Matter}

Although patents can essentially become a yoke that prevents economic advancement in developing countries they are not immune from complying with minimum intellectual property protection and enforcement standards either by virtue of GATT-TRIPs or a bilateral TRIPs-plus agreement like CAFTA. There is no requirement that patent protection be accorded to all things patentable or protectable elsewhere. For example,

\begin{itemize}
\item \textsuperscript{102} Patents Act of 1977, U.K.; see also, MACQUEEN, H. ET AL. CONTEMPORARY INTELLECTUAL PROPERTY: LAW AND POLICY 482 (Oxford Press 2008).
\item \textsuperscript{103} Rising World Food Prices, BBC NEWS (Apr. 11, 2008).
\item \textsuperscript{105} Id.
\item \textsuperscript{106} Id.
\item \textsuperscript{107} ROSAMOND NAYLOR & RICHARD MANNING, Unleashing the Genius of the Genome to Feed the Developing World, PROC. AM. PHIL. SOC’Y VOL. 149, NO. 4, 515–28 (Dec. 2005)
\end{itemize}
patent protection need not be granted for plants and animals, as provided for under Article 27.3(b) of TRIPs.

To the extent possible under GATT-TRIPs and CAFTA, countries in Central America should provide minimal patent coverage to avoid a situation where patent rights essentially impede their development. Toward that end, both El Salvador and Costa Rica already exclude several areas from the patentable subject matter including, discoveries, scientific theories, mathematical methods, computer programs, business methods, surgical methods, diagnostic methods, plant varieties, microbiological process, or anything that is contrary to law, morality, public health, or public safety. This restriction to patentable subject matter may be a prudent approach that should be followed regionally. Lastly, all countries within Central America should coordinate to provide similar coverage; preferably under a regional patent system, as described previously.

I. Sui Generis

1. Develop a Traditional Knowledge Database

By developing a traditional knowledge database, the misappropriation and misuse of traditional knowledge can be decreased and, in some cases, avoided. Developing countries could work with Universities and other NGOs to compile information in a centralized database for the region which is then shared with the intellectual property offices internationally. This will thereby forms a basis for prior art against overly broad claims. One drawback that has been noted to the use of traditional knowledge as prior art currently arises where the information is not memorialized. In that instance, the information can be eliminated as prior art in other countries. For example, under U.S. law, one form of prior art applies where “the invention was known or used by others, or patented or described in a printed publication in this or a foreign country.” A database would help prevent granting of broad patents based on existing information or known traditional knowledge.

In 1999 the Indian National Institute of Science Communication and the Department of Indian System of Medicine and Homeopathy agreed to collaborate on a traditional knowledge digital library. The “Traditional Knowledge Digital Library . . . [is an] ambitious project [that] began in 2002 and is transferring 5,000 years of ancient texts onto a digital database

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108. See MANUAL OF INTELLECTUAL PROP., Costa Rica, supra note 18; MANUAL OF INTELLECTUAL PROP., El Salvador supra note 37.
in Hindi, English and eventually French, Spanish and Japanese."\textsuperscript{110} India believes that the database will safeguard traditional knowledge from patents. Skeptics believe it will just provide a mechanism to steal ideas. Either way, it may be more beneficial to place the traditional knowledge into a database to prevent others from trying to obtain an overly broad patent. The countries in Central America could, like India, coordinate to contribute to or prepare a traditional knowledge database for their contribution. The benefits to such a database would likely far outweigh the drawbacks.

2. \textit{Establish Uniform Rules Regarding Disclosure of Origin}

Several countries, including India and Costa Rica, have taken a proactive step by requiring that patent applications disclose the origins for the biological material that is the basis for the application. Costa Rica Law 7788 provides that "[b]oth the National Seed Office and the Registers of Intellectual and Industrial Property are obliged to consult with the Technical Office of the Commission (for the Management of Biodiversity) before granting protection of intellectual or industrial property to innovators involving components of biodiversity."\textsuperscript{111} Countries within Central America should coordinate to provide similar disclosure requirements in their domestic or regional patent legislation.

3. \textit{Plant Variety Protection}

Possibly one of the greatest resources available to the people in Central America is its diverse plant life. Under GATT-TRIPs countries are required to provide some sort of protection to plant varieties.\textsuperscript{112} In 1995 it was estimated that the public sector spent $11.5 billion USD on agricultural research in the developing countries.\textsuperscript{113} The purpose of the International Union for the Protection of New Varieties of Plants (UPOV) convention is to provide some protection, albeit with a lower threshold, to creators of a new plant variety.\textsuperscript{114} By providing \textit{sui generis} rights, instead of just signing on to the UPOV, countries in Central America can control the scope of the protection further to the manner in which Farmer’s Exception, as discussed above, are protected. Thus, it would be desirable for all

\textsuperscript{110} Fred De Sam Lazaro, \textit{India Works to Shield Traditional Knowledge from Modern Patents}, NPR NEWS HOUR (May 21, 2007).
\textsuperscript{111} COMM’N. ON INTELLECTUAL PROP. RIGHTS, supra note 81 at 86.
\textsuperscript{112} COMM’N. ON INTELLECTUAL PROP. RIGHTS, supra note 99 at 59.
\textsuperscript{113} Id. at 60 (citing Philip G. Pardey & Nienke M. Beintema, \textit{Slow Magic: Agricultural R&D A Century After Mendel}, INT’L. FOOD & POLICY RESEARCH INST., WASH. D.C. (2001)).
countries in Central America to provide a mechanism for *sui generis* plant variety protection that also incorporates a uniform mechanism to protect Farmer’s Rights and prevents registration of existing plant varieties.

4. **Provide Regional Sui Generis Protection of Traditional Knowledge**

Prior informed consent should be an important component to accessing traditional knowledge. Moreover, informed consent can be tied to benefit sharing with the community. A few national and regional laws have set out prior informed consent requirements in their laws.\(^{115}\) It is important, however, that prior informed consent be on mutually agreed terms and that the issue is not ignored. Prior informed consent should not only include biodiversity and genetic issues, but it should also incorporate the rights of indigenous people. The Indigenous Peoples’ Rights Act (1997) was enacted in the Philippines and controls access to genetic resources and traditional knowledge on ancestral lands. Section 32 provides:

*Community Intellectual Rights.* - ICCs/IPs have the right to practice and revitalize their own cultural traditions and customs. The State shall preserve, protect and develop the past, present and future manifestations of their cultures as well as the right to the restitution of cultural, intellectual, religious, and spiritual property taken without their free and prior informed consent or in violation of their laws, traditions and customs.\(^{116}\)

Costa Rica’s Biodiversity Law (1998) provides:

[t]he biochemical and genetic properties of the components of biodiversity, wild or domesticated, belong to the public domain. The State will authorize the exploration, research, bioprospecting and use of the components of biodiversity which constitute part of the public domain, as well as the utilization of all the genetic and biochemical resources.\(^{117}\)

This requires consultations with indigenous communities prior to conducting any research on genetic resources, and benefits sharing arrangements for any commercialization of those resources. Similar coverage or indigenous rights and traditional knowledge should be established regionally.


IV. Conclusion

As a practical matter, the developing countries will not be able to avoid their obligation under GATT-TRIPs and any TRIPs-plus agreement they have signed. These countries would be better served coordinating to protect and selectively exploit the valuable natural resources in a manner that promotes their economies and facilitates their further economic development. Central America is rich in biodiversity of culture and is strategically located. With the increasing food shortages and the need to understand and further develop the knowledge we gain from indigenous people as well as the value from their local biodiversity, the countries of Central America would be served by setting side any cultural and political differences and forming a cohesive strategy to meet their IP obligations and create an area that is attractive for foreign direct investment.