

3. IMPLEMENTING A SUI GENERIS REGIME FOR GRANTING COLLECTIVE RIGHTS TO LEGITIMATE HOLDERS OF TRADITIONAL KNOWLEDGE IN ECUADOR

Catalina Vera Moscoso*

ABSTRACT

While acknowledged as one of the most biodiverse regions in the world, Ecuador has suffered from unauthorized use of its biodiversity due to poorly defined guidelines, a lack of understanding about the protection of Traditional Knowledge systems (TK) and information asymmetry.

As there were no clearly defined guidelines on the protection of TK rights, the Ecuadorian Government approved one of the most important laws on the issue. The law strived for recognizing the rights of nature, the protection of biodiversity and imbuing the importance of TK as part of a strategy for a shared knowledge economy. Long before Ecuador adopted its own TK legislation, the development of a specific system for the protection of traditional knowledge was considered a priority not only in Ecuador, but in the entire Andean region. After extensive negotiations over a six-year period, Peru became the first Andean country to adopt a Sui Generis Regime in 2002, followed by Ecuador in 2016.

Based on lessons learnt from the various strategies adopted to address the issue, this paper proposes three approaches for policymakers and for researchers to evaluate the efficacy of systems for the protection of TK. The first determines the benefits of using IP tools like Geographical Indicators, which local authorities have been advocating for to protect TK derived products. The second analyses the effectiveness IP tools or the Sui Generis Regime for the preservation of TK. Finally, to establish the structures that enhance the entrepreneurial skills in TK

* Catalina Vera Moscoso (Ecuador) graduated from the Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil-Ecuador in 2001 with an Economics major. In 2000, she worked at the Technology Transfer Center at ESPOL and from 2003, worked in the Scientific and Technical Research Center of ESPOL. With this experience, she decided to pursue a Diploma in Project Management at the Instituto Tecnológico y de Estudios Superiores de Monterrey in 2009. In 2011, Catalina Vera was awarded a scholarship from the World Intellectual Property Organization (WIPO) for the LL.M. Intellectual Property programme at the University of Turin (Italy). At ESPOL she dealt with intellectual property and intangible assets identification activities, IP policy enhancement, and the management of identified intangible assets for the Entrepreneurship Center. Catalina Vera is currently an Associate Professor of Intellectual Property and Economics at the Universidad Técnica Federico Santa María – Campus Guayaquil. She is also a part-time facilitator of Entrepreneurship and Technological Innovation at ESPOL.

holders who commercializes or allows commercial use of their knowledge.

Key words: *Traditional Knowledge, Sui Generis protection, proposal, policymakers, efficacy.*

1. INTRODUCTION

Ecuador is one of the most biologically and ecologically diverse regions of the world, housing a variety of unique ecosystems, microclimates and Traditional Knowledge systems (TK)¹. Despite the wealth of TK in the country, the importance of protection of this TK was scarcely known. As a result, there were no clearly defined guidelines on the subject². This resulted in problems in the assignation of property rights, which in turn resulted in a loss of this biodiversity and the associated traditional practices.³

Indigenous communities and small-scale farmers were not as aware as other agents, of the potential and real value of their knowledge about the uses of this biodiversity. When analyzing the protection of TK, due consideration must be given to the economic significance of the phenomenon known as information asymmetry.⁴ This information asymmetry resulted in high profile cases of bio-piracy in Ecuador, e.g.: the Ayahuasca case⁵, which highlighted the importance of searching for strategies to address the

¹ World Intellectual Property Organization affirms that there is not yet an accepted definition of TK, but in international debate, “traditional knowledge” in the narrow sense refers to knowledge as such, in particular the knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations. Traditional knowledge can be found in a wide variety of contexts, including: agricultural knowledge; scientific knowledge; technical knowledge; ecological knowledge; medicinal knowledge, including related medicines and remedies; and biodiversity-related knowledge, etc.

² Manuel Ruiz Muller, ‘Regulating Bioprospecting and Protecting Indigenous Peoples’ Knowledge in the Andean Community: Decision 391 and Its Overall Impacts in The Region’ (2004) *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions* (eds. Twarog, S. and P. Kapoor) United Nations, Geneva, 2004, pp. 241

³ Ramón Espinel, ‘Multifunctionality in Peasant Agriculture: A Means of Insertion into Globalization’ (2008)

⁴ In economics and contract theory, information asymmetry deals with the study of decisions in transactions where one party has more or better information than the other.

⁵ The Amazonian plant Ayahuasca or Yagé, (*Banisteriopsis caapi*), has been used by Shamans to prepare a traditional drink during their religious and healing ceremonies. In 1986, the United States Patent and Trademark Office (USPTO) granted the plant patent No. 5751 to Mr. Loren Miller who claimed rights of a variety of *B. caapi* that he dubbed Da Vine. This proved to be extremely controversial among the Amazonian peoples, who unsuccessfully pursued legal efforts until 2003, when the patent protection expired.

prevalent information asymmetry and to prevent the unauthorized use of traditional knowledge.

On 9 December 2016, the Ecuadorian National Assembly approved the Código Orgánico de Economía Social del Conocimiento e Innovación – Código INGENIOS- drafted by the Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT). This Code replaces the previous Intellectual Property (IP) Law and mandates the protection of TK, implementing a Sui Generis Regime.

2. LEGAL BACKGROUND

In a broader context, Ecuador is a part of the Andean Community, which has an extensive and up-to-date set of provisions on IP including:

- Decision No. 345 Establishing the Common Regime on the Protection of the Rights of Breeders of New Plant Varieties, which was the first legal instrument to protect breeder's creations in accordance with the UPOV convention and Bio Diversity Convention.
- Decision No. 351 Establishing the Common Provisions on Copyright and Neighbouring Rights in accordance with Berne Convention.
- Decision 391 Establishing the Common Regime on Access to Genetic Resources, adopted in 1996, one of the first access and benefit-sharing laws to recognize indigenous and local communities' right to decide about the use of their know-how, innovations and the traditional practices associated with these genetic resources, and;
- Decision No. 486 Establishing the Common Industrial Property Regime, adopted in 2000. It recognizes the need to safeguard and protect biological and genetic heritage. It also protects the TK of indigenous and local communities in the process of granting patents or inventions.

In accordance with this framework, a law regulating IP (consolidated in 2006) applied in Ecuador from 1998 until 9 December 2016. This IP law contained a brief but explicit reference to Plant Variety Protection, which establishes the rights of farmers to preserve their traditional practices (Article 258).

As there were no clearly defined guidelines on the protection of TK rights in Ecuador⁶, in the last decade, one of the priorities of the Ecuadorian Government was the

rescue, preservation and protection of their TK. In 2007, a new Constitution was drafted which is considered as one of the leading precedents for the recognition of the rights of nature, the protection of biodiversity and the enshrinement of the importance of TK as a part of a broad strategy for a shared knowledge economy. The new Constitution was accepted by Ecuadorians through a Referendum held in September 2008. It established the right of individuals to enjoy the benefits of scientific progress and ancestral knowledge (Article 25). Of particular significance is an entire chapter devoted to the recognition of the rights of communities, individuals and nations to freely uphold, develop and strengthen their TK in accordance with the Convention on Biological Diversity (CBD). It also mandates that all forms of appropriation of their knowledge, innovations, and practices are forbidden while granting rights to by-products or synthetics obtained from collective knowledge associated with national biodiversity (Article 402).

3. PROTECTION AND RECUPERATION OF TK IN ECUADOR:

The World Intellectual Property Organization (WIPO) has recognized that there exists a need to assess the interface of IP and development in different socio-economic contexts.⁷ It is against this background that the need to examine the efficacy of IP legislation arises particularly for the people whose TK it seeks to protect.

A. THEORETICAL FRAMEWORK ABOUT TK AND IP TOOLS

Extensive literature (Correa, 2001; Cottier and Panizzon, 2004; Caldas, 2004; Hansen, 2007) can be found about recommended approaches (i.e. use of standard forms of IP, unfair competition or Sui Generis Systems) to the protection of TK in the developing world. However, the effectiveness of these systems has hardly been evaluated. Moreover, the factors determining the success or failure of these approaches have evolved from experiences in the developed world.

García-Bermejo advocates for recognizing the effectiveness of voluntary and direct commercial exchanges, among TK holders and outsiders of their community, as a means for protecting TK holders.⁸ In this scenario, the holders of TK will be directly involved in the innovative, productive and commercial processes. Its effectiveness –in the economic sense- will be revealed by the prevailing market conditions. On the demand side of the equation, factors like the consumers' willingness to pay, the size of the market, their market share, etc. but

⁶ Manuel Ruiz Muller, 'Regulating Bioprospecting and Protecting Indigenous Peoples' Knowledge in the Andean Community: Decision 391 and Its Overall Impacts in The Region' (2004) Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions (eds. Twarog, S. and P. Kapoor) United Nations, Geneva, 2004, pp. 241

⁷ The Economics of Intellectual Property: Suggestions for Further Research in Developing Countries and Countries with Economies in Transition, WIPO, New York, 2009

⁸ Juan Carlos García-Bermejo, "La Protección de los Conocimientos Tradicionales desde una Perspectiva Económica" (2011) Cuadernos de Economía Vol. 34. Núm. 96, 107

importantly on the supply side, by the capacity of the TK holders to face the aforementioned processes.

Due to the characteristics of the products and services offered by the TK holders, recommendations for the use of distinctive signs such as Collective Marks, Certification Marks and, in particular, Geographical Indications (GIs)^{9,10} are nothing new (Panizzon, 2006; Gopalakrishnan, 2007; Bramley, 2011). The primary objective of GIs is to create, in the mind of the consumer, a direct relationship between the origin of a product and a particular quality it possesses. As a corollary, it is required that products bearing the seal of a GI satisfy the quality standards expected by the entities created for this purpose. As the FAO (2008) argues, these standards are often traditional practices that contribute to the conservation of the diversity of local resources and traditions. They also strengthen local organization, fight against rural exodus and offer a wider range of products to consumers. However, there is a lack of evidence demonstrating the contributions of such distinctive signs in protecting and preserving TK in developing countries.

B. PREVIOUS INTERACTIONS WITH INTELLECTUAL PROPERTY SYSTEMS FOR THE PROTECTION AND RECUPERATION OF TK

Various initiatives established under the umbrella of the Ecuadorian Constitution envisaged to the protection and recuperation of TK, such as:

(1) The Co-ordination of Traditional Knowledge by the National Secretary of Science and Technology (SENESCYT). It consisted of four programs for the recuperation and development of TK. One focused on medical practices among the rainforest communities, which were presented in the form of a series of books. Another programme broadcasted the uses of local flora and set up ancestral medicine as an alternative to allopathic medicine, which has not been implemented.

(2) In the coastal regions, a recent case has been the use of the Appellation of Origin “Sombrero de Montecristi” for the protection of straw and the ancestral knowledge involved in the production of straw hats (incorrectly recognized worldwide as “Panama Hats”). This example is explained ahead in detail.

(3) In the Ecuadorian highlands, despite the communities located there being highly organized compared to the coastal or the Amazonian regions, there was no awareness

or understanding about the importance of IP protection. In this region, IEPI was involved in a pilot project to register genetic resources associated with TK of the Tsáchila tribe and plans to commence the same work with other indigenous communities. Their work includes registration of Trademarks and Appellations of Origin for traditional clothing styles, cultural expressions, dances, and crafts of several indigenous groups.

(4) As Almeida (2005) asserts, Amazonian Indigenous communities have been reluctant to share their knowledge due to a lack of mechanisms for economic compensation and the exploitative approaches involved in the “sharing” process. To curb such tendencies, various indigenous and local groups participated in an experimental project which protected their TK as trade secrets, in conjunction with an assessment conducted by an NGO.¹¹

The “I Cumbre Regional Amazónica Saberes Ancestrales, Pueblos y Vida Plena en Armonía con los Bosques” and the Mandate of Manaus in 2011 stressed, once again, the demands of the indigenous people of the Amazonas River Basin. They seek to guarantee the legal security of the indigenous territories. The goal is to enable their protection, engender respect and prevent commercialization of their TK which makes clear that they prefer to maintain the secrecy of their TK.

C. THE USE OF THE APELLATION OF ORIGIN “SOMBREROS DE MONTECRISTI” TO PROTECT TK IN ECUADOR

Under the framework of the TRIPS Agreement and Decision No. 486 of the CAN, Ecuadorian Law grants the use of “Appellation of Origin” as a special kind of GI. GIs, as defined by Article 22.1 of the TRIPS Agreement, are indications that identify goods as originating in the territory of a particular country, or a region or a locality in that country, where a given quality, reputation or other characteristic of the goods are essentially attributable to its geographical origin. The objective of these indications is to create in the mind of the consumer a direct relationship between the origin of a product and a particular quality (ESCOBAR, TORRES, VERA, 2012).

Ecuador has two Appellations of Origin (A.O.) namely: “Cacao Arriba” granted in 2008, and the second A.O. is “Sombreros de Montecristi” filed in 2005 after the establishment of the Unión de Artesanos de Paja Toquilla de Montecristi in 1995.

The “Sombrero de Montecristi” is made from the Toquilla palm leaf that grows in the warm coastal lowlands of Ecuador. It was discovered that this species of palm only grows on the coast of Ecuador, between a 100 and 400 meters above sea level. The soil in this region is rich in salt

⁹ I will use the expression “Geographical Indicators” to refer both to Appellations of Origin and Indications of Source.

¹⁰ Several researches explain the rationale for the legal protection of GIs; Dr Dwijen Rangnekar in 2004 analyses clearly how consumers protects themselves from information asymmetry using various distinctive signs as markers of quality and reputation. These distinctive signs can acquire a high reputation and commercial value.

¹¹ Joseph Henry Vogel, *El cártel de la biodiversidad: transformación de los conocimientos tradicionales en secretos comerciales* (Quito, CARE: ECOCIENCIA. 2000) 138

and calcium, which along with the rains, humidity, average temperature and the shadows generated by other larger plants, make up the ideal habitat for this species. The palm leaves are first shredded into fibre straws and then dried in the sun. They are then woven by hand, trimmed and shaped over, at least, two months, into what is arguably the finest handmade hat. The knowledge of this process has been dated back to the sixteenth century (Toko, 2009; Escobar et al, 2012).

Between its registration, in 2008, and 2011, there were no requests for authorizations for its use. Therefore, IEPI in conjunction with Ministry of Productivity and UNIDO, are running several projects to strengthen associated practices and innovation amongst artisans. Though the process is still in development, 91 artisans have made requests for authorizations. However, the impact of IP in the creation of benefits for the TK holders or the preservation of their knowledge has not yet been assessed or documented. Nevertheless, the Ecuadorian government has expressed the intention to use the same IP tool to protect between 10 to 15 products, at least two of which are related with TK like the Transcutucú peanut produced in the Ecuadorian rainforests.

4. DEVELOPING A SUI GENERIS SYSTEM TO PROTECT COLLECTIVE RIGHTS IN ECUADOR

The development of a specific protection system for TK was considered a priority for a long time not only in Ecuador, but in the entire Andean region. The Andean Community, through the Development Bank of Latin America (CAF), became the forum for indigenous groups to discuss the characteristics of the protection needed to remedy the gaps in the Andean Community's Decisions.

After 6 years of negotiations and following the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore's recommendations, Peru was the first country of the region to adopt a Sui Generis Regime in 2002. Law No. 27811 was enacted for the protection of collective indigenous knowledge related to biological resources.

This regime for the promotion of fair and equitable benefit-sharing and recognition of knowledge holders is based on five main strategies, as BENGGOA (2013) summarizes:

- a) Implementation of licensing agreements between the indigenous peoples and the users;
- b) Granting of Prior Informed Consent by the indigenous holders, as an essential requirement for obtaining access to TK;
- c) Registration of TK in public, but confidential, local registries;
- d) Implementation of a fund (Fondo para el Desarrollo de los Pueblos Indígenas) for funding

projects that contribute to the development of indigenous holders of TK; and

- e) Development of compliance and awareness tools.

Benefitting from this regional experience, the Ecuadorian Government presented a new legal framework in 2014, in line with the Constitution accepted in 2008, the Organic Code for Social Economy of Knowledge, Creativity and Innovation known as INGENIOS (Código Orgánico de Economía Social del Conocimiento, Creatividad e Innovación – Código INGENIOS). The main objective of INGENIOS is to regulate the National System of Science, Technology, Innovation and Ancestral Knowledge. INGENIOS stems from the Constitution of Ecuador and along with the National Education System, the Higher Education System and the National Culture System, establishes a legal framework in which knowledge, creativity and innovation are rooted in the context of a social economy.

The INGENIOS Code was approved by the National Assembly on 9 December 2016. It advocated an open knowledge economy that would enhance entrepreneurship and the research, while granting collective rights to the holders of traditional knowledge.

INGENIOS aims for the preservation and development of TK. Importantly, it protects against commercial misappropriation. This knowledge, both tangible and intangible, has evolved from generation to generation. The people who are recognized as legitimate holders of this knowledge are the indigenous communities like the Afro-Ecuadorian people, the Montubio people and the communities legally recognized in the Ecuadorian State.

Adopting the principle of free, prior, informed consent and benefit sharing, the legitimate holders are granted the right to authorize the access, use or exploitation of their TK. Once the third party obtains their consent, contracts should be drafted to establish the terms and conditions on which the use has been authorized. These terms cover aspects such as potential uses, fair benefit-sharing as well as sustainability.

In broad terms, the Ecuadorian State guarantees the positive and effective protection of TK through prevention, monitoring and penalty mechanisms. Moreover, funding is granted to the authorities to promote community controlled registers and to enhance their capability to maintain them, as well as conduct research for the continuous development of TK.

5. CRITIQUES OF THE SUI GENERIS REGIME FOR PROTECTING TK: LESSONS LEARNT

The regional experience has clearly demonstrated the important role of the State in capturing the expectations, interests and conditions of TK holders when framing Sui Generis Regimes.

Evidence from Peru has shown that the main challenge has been the shared nature of TK and the complexity in determining who the legitimate holders are to share potential benefits that could arise from the process. Scientists expressed concerns about how the regime created barriers for research due to the lack of staff and resources with the regulator, the Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (INDECOPI). INDECOPI is the safe keeper of IP in Peru, and it has not increased its capacity to deal with its additional responsibilities under Law 27811. This is a challenge yet to be overcome in Peru.¹²

Even though, one of the objectives of the Law was the implementation of the Fondo para el Desarrollo de los Pueblos Indígenas, financed with the 0,5% of royalties collected from the commercialization of TK. Up until December 2016 no registry of licenses has been granted.

For the Ecuadorian government, one of the main challenges to overcome was the clash between article 402 of the Constitution¹³ and the open nature of contractual rights under INGENIOS (Article 532).

Proper structures, budgets and appropriate expertise should be made available to properly implement the Sui Generis Regime.

The Ecuadorian government should analyze the effectiveness of the current strategy *vis a vis* the experimental regime in protecting TK while also creating benefits for the holders of that knowledge. Specifically, the economic benefits directly received by TK holders when IP tools or contracts have been used should be considered. Thereafter, the next step would be to ascertain whether the use of the IP tools or the Sui Generis Regime has enhanced the preservation and transmission of TK among the community. Finally, it must be determined whether the entrepreneurial activities (or the lack thereof) of the TK holders has had a significant impact on the community, specifically in terms of benefits created as a result of the legal protection of their TK.

6. CONCLUDING WITH A PROPOSAL FOR POLICY MAKERS

In order to guide policymakers on how to meet the expectations of TK holders, I would like to present some approaches recommended by experts to develop a national strategy:

Determine the benefits of using IP tools like Geographical Indicators (for the TK holders):

¹² Carla Bengoa Rojas, El régimen peruano de protección de conocimientos tradicionales: logros obtenidos y retos pendientes in XII Taller de Derecho Ambiental, Sociedad Peruana de Derecho Ambiental⁽²⁰¹³⁾

¹³ Art.402: The granting of rights, including intellectual property rights, to by-products or synthetics obtained from collective knowledge associated with national biodiversity is forbidden

The Ecuadorian government has expressed its intention to keep using Appellations of Origin to protect TK products. Private companies have always used valuation methods to value trademarks and brands but policymakers could also use it to determine the market importance and economic impact of GI status, as is done for any other intangible asset. Therefore, it can be valued and analyzed.

A possible solution when determining the efficacy of IP tools and specifically GIs, in disseminating economic benefits to TK holders, is by building models. These models can estimate the distribution of benefits among the different stakeholders when using GIs. Xiao et al (2008) modified and applied a two-factor model for agricultural policy to estimate the distribution of benefits from GIs in developing countries. They used Oolong and Darjeeling teas as examples, showing that the least elastic element in the supply/demand equilibrium received the greatest share of benefits.

Grote points out that evidence on the actual cost of GIs is even scarcer than their net benefits, which Bramley further develops explaining that this lack of information makes it difficult to measure the increase in welfare for the producers and also its impact on rural development. Besides, the latter reinforces the fact that the distribution of rents in GI supply chains is a void in current empirical studies.

Salazar and Van der Heyden from the Dutch Development Organization (SNV) develop and propose a methodology that allows the analysis of supply chains oriented to local development. If economic modelling is not possible due to the lack of data, it will be possible to infer how the benefits are distributed among the stakeholders by using the methodology indicated above. As the authors conclude, visualizing the costs and sales margins, allows analysis of the economic inequities that exist in a supply chain.

Analysing the Preservation of TK when using IP tools and the Sui Generis Regime:

Teuber, after reviewing the extensive economic literature related to GIs, asserts that protecting biodiversity, traditional knowhow and authenticity have not been included as factors in theoretical models, and, the empirical evidence from GI case studies is rather inconclusive, reasoning as follows:

‘...to what extent GI regulation supports issues surrounding the

protecting of biodiversity, traditional knowledge, or authenticity still needs to be further analyzed to address the efficiency of GI policy instruments in supporting these goals.¹⁴

Bramley points out that according to some researchers, the impact of GIs on TK could be ambiguous. In some instances it has had a negative effect on the preservation of TK due to the pressure for massive production or disclosure obligations because of legal provisions, :

‘GIs however do not protect traditional knowledge as such but rather, as explained earlier, the collective reputation of an origin based product. It cannot prevent the appropriation of traditional knowledge embedded in the GI. It does however, by valorizing the products which draw on traditional knowledge in its production, allow for the traditional knowledge to be recognized and for the knowledge holders to benefit from its commercialization.’¹⁵

The adoption of an IP tool must require the consent of the TK holder, which ensures that it does not interfere with the communities’ own values, laws and protocols. Anthropological studies have shown that indigenous values and practices are based on sharing. Therefore, preservation in this context should seek to determine whether new generations of the community where the knowledge originated are actively promoting and maintaining the vitality of such knowledge.

Methodologies like VITEK¹⁶ measure the vitality of TK through different generations of a

community based on interviews and observation. They can be adapted to assess the impact of an IP tool in preserving TK.

Establish structures to develop Inclusive Business Models:

One of the most important advances in the development of business models is the recognition of the need to empower low-income communities (the base of the Pyramid) and ensure that they benefit from market activities. In this context, several organizations have perfected a model known as Inclusive Business that entails the “inclusion of people living in poverty into business processes all along the value chain”. This new model of doing business has been used by the alliance between the World Business Council for Sustainable Development (WBCSD), the Dutch Development Organization (SNV) and the United Nations Development Programme (UNDP) within their “Growing Inclusive Markets Initiative”.

Evidence has shown that inclusive business models can make a significant contribution to the fight against poverty. Local populations can benefit as basic needs are provided for along with access to services which make life more efficient. They also create new business opportunities, jobs and income. Looked at from this perspective, poverty has been defined as a lack of access to productive resources, markets, employment opportunities and basic services especially for the poor and extremely poor in rural areas.

Inclusive Business Models could be developed for products or services related to or based on TK with the aim of creating benefits for the holders of that knowledge. An Inclusive Business Model aims to develop a tool to be used by policymakers in making decisions to optimize scarce resources.

In light of the above, the Ecuadorian government has the duty to establish the required administrative structure (human and physical) to implement and operate the Sui Generis Regime. A regime that enhances the use of contractual agreements to create benefits from the use of collective knowledge. Such a system will be premised on encouraging the entrepreneurial intentions of the TK holders within the broad context of a market driven economy.

for relative comparisons of that status among groups at various levels of inclusiveness.

¹⁴ Ramona Teuber, ‘Protecting Geographical Indications: Lessons Learned from the Economic Literature’ (EAAE 2011 Congress Change and Uncertainty, August 30 – Sept. 2, 2011, Zurich, Switzerland) <<https://core.ac.uk/download/pdf/6699343.pdf>> accessed 19 September 2016

¹⁵ CERKIA BRAMLEY, ESTELLE BIÉNABE and JOHANN KIRSTEN, *The Economics of Geographical Indications: Towards a Conceptual Framework for Geographical Indication Research in Developing Countries*, in *The Economics of Intellectual Property: Suggestions for Further Research in Developing Countries and Countries with Economies in Transition*, WIPO, New York, 2009, 109

¹⁶ As explained by its developers, Stanford & Eglee Zent, VITEK (acronym for “Vitality Index of Traditional Environmental Knowledge”), rates the vitality status of TEK (i.e. inferable trends of retention or loss over time) within selected groups and allow

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