4 WORKING PAPER

Community Biodiversity Registers as a Mechanism for the Protection of Indigenous and Local Knowledge

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Working Paper 4

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List of Acronyms

CBR	Community Biodiversity Registry
CEPCU	Centro de Estudios Pluriculturales
COICA	Coordinadora de las Organizaciones Indigenas de la Cuenca Amazonica
GIS	Geographic Information System
IDRC	International Development Research Centre
I&LK (I&L)	Indigenous and Local Knowledge
IPR (IP, non-IP)	Intellectual Property Right
NGO	Non Governmental Organization
PVP	Plant Variety Protection
SRISTI	Society for Research and Initiatives for Sustainable Technologies Institute
TRIPS	Trade Related aspects of Intellectual Property Rights
WIPO	World Intellectual Property Organization

Executive Summary

In the latter half of the 1990s various indigenous and local communities around the world have been actively involved in the documentation of their knowledge in Resource Registries. Although the process and specific objectives of each endeavor vary widely, the Registry is primarily being undertaken to assert both non-intellectual and intellectual property rights. The following report explores three such endeavors: 1) Community Biodiversity Registers; 2) the Registry of Invention in India; and the 3) Knowledge Cartel in Ecuador.

Although the study is in no way exhaustive, it highlights the various attributes of each endeavor and explores some of the technical issues surrounding the use of the Registry for IP assertions, from defensive publication to trade secrets. Finally the report raises several substantive questions with regards to the notion of the Registry for non-IP and IP protection that reflect a 6 week exploratory research trip in Ecuador that sought not only to clarify the Knowledge Cartel in more detail, but to situate the Registry within a particular context.

The report goes on to provide several preliminary conclusions that suggest that although the Registry may indeed be a useful mechanism for I&LK protection, more consideration should be given to the numerous technical issues raised concerning IP aspects of the Registry. Furthermore, and perhaps more importantly the report reveals that the Registry reflects a wide range of activities, and as in the case of the Knowledge Cartel in Ecuador is not necessarily reflective of I&L peoples visions of knowledge protection. If appropriate mechanisms for I&LK protection are to be considered, more research needs to be done on what I&L peoples' visions are for such a system. As this report has attempted to demonstrate, such a vision may not categorically refute IPRs as such a mechanism, however IPRs may only be one aspect of a larger non-intellectual property rights vision.

Contents

Part 1: Introduction

1.1 Introduction and working definition

The following report is a result of a one year internship for the Sustainable Use of Biodiversity Programme Initiative at IDRC. For this internship I had the opportunity to assist Michael Halewood, the Executive Secretary of Crucible II, with various tasks related to the drafting of *The Crucible Project Reports Volume I and II* [1] and conduct my own research. This report largely reflects the latter aspect of my internship. Initially my research sought to explore more generally the impacts of proprietary science[2] on local communities. However as a result of my involvement in the Crucible, I narrowed my focus on the particular response of various communities around the world that are registering their knowledge as a mechanism for protection. It became increasingly interesting to me that as policy makers continue to discuss and draft possible *sui generis* legislation that will meet the TRIPS requirements and other influential conventions, that certain communities and organizations are actively employing a mechanism that may in fact 'protect' indigenous and local knowledge (I&LK), 'promote' continued innovation, conservation and continued flows of plant germplasm. Hence my internship research has sought to understand the Registry in more detail and to explore the effectiveness of

1. In the spirit of the Crucible I, the second phase of the Crucible Project brought together individuals from various sectors (academic, research, corporate and government) from around the world to discuss issues related to the conservation, ownership and flows of information and plant germplasm. Book 1 of Crucible II is in fact a continuation of *People, Plants and Patents* which updates and explores these issues, offering viewpoints on some of the more difficult and contentious topics. Book II however attempts to lay out some of the possible legislative options (both conventional and *sui generis*) for national governments grappling with: 1) the conservation and exchange of germplasm; 2) the 'protection' of indigenous and local knowledge; and 3) the continued promotion of biological innovations.

2. Proprietary science refers to the increasing trend in the field of biotechnology for the assertion of intellectual property rights over modified biological innovations.

the Registry as a mechanism for the protection of I&LK as a significant response of local communities to the impacts of proprietary science.

1.2 Methodology

The topic was explored through various literature and internet searches, email correspondence with peoples involved in community Registries in India and a six week research trip to Ecuador.

1.3 Report Outline

After a brief introduction to the concept of the Registry for non-intellectual and intellectual property right protection, the following report will outline three Registry endeavours: 1) the **Community Registry** such as the Community or People's Biodiveristy Registries (CBR) in India; 2) the **Registry of Invention** in India; and 3) the **Knowledge Cartel** in Ecuador. The report will then provide a technical analysis of the IP related aspects of each endeavours. Finally the report will explore the cases from a non-IP perspective and will highlight more conceptual or subtantive issues and observations of these various initiatives. This section will also draw upon the findings of the 6 week exploratory research trip to Ecuador.

Part 2: The Registration of Knowledge: a Concept

2.1 Working Definition

The community resource Registry has to date been a loosely defined term referring broadly to the processes by which communities seek to protect resources and associated knowledge through some method of documentation. Although documentation is not a necessarily contemporary phenomenon per se (many societies have historically documented their knowledge in various manners), the Registry has more recently arisen out of community concerns for diminishing biological and cultural diversity and the increasing prevalence of bioprospecting activities. To date there has

been no comprehensive study of the extent of the use of Registries. However a preliminary inquiry demonstrates that registration activities are taking place in various parts of the world in order to ensure a spectrum of non-IP and/or IP protection for indigenous and local knowledge (I&LK). The following section provides a brief overview of the range of various Registry activities.

2.2 From non-IP to IP protection: A brief overview

2.2.1 Registries for non-IP protection

To begin with, one could argue that any initiative that documents knowledge may in some way be engaging in a non-IP protection strategy. Certainly the Registry, as outlined in the Crucible II Legislative Menu 'Non-IP Options to protect, promote, conserve I&LK' in Topic 2, can be a central part of a community's consciousness and conservation strategy and can assist in environmental and community planning, including the development of research protocols and 'downstream' development strategies (IDRC, to be published in 2000). Many endeavors such as various *in situ* conservation strategies involving the documentation of knowledge in resource inventories, ethnobotanical journals, community mapping, cookbooks and Geographic Information Systems initiatives, are all representative of ongoing processes of resource documentation.[3] Although the intent of these projects and the manner in which they are undertaken (top down vs. bottom up) differ, they may facilitate some manner of non-IP protection (Denniston 1994, Harmsworth 1999, Gonzalez 1999). All of these activities could also support important factors, such as cultural survival, the elevation of I&LK into decision making, research protocols, community ownership and controls and redress mechanisms. In particular the registration of knowledge may also support the

3. For example the Paramo Project in Ecuador, works with communities to develop community land based use plans and to influence national policies to promote sustainable use and conservation of the mountain ecosystem. The Merck/Inbio initiative in Costa Rica and the recent proposal by the OECD for a global information network called the Global Biodiversity Information Facility are other examples of non-IP oriented GIS initiatives.

development of access and benefit sharing agreements. In this sense non-IP does not refer to a defined category in the way that IP protection does, but is being used as a term to identify that which does not fall within the intellectual property right domain. The Registry can also provide intellectual property protection, and in some cases is being specifically considered and/or undertaken in order to assert IP protection over indigenous and local knowledge.

2.2.2 Registries for IP protection

Perhaps it is in fact the particular emphasis on IP protection that separates the Registry from other kinds of development projects as outlined above. In particular, there are three categories of Registries that seek IP protection for I&LK. At one end of the IP spectrum where non-IP and IP elements blend, the Registry, as in the case of the Community Biodiversity Registry and the Registry of Invention in India, is intended for defensive publication. At the other end of the IP spectrum, the Knowledge Cartel in Ecuador seeks to use the Registry for trade secret protection. These categories are based on projects that seek to protect knowledge through existing IP mechanisms. Most of these projects however also seek some kind of *sui generis* protection mechanism to support their endeavor.

2.2.3 Definitions

Defensive Publication refers to the establishment of prior art through the publication of knowledge in order to defeat subsequent patent applications for the same or similar inventions**.**

Trade Secret refers to the confidentiality of commercially related knowledge held between several individuals.

Part 3: Three Examples of Registries

3.1 Peoples's Biodiversity Registers: The use of defensive publication in India.

In India, what has come to be known as the Community or Peoples' Biodiversity Registers (CBR) has resulted in nation wide registration activities of I&LK at the local level. Initiated in 1995 by the Foundation for the Revitilization for Local Health Traditions and the Centre for Ecological Sciences, CBRs are now being conducted by other institutes across India such as the Swaminathan Foundation, the Navdhanya Program of the Foundation for Science and Technology and Ecology and the Nayakrishi Project in Bangladesh.

In 1994 a workshop brought together some of these various organizations to discuss the registration of knowledge as a mechanism for I&LK protection. From this workshop the Srusstigyann Manual was developed which outlines the methodology for the participatory registration of information from everything about the landscape and resources to the resource users. Participatory workshops are run with the interested community that help to identify and document everything from 'landscape elements' and geographical elements, including all species known (named) and unknown (then documented as existing) and their economic significance to the ecological history contained in the biota on indigenous and local community lands and territories (Rao, S., et.al, 1995). The CBR also documents various resource users, community and environmental concerns and aspirations.

The inspiration for this now widespread initiative arose not only from the desire to protect community intellectual property rights, but it was felt that through a process of documentation, communities could also renew or develop resource management strategies (Kothari, A., et.al., 1996), development aspirations and pride in community knowledge and scientific abilities (Gupta, A.,1998; Nijar, S., 1996). However, perhaps what sets this initiative apart form other conservation and resource management

activities is that the CBR also seeks to defend and assert community IPR over knowledge through defensive publication.

3.2 Registry of Inventions: The case of SRISTI in India

The Society for Research and Initiatives for Sustainable Technologies Institute (SRISTI) and Honeybee Network have also been involved in the documentation and further experimentation and dissemination of I&L innovations and practices in animal husbandry and agriculture for nearly 16 years. Through the publication of I&L innovations they seek to promote and protect I&LK. They have also been involved in a variety of methods of documentation and have registered over 5300 innovations and practices from 2300 villages (SRISTI, 1996), and from other parts of the country and the world (SRISTI, 1999). SRISTI defines protectable subject matter through the identification of innovations, both collective and individual. Furthermore it functions on the premise that not all I&LK is communal or traditional. Therefore it is imperative that protection of I&LK reflect the individual and/or community origin of an innovation that could in fact be a contemporary manifestation of a traditional concept.

The SRISTI Registry of Invention, a decentralized, public database and network at the national level, primarily seeks recognition for grassroots innovators through publications and symposiums. It also promotes conservation of knowledge and knowledge systems and the promotion of information flows and continued innovations. SRISTI also seeks to establish claims and subsequent benefits for individual and/or community knowledge of biological resources and the derivation of benefits. As Anil Gupta, the founder of SRISTI claims, “The farmers, indigenous people, artisans etc. are almost never acknowledged in any discourse on their knowledge in a manner that can be identified...” (Gupta, 1999). “...we have to discuss the issue of recognizing, respecting and rewarding the contribution of local communties’ (Gupta, 1994). He proposes a variety of ways in which individuals and/or collectives can receive material or non-material benefits for their knowledge while providing incentives for continued innovation.

Incentive Matrix

	Material	**Non-Material**
Individual	Property Rights, IPRs, Money, Fellowships	Documentation, Press, Title, Fame
Community	Risk/Trust Fund, Community Awards, Grants	Increasing control over natural resources, self-determination, favourable policy

Source: Gupta, 1999

Although SRISTI is actively seeking IPRs for I&L innovations, primarily to protect such innovations through defensive publication and through existing IPR mechanisms such as petty or utility patents and PVP rights, it is also attempting to redefine the meaning of 'innovation' in a way that reflects contemporary I&L communities.

3.3 The Knowledge Cartel: A Latin American initiative for the conversion of traditional knowledge into trade secrets.

One proposal for the use of the Registry for IP protection is the formation of a regional *Knowledge Cartel* in Latin America. The project entitled: *From Traditional Knowledge to Trade Secrets*, arose from a proposal put forth by J. Vogel[4] and is currently in the initial stages of its development (Vogel, 1999...). The project, currently run by Ecociencia, an Ecuadorian Environmental NGO, seeks to manage traditional knowledge in confidential databanks in order to negotiate access to the knowledge as a trade secret at a regional level. The project has already begun to create the GIS database system for knowledge management and has also published six paralegal manuals that seek to build community capacity for the organization, creation and management of strategies for the sustainable use of biological resources. The sixth manual specifically explores the issues around biodiversity and IPR, outlining existing IP mechanisms for knowledge protection and

specifically highlighting the Registry as the best method for I&L knowledge protection (Morales, 1999).

The basic rationale for the Cartel rests on the economic premise that bioprospecting has not been a lucrative industry for the suppliers of raw material due to high levels of raw material supply, resulting in high competition and lower prices. Hence Vogel proposes that the rationale for monopoly rights over biotechnology due to the expense of research, the ease of reproduction and lack of exclusionary mechanisms, be extended to oligopoly rights. In the case of bioprospecting, such rights would extend over biological diversity (Vogel, 1999). Vogel further suggests that national IPR law be amended to require certificates of origin on all products that utilize biological diversity, a scientific mechanism to determine the range of habitat for taxa registered, and a clearing house mechanism to identify the range of taxa to identify common knowledge holders. Furthermore he proposes the establishment of a fund to receive 15% royalty on net sales of biotechnology using biological diversity registered. This money would then be distributed to cartel members ranked according to knowledge. While this proposal may encourage bioprospecting, Vogel proposes an incentive for enthnobioprospecting that breaks the 15% down for distribution to intermediaries, distinguishing between member country and member community.

The next phase of this project will prepare paralegal coordinators to initiate information workshops that raise awareness in I&L communities to the issues regarding bioprospecting, intellectual property rights and the use of the Registry for the protection of those rights. Subsequently through interviews with individual informants, Ecociencia will catalogue I&L knowledge related to medicinal, non-medicinal and shared categories,[5]

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4. His upcoming publication: *From Traditional Knowledge to Trade Secrets* outlines his proposal in detail.

5. Two forms for the collection of ethnobotanical information (medicinal and non-medicinal plants) have been created by Ecociencia as a result of 20 years of ethnobotanical work with indigenous

which will then be transferred into databases either managed by each community or located in universities or NGOs.[6] The database, currently being created, will restrict access to I&LK through the definition of different levels of participation. These levels are reflective of an administrative and centralized vision of the database[7] that will ensure

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communities in the Oriente. The forms will be completed through interviews with single informants from various communities. The non-medicinal form provides information on the name of the collector, informant (name, age, gender, profession, ethnicity, name of community, province, canton and paroquia) the form also provides information on the exact site of collection (GPS, maps, longitude, latitude), species, information regarding the informant, zone cultivated or non-cultivated, type, management, use (artesinal, cosmetic, mythic, ornamental, edible, construction, agricultural, hunting or for the house and whether it is used on a human or animal and local name of use and the part used. Information is also included on the preparation and geographic uses, information on the flower and or fruit and period of floration/frutation, active principle and other literature it is cited in and bibliographic references. Except for the last two points and the GPS positioning, the information collected on this form represents the informants' perspective. The medicinal form explores much the same information but asks for more specific information such as the local name for the illness and the occidental name for the illness, its action (anti-inflamatory, disinfectant, sleeping drug, relaxant, purgent, blood clotter, anti-malarial, tranquilizer, dewormer, cold remedy, energizer, tonic, aphrodisiac, anti-controceptive or cleaner), the part used (all of plant, root, stalk, trunk, leaves, flowers, fruit, heart or head, milk, resin, gum, bark, tuber, seed or rhizome) form of use (crude: ingest: juice of plant, portion, drops, or bath, plaster or poultice, washing, rubbing, or cooked: ingest: infusion, portion, puree, or vaporization, bath, plaster, rubbed or faumento). Finally information is added on the preparation (explanation, posologia, contra-indications) and the age level and place of uses along with the thermic quality of the medicine (hot or cold).

6. There appears to be a discrepancy between Dr. Vogel's proposal which indicates community control over databases and perceptions of the current managing organization, (Vogel, 1997) Ecociencia which indicates a more centralized management system that may even be coordinated by a government body (Interview with Ecociencia 21 September 1999).

7. Level 1 refers to the physical restriction of the computer itself (where the computer is kept and who has access to it), Level 2 will limit entry to the computer (password), Level 3 will restrict the

that the I&LK registered in the system is kept confidential (Saens, 1999). Indigenous and local communities under Ecuadorian law could then make a claim for the protection of their knowledge and know-how as a trade secret.

Part 4: Critical Reflections

These three cases are representative of various approaches to the registration of knowledge that seek to move beyond strictly non-IP aspects such as conservation but endeavor to assert community 'rights' over I&LK through the use of certain IPR mechanisms such as the trade secret and defensive publication. Although the non-IP aspects are clearly of great importance, and will be dealt with later, it would be useful to first explore some of the technical issues of the registration of knowledge for trade secrets and defensive publication.

4.1 Defensive Publication

Defensive publication is an interesting option for those interested in keeping others from patenting an innovation, but who are not interested in obtaining a legally enforcable monopoly. In this sense, defensive publication has been termed a 'non-patent patent', as Registry members publishing in the Registry could inhibit subsequent inventions filed after that date without making a positive assertion over the registered knowledge (IDRC, 1994).[8] Defensive publication is in fact a perfect example of the ambiguous distinction

program (program password), Level 4 will restrict the database archive with a password and finally Level 5 will restrict the access at user level (the password will change periodically, users will have certain access abilities depending on their involvement with the program).

8. Statutory Invention Registration allows rival inventors to allege prior invention to the date of publication. An 'interference' is then run by the Patent Office that explores the details and dates of

between the suggested IP and non-IP categories, in that although not specifically an IP mechanism, in the way that patents, copyright, trademarks and trade secrets are, neither does it fall neatly within the non-IP continuum.

In order to establish a patent claim it is essential that the inventor demonstrate, among other criteria, that the innovation does not already exist within the public domain. Although the criteria for establishing prior art differs from country to country, generally speaking, a patent agent performs a search to determine the novelty of the proposed patent. If the knowledge already exists within the public domain, the patent may not be granted, or the patent lawyer, may have to draft the patent application in a way that demonstrates the novelty of the patent in question. Conversely, a patent can also be defeated through the demonstration that the innovation had already existed in the public domain. Hence a sort of monopolistic and/or oligopolic right is asserted over knowledge in the Registry. The Registery, it is argued by its advocates, will be able to establish prior art through the act of defensive publication. I&LK which may have formerly been maintained orally will now be documented as proof of prior existence and patent claims such as the Neem patent would be defeated.

Both SRISTI and the Community/People's Biodiveristy Registery Initiatives seek to defensively obtain IPR protection over registered knowledge through establishing prior art through the publication of knowledge. One could argue that any initiative that documents knowledge could in fact use the same mechanism for I&LK protection. However, in the context of CBRs and certainly the Registry of Invention, various factors arise that raise concerns regarding the 'effectiveness' of the Registry for defensive publication. First of all, in order for published knowledge to be searched as part of establishing prior art, some form of legislation must be passed, as in the case of the

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the research, not merely the date of publication. In the context of International Agriculture Research Centres (IARCs) it was argued that the this kind of defensive publication would be extremely useful as only one application is necessary for a large acquisition and subsequently published material would be then part of required patent office search in establishing prior art (IDRC, 1994).

Statutory Registration of Inventions in the US, whereby the applicant would apply for a patent with the exemption for the examination for novelty. In this case the material to be published would still have to be considered technically useful and would be fully disclosed in order to be repeated. In the case of living organisms this would result in the deposition of the organism as a sample.

However both kinds of Registries outlined above that seek defensive publication are not formally applying for such protection. They are merely publishing knowledge (outside of the patent system) that could be used to subsequently defeat patents they can prove copied or were based on the registered knowledge. Such registration does not require the patent office to search this knowledge. Clearly one of the central challenges for this to be an effective mechanism for I&LK protection is that legislative amendments will have to be enacted in order to require the extension of searches to CBRs and or Registries of Invention.[9]

By extension of this limitation other concerns would have to also be addressed. For example, in the case of the CBRs there is no clear distinction between general knowledge and protectable subject matter. Everything is being documented irrespective of the particular knowledge deemed by the community as falling within the scope of protection. The US legislative example clearly demonstrates that some kind of parameters for protectable subject matter would have to be developed in order for searches to include the Registry. (Furthermore, as with the patent system, if everything were patentable it would in effect defeat the entire purpose of the system). Secondly, in the case of the Registry of Invention and in many of the CBR initiatives there is no evidence of deposition of the sample organism to enable it to be 'repeated'. Hence Registry endeavors would have to carefully consider what they would like to define as

9. At an administrative level it has been argued by some that such a requirement would place an unmanageable administrative constraint on already overburdened patent offices (Dutfield, 1997).

protectable subject matter and may also have to consider undertaking community seed bank initiatives in order to fully support the defensive publication mechanism.[10]

Finally, there are several underlying assumptions with this model that beg further examination. For one, there is an inherent assumption in these various Registry endeavors, that all communities/peoples will want or will be able to document their knowledge. While a massive awareness campaign would have to be initiated so that communities did not get excluded from registration this still may not account for those uninterested in participating. Secondly, given that protectable subject matter would have to be defined, it is highly possible that what I&L communities define as protectable would be of little interest to the private sector, leaving the unregistered material open for appropriation. Furthermore it would be very difficult for communities to predict this. Finally, what has actually been documented may not necessarily prevent the patenting of 'valid' inventions based on registered knowledge that 'isolated' or 'discovered' a new gene or through the use of registered materials that enabled the production of varieties with significantly improved properties. Hence the Registry may in effect facilitate further acts of misappropriation, the very thing many of its participants are seeking to control.

4.2 Trade Secret

Likewise, many of the underlying assumptions of a Knowledge Cartel raise concerns regarding the use of the Registry for ensuring trade secrets. The trade secret is generally employed for the confidentiality of commercially related knowledge held between a few individuals (ie. the recipe for Coca Cola). Subsequent agreements between the 'knowledge holders' and interested parties would be negotiated in order to respect confidentiality. Although independent discovery by outsiders, whether it be

10. While defensive publication may be useful for large seedbanks such as held by the IARCs, it may not be applied so easily to Registries given that in most cases they do not necessarily have the funds to start up or maintain a seed bank. In situ conservation practices may have to be included in the definition of a living seedbank.

accidental, through actual disclosure or reverse engineering, would be perfectly legal, taking the information without the consent of the knowledge holders would allow for legal action to be taken. The individual or company might then be obliged to share in the profits.

Clearly the purpose of the Registry in the case of the Cartel proposal in Ecuador is to establish knowledge that is shared by I&L communities at a regional level that is not yet public, in order to negotiate the knowledge as a trade secret in a Material or Information Transfer Agreement between the knowledge holders and the interested party. However the use of the trade secret in this example would be for knowledge not necessarily of commercial value and would be held by many individuals if not communities at a regional level. Although possible, this would certainly stretch the scope of the trade secret to its limit. This may be feasible, but as of yet it is not clear that this new or extended application of an IPR mechanism will work.

However other assumptions inherent to this model include, for example, that confidentiality will be kept. If knowledge is held by several individuals within or throughout various communities it would be extremely difficult to ensure confidentiality. Furthermore, it would be difficult to ascertain who divulged the information, in the case that confidentiality was breached. Another weakness in the model is that given the large amount of species already documented in ethnobotanical journals, catalogues and national herbariums it would inhibit secrecy due to the prior disclosure of the information. Following upon this point, while I&L communities may maintain confidentiality, the biological diversity on their lands is still easily accessed by bioprospectors.

As in the examples for defensive publication, another assumption with the trade secret model is that all communities will be able to register or will want to register their knowledge. However, unlike the CBR and Registry of Invention, the Knowledge Cartel model may be perceived as a greater risk in that it is unclear if communities will actually have control over the databases that hold their knowledge. It has also been pointed out

that knowledge held in common by a community or communities may not even hold as a trade secret and that it may conflict with the TRIPs Agreement (Simpson, 1998).

4.4 Technical Conclusions

In both cases, the use of the Registry for IP protection through trade secrets and defensive publication clearly has limitations and challenges that merit further consideration. In both models some of the underlying assumptions such as the participation of all I&L communities and the lack of adequate supportive legislation, (such as required searches in the case of defensive publication and sufficient access legislation in the case of the trade secret,) are critical factors that may influence the effective use of the Registry for IP protection. However many of the concerns listed above are not held in common and are in fact specific to each particular model.

Although both kinds of endeavours have been explored above as employing IPR mechanisms for the assertion of community rights, they are in fact engaging in very different processes and using different kinds of mechanisms. Although defensive publication has been described above as a kind of non-patent patent it is clearly not a positive assertion of IPR in the way that a trade secret is. In fact it has been argued that the act of defensive publication is in fact a rejection of intellectual property rights (Nijar, 1996). From this perspective the CBR and Registry of Invention activities are representative of an attempt to use the Registry for the purpose of denying private rights to I&LK, while the Knowledge Cartel is distinctly employing IP protection for I&LK. Although this disjuncture emphasizes the distinctions between various Registry activities at the IP end of the spectrum, it does not necessarily reflect the important and if not central non-IP aspects of those same projects.

Although it is not within the scope of this report to address the breadth of non-IP issues and possibilities for the Registry, suffice as to say at this point, that the non-IP aspects of the above cases are either directly sought, as in the case of the CBR and Registry of Invention initiatives, or are what one might consider the hidden transcripts of the written objectives. The importance of the non-IP aspects of these Registry endeavours came

into focus through an attempt to learn more about Registries from communities engaged in them directly.

Part 5: The Ecuadorian Case Study

5.1 The Research Trip

In an attempt to contextualize the Registry, a six week research trip to Ecaudor was undertaken that sought to further explore the Registry as a mechanism for the protection of the intellectual property rights of indigenous and local communities. Although the research problem in and of itself could largely be reflected upon without physically journeying anywhere, it was felt that given the lack of research done in this area, more could be learned about Registries from communities actually engaged in the process. Why were they registering their knowledge? How were they doing it? Who was involved in the registration process and how would the Registry function to 'protect' their knowledge?

Although various articles and project reports strongly indicated ongoing Registry activities in Ecuador, in reality no ongoing projects at the community level were found that sought IPR protection through documentation.[11] As a result of these initial findings,

11. A UNDP and IDRC funded project (through the SUB-funded Indigenous Knowledge Programme) coordinated and run by the IQBSS (Indigenous Biotechnology Institute) in Ecuador indicated in their project summary that of the various conservation and recuperation initiatives that '….the strategic role of the ethnobotanical garden since its implementation will allow for the organized control and management of indigenous knowledge on biodiversity and amazonian ecosystems in order to strengthen the collective IPR of indigenous peoples.' Upon further exploration it seems that the project only in its preliminary stages seeks to find out how to protect the collective IPR of the community. This kind of terminology is not uncommon in much of the literature on I&L conservation projects. However it would appear as the IQBSS example suggests

a more conceptual discussion was pursued on the protection of indigenous knowledge. Interviews were conducted with environmental, legal and indigenous organizations in an attempt to chart out the current perspectives and strategies for the 'protection' of indigenous and local knowledge and to situate the Registry within this setting (see Trip Report for a list of organizations contacted).

Although an exploratory excursion into the Ecuadorian context attempted to capture an overview of these various organizational and community perspectives on the protection of I&LK and the use of documentation as a particular protection mechanism, it became clear that at least in the Ecuadorian case, a narrow focus on the IPR aspects of knowledge protection limited one's understanding of the broader context of the subject. Organizations and I&L communities contacted in Ecuador repeatedly demonstrated that IPR, although important, is only one aspect of a continuum of 'rights' issues. The IPR lens which was being used to understand the concept of Registries was in fact incapable of capturing the myriad of Registration activities that are occurring outside of the IP construct.

5.2 Background to IPR discussion

Although the use of IPR mechanisms for the protection of I&LK (and for knowledge in general), has been debated back and forth, it has more recently become the focus of various international, regional and national fora. The academic and political discussions on the suitability of IPR for I&LK protection have raised various concerns, from the distinct rejection of IPR, for example a call for non-IP 'protection' such as the incorporation of I&L values into decision making (Brush, 1996), to a focus on IPR as a useful mechanism for I&LK protection. Recently, groups such as the Ad Hoc Working Group to Article 8j and the World Intellectual Property Organization (WIPO) have focused greater attention in the area of IPR protection for I&LK. For example, WIPO's recent *Roundtable on Intellectual Property and Traditional Knowledge* (Nov 1-2, 1999) meeting

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that it is actually an area that the project would like to research further and not reflective of a sui generis I&LK protection strategy.

has 're-opened the IPR discussion. Although this debate is certainly taking place at the policy, industry and academic level, it does not necessarily reflect discussions taking place at the grass-roots level. By attempting to situate the Registry in a local context, this dichotomy regarding IPR was thrown into question. Although this research was exploratory in nature, it demonstrated that there is a distinction between the IPR discussion at the policy and academic level on the one hand, and the perceptions of I&L organizations on the other.

5.3 Some Indigenous and Local Perspectives

A preliminary inquiry into the Ecuadorian case revealed that intellectual property rights, although not being fully discounted by I&L peoples, are only one aspect of a larger rights discourse. Perhaps what was most telling about the Ecuadorian case is that although it appeared that I&L communities were registering their knowledge for IPR protection, that in fact within a six week period no such examples were found. In light of this fact, the Knowledge Cartel Project discussed above, shifted from being an example of a specific I&L response to knowledge protection, to an exogenous proposal. This fact does not necessarily imply that it would be of no interest to I&L communities (Ecociencia, an environmental organization administering the project, expressed the view that the notion of a regional trade secret reflects I&L historical methods of knowledge protection), however through interviews it became clear that not only was this project largely unheard of, but that the use of IPR as a protection mechanism was only one possibility for further consideration. Certainly I&L communities contacted, expressed an interest in learning more about 'their intellectual property rights' as one aspect of their rights 'struggle' in general.

The COICA (Coordinadora de las Organizaciones Indigenas de la Cuenca Amazonica) represents indigenous organizations in the Amazonian Corner and indigenous communities from Bolivia, Brasil, Columbia, Ecuador, Guyana Francesa, Guyana, Peru, Surinam and Venezuela. The COICA, although not opposed to the registration of knowledge as a *sui generis* protection mechanism, seeks more specifically to defeat patent claims such as the Ayahuasca patent which they consider to be acts of biopiracy,

and also seeks collective rights over indigenous knowledge. The Registry as a mechanism for defensive publication was seen as an interesting proposal for consideration whilel the notion of a Knowledge Cartel was received with scepticism as no 'successful' example could be drawn upon. The COICA has also recently co-published a book entitled: *Biodivesidad, derechos colectivos y régimen sui generis de propiedad intelectual* 1999, that provides an overview of the issues regarding the protection of I&LK, mechanisms in place for its protection such as international rights and IP regulations, and proposes that I&L peoples come up with their own indigenous system of knowledge protection. Certainly the exploration of IPR as suggested by various critical thinkers (Posey, 1994; Greaves, 1994) is being done by I&L organizations as only one possibility set within a larger rights context.

Other I&L organizations such as CEPCU (Centro de Estudios Pluriculturales) in Otavalo, the UNCONIAE-C (Union de Organizaciones y Communidades de Anyachaya la Esperanza y Caranqui) and I&L community members spoken to through Proyecto Paramo in Riobamba, Otavalo and La Esperanza all reiterated the interest in learning more about their IPR within the larger rights context. In all of these cases, IPR has not been a topic of discussion, let alone the registration of knowledge for IPR protection. Organizations such as CEPCU and the Paramo Project are engaged in environmental and community management projects, whereby I&LK is being recorded, but this is not being done explicitly for IPR protection. Members of these organizations and I&L communities spoken to were concerned however with the possible misappropriation of their documented knowledge and wanted to know what to do in order to ensure their rights.

If proposals such as the Knowledge Cartel are successful in launching their project, such communities may be directed towards the Registry for trade secret purposes as the solution. Given the various technical concerns explored above, there is much to be explored if such a project is to be useful. Perhaps what was most telling were the responses of I&L medical practitioners in the Jambi Hausi Alternative Health Centre in Otavalo, who appreciated the importance of registering their knowledge as a manner by

which to inhibit its misappropriation, however voiced the concern that much of what they know cannot be captured through documentation. It is through the continued use of that knowledge, by sharing it and passing it on to others, that I&LK will truly be protected from disappearing.

Part 6: Conclusions

This report has sought to explore the concept of the Registry as a mechanism for I&LK protection. Although the three cases explored: 1) the Community Biodiversity Registers in India, 2) the Registry of Invention in India and 3) The Knowledge Cartel in Ecuador represent interesting proposals for I&LK protection, they are not, as in the case of Ecuador, necessarily reflective of I&L strategies. Many of the technical issues highlighted certainly give rise to concerns with regards to using the Registry for the turning on of mechanisms such as defensive publication and the trade secret for knowledge protection. However, there are also clearly substantive issues as demonstrated in the Ecuadorian case that require further exploration.

In the Ecuadorian context it became quite clear that IP proposals such as the Knowledge Cartel Project are representative of an exogenous proposal that does not necessarily reflect the I&L concerns and visions regarding the protection of knowledge. While Ecuadorian indigenous organizations are considering various options surrounding the issue of I&LK protection, they are critical of non-indigenous proposals that are of a western IPR persuasion. Likewise environmental & indigenous organizations that had not been exposed to the issues of knowledge protection expressed the desire to understand the implications of knowledge documentation in greater detail.

It would appear that the IPR debate to date has largely taken place outside of the indigenous and local community domain and that if 'we' are to speak about appropriate protection mechanisms for I&LK, more research needs to be done on what I&L people's visions are for such a system. In doing so, false dichotomies as have been constructed

between notions of intellectual property rights and other rights need to be addressed if such an I&L vision is to be constructed. Although the CBR and Registry of Invention examples in India place a clear emphasis on non-IP aspect of the Registry, they make an ideological assumption that I&L communities reject IPR mechanisms out of hand. These initiatives like the Cartel Project are not necessarily exploring I&L visions of the subject, but are proposing the Registry as the best method for I&LK protection.

Afterthought

The Registry may be reflective of the objectives of implementing the CBD that acknowledges the importance of and respect for I&L knowledge, innovations and practices (Article 8j). However, as pointed out by Victoria Tauli Corpuz, of equal importance to I&L peoples is the UN Draft Declaration for Indigenous Peoples that does not submit natural resources to the control of the state, but points to the rights of indigenous peoples over their territories and genetic resources as of equal importance to the conservation of biodiversity.

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