E C O

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An urgent call for negotiating definitions for the ABS Protocol

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As the negotiations on the ABS Protocol are advancing it becomes more and more obvious that these negotiations suffer from a lack of work on definitions. Defining "typical uses", for example, could clarify what will trigger the application of the ABS protocol provisions when access to specific genetic resources is sought. Clarification and definition of a few other terms also could promote the finalization of a *substantive* ABS Protocol. Although the Group of Legal and Technical Experts on Compliance recognized that definitions are not essential for international instruments, the Group also noted that without clear definitions *compliance* cannot be enabled. But is compliance not *essential* for preventing biopiracy? In this context, a "*misappropriation and misuse*" need a clear definition.

The Group of Legal and Technical Experts on Concepts, Terms, Working Definitions and Sectoral Approaches worked on the terms "*genetic resources*", "*derivatives*" and "*products*". The Group concluded "that further clarification would be helpful to further understand the practical implications for access and benefit sharing within the international regime." The Group further concluded that a list of "typical uses of genetic resources" [...] "could provide further clarification to the understanding of the definition of 'genetic resource' as used in the Convention on Biological Diversity." The non-exhaustive list on such uses suggested by the Group include:

1) Genetic modification
2) Biosynthesis
3) Breeding and selection
4) Propagation and cultivation of the genetic resource in the form received
5) Conservation
6) Characterization and evaluation
7) Production of compounds naturally occurring in genetic material

In other words, in this context we see two tasks lying ahead of Parties:

(1) defining "*genetic resources*" in the context of an ABS Protocol, or else the scope and applicability of such a Protocol would be left in the dark. With an unclear scope, national implementation and the enforcement of compliance in user countries would be seriously jeopardized, if not erratic. **Such a list is a critical component of the ABS Protocol, and has to be addressed at the next meeting of the Working Group.** As the negotiations of the Cartagena Protocol on Biosafety have shown, the elaboration of definitions takes its time but is worth this time. It certainly cannot be started only at COP10.

(2) dedicating adequate time and effort to develop and agree upon a comprehensive list of "*typical uses*", a list that must include all those ABS cases that until now are propagated as best practices - or as classical cases of biopiracy!

It is especially important to include the extraction of metabolites in the list of typical uses. Indeed, the point of departure in the CBD debate is that any ABS system has to cover and reward the use of biological diversity in all non-profit and profit-making fields such as medicine, cosmetics, food supplements, industrial processes, breeding, crop protection, and horticulture. As a general rule, two groups of industries use different components of genetic resources. While medicine, cosmetics and food supplements use biochemical compounds, many industrial processes and the breeding sector use the genetic information of the resource. This means that the two tasks outlined above are interlinked.

The CBD definition of genetic material describes its physical status: it must "contain" a functional unit of heredity. Last but not least, the CBD defines those genetic materials as "genetic resources" that have "actual or potential value" for the user. *Continued next page…*

HOW EUROPE TURNS ITSELF INTO A 'PROVIDER COUNTRY'
WHOSE MICROBES ARE THEY STORING?

EU Starting Microbe Storage Network

(GenomeWeb News, 19 March 2009) - The European Union will spend 4.2 million ($5.8 million) to create a pan-European network of microbial specialty centers that will collect, analyze, and preserve microbe samples such as bacteria, viruses, and microscopic fungi, and will include a DNA bank…The centers will work together to harmonize the methods that they use to conserve and identify samples. They also will explore new ways to identify and classify microorganisms that are housed in the centers and are used in academic research, education, and in the agro-food and pharmaceutical industries and in hospitals.

The initiative, called the European Consortium of Microbial Resource Centers project (EMBARC) and its partners also plan to lay the foundation for the creation of a project called the Global Biological Resource Centre Network. For more information see http://www.genomeweb.com/print/913520?page=show

Definitions, continued from previous page

In the context of the ABS negotiations, it will be essential to keep in mind that "genetic material" is defined through physical status of a certain biological entity, while "genetic resource" is defined through the socio-economic value of this specific biological entity.

In principle, a future ABS regime must cover the use of all components of genetic resources. If an ABS regime would only cover the use of the genes and leave out the use of the biochemical components, such a regime will exclude the majority of uses from access and benefit sharing. The overwhelming number of bioprospecting cases that have emerged during the history of the CBD are based on the use of biochemical components of genetic resources and only very few on the use of genes from genetic resources. Both types of use have been promoted as best practice cases for ABS-agreements. [1]

The definition of "typical uses of genetic resources" as basis of the scope of the ABS Protocol cannot rely on the retrospective analysis of the assumed intentions of the CBD negotiators in Rio in 1992. The ABS Protocol has to be based on the analysis of the current and upcoming structures and patterns of benefit-generation through the major commercial and non-commercial use of the genetic resources.

It is apparent that an ABS regime could easily become dysfunctional if the full set of provisions would apply to all possible forms of access and to all possible forms of using genetic resources. A solution comparable to the provisions of the Cartagena Protocol might be feasible, which covers all living modified organisms (LMOs) in its scope but creates different levels of minimal standards based on the respective LMO activities as eg. contained use, transit or use for food and feed. Certainly, the use of timber for furniture or of fish for food is a very different case as the use of marine sponges for the development of a drug. Some national ABS regulations have already created such a multi-level system.

With regard to the general ABS discussion under the CBD, and in particular with regard to the many cases presented as exemplary ABS approaches, the use of genetic resources is not restricted to cases using the genetic information itself but also the vast diversity of biochemical compounds. The numerous case studies dealing with pharmaceutical and phytomedical R&D will certainly fall under the full provisions of an ABS regime, including Prior Informed Consent and Mutually Agreed Terms. [2] The same will be true for the use of biological resources for products with health or beauty claims based on traditional knowledge, as for example the well-known benefit sharing agreements in South Africa concerning the use of Hoodia or the cooperation between the U.S. company Aveda and Indigenous Peoples from the Amazonas region. The full set of ABS measure would also apply for the direct use of the genetic material in R&D of genetically engineered organisms for agriculture, pharmaceutical products or industrial production. [3]

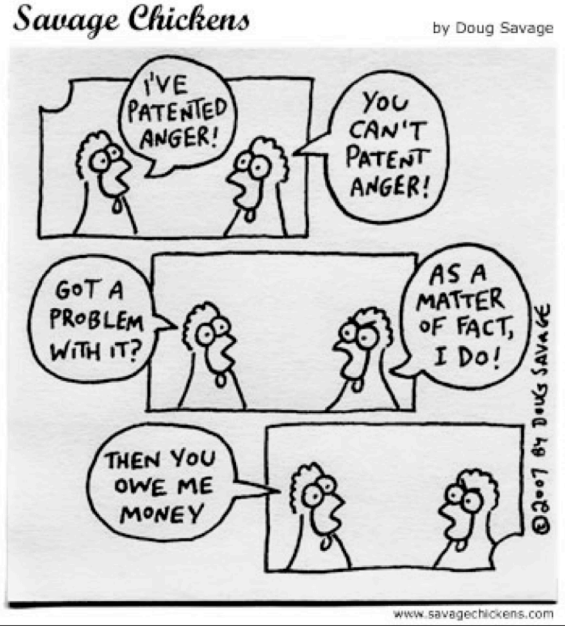
In the field of agriculture it has to be noted that the access to a negotiated list number of plant species when stored in the gene banks of the Multilateral System and used as genetic resources for food and agriculture is already been regulated through a specific ABS system of the International Treaty on Plant Genetic Resources for Food and Agriculture adopted in 2001. These genetic resources will have to be excluded, as well as human genetic resources.

Instead of the present focus of the negotiations on what should be outside the ABS Protocol Parties should find consensus on what should be in. We need the political will of every Party to cover all the well-known cases of use of genetic resources – whether biopiracy or equitable agreement - by the scope of the new instrument. Otherwise, the ABS Protocol would be empty and useless; it would not be able to adequately contribute to the third objective of the CBD, the fair and equitable sharing of benefits. Thus, the CBD would suffer from a serious imbalance and loss of credibility negatively affecting the future of the Convention as a whole.

[1] eg: UNEP. 1998. Synthesis of case-studies on benefit sharing. http://www.cbd.int/doc/meetings/cop/cop-04/information/cop-04-inf-07-en.pdf

[2] eg.: CBD case studies 1, 2, 5, 7, 8, 11, 13, 15, 19, 20, 21 at http://www.cbd.int/abs/cs.shtml
or: International Chamber of Commerce. 2008. Good Business Practices and Case-Studies on Biodiversity. Report submitted for the Windhoek meeting at http://www.cbd.int/doc/meetings/abs/absgtle-01/information/absgtle-01-inf-01-en.pdf

[3] eg.: CBD case studies 17 & 24 at http://www.cbd.int/abs/cs.shtml



Patents, Open Source and ABS: A Forward Look

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Addressing the problem of biopiracy/misappropriation with respect to the patent system has been a key factor behind the development of the international regime on ABS. Proposals for disclosure of the origin of biodiversity and associated traditional knowledge within patent applications and the introduction of a certificate system under the ABS regime are important potential elements of the regime. In related developments the CBD is also tentatively engaging with open source models with respect to technology transfer (Decision IX/14 para. 11).

Quantitative data on patent activity for biodiversity and associated traditional knowledge is limited and developing indicators is challenging. We are presently completing the first phase of the European ABS indicator for the European Environment Agency as part of the Streamlining European Biodiversity Indicators (SEBI 2010) initiative. To do this we are using the World Patent Statistical Database (PATSTAT) which serves as the international baseline for patent statistics. We have been able to define patent activity for genetic resources, biodiversity and associated TK to a high level of detail using the WIPO International Patent Classification (IPC) of 70,000 codes. Available data for 1990-2007 reveals that after strong growth in the late 1990s, peaking at 11% of overall European activity in 2001, patent activity has now declined to around 9% by 2005 for biodiversity and associated traditional knowledge with 591,120 applications, grants and associated republications recorded between 1990-2007. Much depends on the treatment of the origin of pharmaceutical and industrial compounds and the above represents a conservative approach.[1] Patent data can also be counted under different scenarios, and we intend to count under all available scenarios, but the declining trend is confirmed by OECD (2008) and WIPO (2008) statistics using PATSTAT and narrower definitions of biotechnology patents.

The general indicator trend is largely a result of declining activity for biotechnology. However, this disguises rising trends inside the indicator for other sectors, i.e. for plant based traditional medicines, cosmetics, functional foods etc. and emerging areas such as metabolic engineering and synthetic biology (UNEP/CBD/WG-ABS/5/INF/6).

Trends for pharmaceuticals of natural origin, linked to debates on derivatives, present difficulties at the level of classification and merits expert review. Nevertheless, despite the promise of combinatorial chemistry, it is empirical fact that for the last 25 years natural products have accounted for the vast majority of new approved pharmaceuticals. Nature will rarely be beaten as a source of new products: it is our models of innovation that will normally require adjustment.

New players, such as China, India and Brazil are entering European intellectual property markets for biodiversity and associated traditional knowledge and we should expect that this will increase in future years. Economic data is fragmentary but worldwide licensing revenues (rents) for all forms of intellectual property rose from an estimated US$10 to US$110 billion in 2004. In competitive markets, patents and Intellectual Asset Management (IAM) are increasingly used to protect investments, leverage rents and establish partnerships. The social and economic implications of patents with respect to access to medicines, health care budgets, and the openness of science and innovation are not trivial. However, patents are emerging as one component in a wider shift towards "open innovation" that merits greater attention in debates on ABS.

Open innovation is characterised by out licensing and in licensing of knowledge, expertise and technology, i.e. in the pharmaceutical sector, rather than in house R&D, because it is generally more efficient. In the software sector major patenting companies such as IBM are also promoters of 'open source' or 'commons' models of innovation. These consist of licensing models setting out the terms under which software code is made available and are directed towards promoting collaborative innovation. As a result of genome sequencing and the rise of bioinformatics, genetic and biological material is increasingly an informational resource that provides opportunities to promote open source/commons models directed to international collaborations on issues such as neglected diseases (UNEP/CBD/WG-ABS/3/INF/4).

In the context of ABS, the rise of commons models also presents opportunities to address recognition and respect for the rights and customary laws of indigenous peoples and local communities. In economic terms, human relations run along a spectrum embodied in the concept of reciprocity (i.e. gifts, impersonal cash for goods etc). Customary law systems employ a diverse range of options and elaborated rules for accessing and utilizing knowledge and resources over time along the spectrum of reciprocity. One challenge in respecting customary law systems is promoting mutual visibility between different regimes, in this case with the western intellectual property regime. Provision for the development of commons models within the ABS regime could make an important contribution to enabling and promoting collaboration and innovation in conditions of adequate certainty in relation to respect for rights.

The successful pursuit of sufficient certainty with regard to respect for rights within the patent system would be facilitated by mandatory disclosure of origin within patent applications, including disclosure of the name of the indigenous peoples concerned (all peoples have names). At the same time, as a fully functioning global information system employing

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standardised country codes, classification, and citation systems, proposals for certificates of origin (including possible Certificates of Indigenous Peoples and Local Communities - CILC) could be based on the existing patent citation system. The patent information system could also be extended to recognise commons models under the ABS regime. Finally, the use of variable fee schedules, an existing feature of the patent system, to penalise negative behaviour and reward compliance would add a potential financial/compensation mechanism (Conclusion, UNEP/CBD/WG-ABS/5/INF/6). This is not rocket science: it is based on what works.

The development of an international regime on ABS responds to historic problems and inequities in the sharing of knowledge and resources. However, in addressing these concerns an ABS regime should focus on the challenges of the 21st Century. The inclusion of commons models would provide a range of choices for sharing knowledge and resources and could turn out to be the greatest contribution that the ABS regime makes to addressing the collective challenges we confront in the 21st Century.

[1] If all pharmaceutical and heterocyclic compounds, along with certain carbocyclic and macromolecular compounds, are assumed to be of natural origin the percentage rises to 16%. See Oldham and Hall forthcoming for details.

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Indigenous Women of the Central African Region Reduce Deforestation

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In 1998 Indigenous women from all corners of Africa converged in Agadir Morocco for the First African Indigenous Conference (FAIWAC). The outcome was the creation of the African Indigenous Women Organization (AIWO) coming from the impulse of the Netherlands Center for Indigenous People (NCIV). Since this date, meetings have been organized between Indigenous women. Of particular note was the one held in Amsterdam where they decided on implanting AIWO in the whole of Africa at the grassroots level. This process consisted of organizing meetings within the sub-regions and the election of representatives who would later constitute the executive bureau of AIWO.

The conditions for the existence of these groups are precarious. Their environment has suffered considerable degradation due to geographic mutilation, demographic explosion from the neighbouring farmers' communities and modernity to which they have difficulties to adapt.

Despite all, Indigenous women of Cameroon are conscious of their situation and have made great strides. The creation of the African Indigenous Women Organization Central African Network (AIWO-CAN) in which Indigenous women associations and NGOs are regrouped has contributed enormously to bring them out of silence. Many initiatives in favour of Indigenous women were carried out by this Network, such as the building of their institutional and organizational capacities, seminars were held on leadership, Indigenous women participated in party politics and elections, as well as attended international conferences on indigenous issues. Today these women work within this framework through which they can make their voices heard and defend their interests. Nonetheless a lot still remains to be done for Indigenous women in order to achieve better living conditions. Much effort still has to be deployed especially in empowering them economically, socially and politically.

In line with its commitments to the Major Environmental Agreements (MEA), Cameroon has produced situation analyses and action plans for biodiversity conservation, climate change adaptation and mitigation, and biodiversity conservation. The National Action Plan against Desertification includes diversification of domestic energy sources as a priority. The implementation of these action plans and strategies however remains elusive, due to the lack of capacity and also the limited political will.

Domestic energy consumption in Cameroon is not the main cause of deforestation. Unsustainable logging in the southern part of the country constitutes a major threat with a global impact. However, there is great need to preserve the pockets of forest in the northern half of Cameroon and Chad. With the growing firewood crisis in this northern part of Cameroon. There will eventually force wood transport from the southern areas to the northern part of the countries. This firewood is unlikely to be sustainably harvested, since it is known that households collect their own firewood in a more efficient manner than the methods used by the bulk harvesters that would be used for this task.

To avoid this chain reaction, it is important - and most cost-efficient - to address the basis of the problem: the need for firewood. Between 5 and 10 million tonnes of wood are used annually as firewood in Cameroon. The main users are women, and AIWO-CAN has looked at simple, existing technologies and techniques that would reduce their energy consumption. Through demonstrations and discussions with UNESCO in Cameroon, women's groups have started manufacturing and using a simple bag cooker (heat retention cooker). Its potential has generated further interest in the potential of these technologies and techniques for reducing energy needs and hence improving the quality of life. The current request is therefore to allow the domestic energy-efficiency programme to be expanded among all members of the AIWO-CAN network in Cameroon and Chad and in the future other countries within the Central African Region. UNESCO has committed itself to support the action technically and financially. These women's groups are also going to regenerate all the Biodiversity that has been lost and they are also going to carry out programmes in the preservation, protection and promotion of Indigenous traditional knowledge and biodiversity especially in regards to women and biodiversity.