Briefing Paper

On the Scope of an International ABS Regime

prepared for WGABS-3, 14-18 Feb 2005, Bangkok, supported by:

What do well known examples of ABS-cases such as the agreements between INBio (Costa Rica) and Merck (USA), the Kani tribe and the Tropical Botanic Garden and Research Institute (both India) or The Fund for Integrated Rural Development and Traditional Medicine (Nigeria) and the International Cooperative Biodiversity Group (USA) have in common?

They all would fall out of the scope of an international ABS-regime, if that regime would follow a narrow, technology-orientated interpretation of the CBD as advocated by some experts and Governments.

Where is the problem?

The CBD stipulates that access to genetic resources and the fair and equitable sharing of the "results of research and development and the benefits arising from the commercial and other utilization of these resources" should be regulated internationally and nationally. It defines that "genetic resources means genetic material of actual or potential value", whereas "genetic material means any material of plant, animal, microbial or other origin containing functional units of heredity", the latter usually referred to as genes. The CBD also speaks of biological resources that "include genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity".

The definitions lack preciseness. A differentiation between genetic resources and organisms is not obvious, organisms ARE genetic resources. Also the two terms 'parts thereof' and 'material of plant, animal, microbial or other origin' in the end can be used to describe the same object. The scientists working with these materials do not make a distinction by classfiying them under any of these definitions.

For many years, a crucial question was whether ABS regimes should only cover genetic resources - as the CBD says - or also include biological resources - as many national regimes say and as the Like-Minded Megadiverse Countries demanded at the the WSSD in 2002. The underlying question is: what is the difference between biological and genetic resources?

Two opinions prevail

The one opinion says that in most cases both definitions cover the same objects. The application of access regulations is triggered by the presence of genetic material regardless of whether genetic or biochemical components will be used later on. We are going to call this the 'resource-oriented' approach.

The other opinion says that the purpose for which a biological object is used defines whether it is a biological or genetic resource. If an animal is used for food production it has to be regarded as a biological resource, if it is used for breeding and propagation, it is a genetic resource. The same distinction applies in the field of medicine and cosmetics: if somebody uses biochemical substances from a plant to make drugs or lotions, this plant is a biological resource, if the genes are used - mostly in genetically engineered organisms - to make drugs or lotions, the same plant is a genetic resource - although the following examples show that experts vary in their opinion what is genetic or biochemical. We are going to call this opinion technology-oriented.

Problems arising from the application of the technology-oriented interpretation are severe. If the application of ABS procedures is triggered by the intended use in a yes-or-no manner, the door is open for fraud. Once the access has been taken out of ABS obligations on the ground that the genetic properties will not be used (e.g. vanilla for its aromatic essence), a subsequent use of those genetic properties (e.g. a vanilla gene to produce the aromatic essence in a genetically engineerd orgainsm) would also not be captured by ABS obligations. Moreover, all well known cases in the field of drug development and all successful drugs would fall out of the regime because biochemcial properties are used, not genetic properties. The same would be true for cosmetics.

A survey of the 50 world-wide top selling drugs revealed that 26 of them contain active ingredients which are derived from specific organisms, countries or traditional knowledge. But none of these drugs make use of the genetic properties of the original resources. Their effects rely on distinct biochemical properties. Six of the 50 drugs contain recombinant proteins - but the genes used are of human origin and thus out of the scope of the CBD. This means that the 'technology-oriented' approach combined with the exclusion of human genetic resources from the CBD would render the development of successful drugs out of the CBD and its ABS obligations.

It is the biochemical properties which are interesting for bio-prospectors in the field of medicine. The notion that "green gold" lies in the genes as such is a myth. The "green gold" in the field of medicine and cosmetics lies in biochemical properties of the biological resource. The text of the CBD does not say that the intended use of a resource determines its classification. The technology-oriented approach seems to be wide-spread in some theoretical discussion but this would undermine the CBD if adopted.

The appropriate way to implement the CBD ABS provisions is shown in most national ABS legislation that adopts the resource-oriented approach by using the term 'biological resources'.

Necessary elements related to the scope of an international ABS regime

- broad scope that covers all non-human biological resources
- definition of 'genetic resource' by its biological properties, not through its intended use

selected quotes on different CBD interpretation

technology-oriented

In short, biological resources are genetic resources when they are used for the purpose of exploiting genes or other functional units of heredity - not for their physical properties. The definition of genetic resources excludes the use of biological material when not used for the purposes of its genes.

Nordic Council, Access and Rights to Genetic Resources, 2003, p.14

If this is the case, then it is only necessary to obtain prior informed consent, reach mutually agreed terms and share benefits where the use is made of the material's genetic attributes, for example, exploring the biological activity of compounds extracted from the material or using plants in breeding programmes.

K.ten Kate & S.A.Laird, The commercial use of biodiversity, 2002, p.17

resource-oriented

The theory of genetics that is generally based on the DNA discoveries made by Watson-Crick and others holds that a species' biochemical properties are determined by its DNA. On this basis, some commentators have suggested that bulk use of biological resources (as ingredients in commercial products, herbal medicines, components in other medicinal products, cosmetics, spices, tea, etc.) constitutes a utilization of genetic resources.

IUCN, Accessing Biodiversity and Sharing the Benefits: Lessons from Implementing the Convention on Biological Diversity, 2004, p.282

Genetic resources are materials of plant, animal or microbial origin. [...] They are of fundamental importance to many areas of scientific research, like plant breeding for agriculture and horticulture, and for a wide range of industrial sectors, including biotechnology, pharmaceuticals, medicine, and cosmetics. For example, various plants have cosmetic applications: *cinnamon* has essential oils with antiseptic properties, *green tea* has a free radical scavenging property and *horse chestnut* is an astringent.

European Commission, Commission encourages international solidarity when utilizing exotic plants, Press Release IP/04/21, 7 Jan 2004