



# Protecting and sharing biodiversity and traditional knowledge: Holder and user tools

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## Abstract

The present paper deals with the question how legal protection of biodiversity and traditional knowledge can be accommodated and how the results from the use and exploitation of biodiversity and traditional knowledge can be shared. The aim is to cast the various contributions in this volume in a wider framework, by describing and evaluating current intellectual property (IP) protection systems, intellectual property-similar regimes and protection and sharing initiatives outside intellectual property. © 2005 Elsevier B.V. All rights reserved.

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*Abbreviations:* ABS, access and benefit sharing; Bonn Guidelines, Bonn Guidelines on Access to Genetic Resources and Benefit-sharing, agreed by the Conference of the Parties (COP) in the Hague on April 19 2002; CBD, Convention on Biological Diversity; CCIPR, Collective Community Intellectual Property Right; COP, Conference of the Parties; EPC, European Patent Convention; EPO, European Patent Office; EGE, European Group on Ethics in Science and New Technologies; EIPR, European Intellectual Property Review; GURTs, Genetic Use Restriction Technologies; ITPGRFA, International Treaty on Plant Genetic Resources for Food and Agriculture; IP, intellectual property; IUCN, International Union for Conservation of Nature and Natural Resources; NHBMs, non-human biological materials; TIP right, Traditional Intellectual Property Right; TRIPs, Agreement on Trade-Related Aspects of Intellectual Property Rights; UPA, Utility Patent Act; UPOV, Union pour la Protection des Obtentions Végétales; USC, United States Code; USPTO, United States Patent Office; WIPO, World Intellectual Property Organisation.

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## 1. Introduction

The present paper deals with the question how legal protection of biodiversity and traditional knowledge can be accommodated and how the results from the use and exploitation of biodiversity and traditional knowledge can be shared. The aim is to cast the various contributions in this volume in a wider framework, by describing and evaluating current intellectual property (IP) protection systems, intellectual property-similar regimes and protection and sharing initiatives outside intellectual property. The term protection in the current survey should be understood in the common sense it is given in an intellectual property law context and does not refer to the concept of protection in environmental law, nor to the concept of preservation.

The paper first addresses some of the major concepts used in the current debate: biodiversity, (traditional) knowledge, holders and users (Section 2). The paper then embarks on a wide and in-depth tour d’horizon of the legal instruments which can serve to protect biodiversity and traditional knowledge, seen from the perspective of biodiversity and traditional knowledge holders (Section 3). Next, the legal tools are explored which can be helpful in sharing the benefits resulting from biodiversity and traditional knowledge, from the perspective of responsible users (Section 4). After this expansive survey of the various legal initiatives, the paper closes with some conclusions and recommendations (Section 5).

## 2. Major concepts

In the search for new pharmaceutical, biotechnological or agricultural products, two different but closely related components have to be distinguished: the use of a *tangible* element, biological material, and the appropriation of an *intangible* component, traditional knowledge. The World Intellectual Property Organisation (WIPO) takes the view that the term ‘traditional knowledge’ refers to both tangible and non-tangible components: the tangible component of traditional knowledge mainly refers to genetic resources, whereas the intangible component of traditional knowledge mainly refers to the knowledge (WIPO, 2001). However, for clarity’s sake and in view of the differing applicable IP regimes, it is better not to plug the notion ‘biodiversity’ into the notion of traditional knowledge, but to address them as two closely related, but different concepts.

### 2.1. Biodiversity

Article 2 of the Convention on Biological Diversity (CBD)<sup>1</sup> stipulates that ‘biological diversity’ means “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity

within species, between species and of ecosystems”. ‘Biological resources’ include “genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity”. ‘Genetic resources’ means “genetic material of actual or potential value”. While the language of the CBD provides a broad scope for action, CBD discussion documents suggest that the parties are at present focusing on *non-human* biological materials (NHBMs) and their natural habitats (Polski, in this issue; Hassemer, 2004). Those resources thus encompass pharmaceutical as well as natural product resources and crop genetic resources.

In addition to the semantic discussion on the notion of ‘biodiversity’, there has been an interesting debate on the economic nature and value of biodiversity. Polski takes the view that NHBMs are components of “common pool resources” and are themselves “common pool goods” (see also Maier-Rigaud and Apesteguia, 2004). The question arises to which extent this economic qualification has/should have any effect on our thinking on intellectual property concepts in the field of biodiversity. This question calls for further investigation.

### 2.2. Knowledge

#### 2.2.1. Traditional knowledge

A key concept in the current debate is ‘traditional knowledge’. At present, one interpretation seems to be commonly accepted. The term traditional knowledge is understood to comprise both aesthetic and useful elements, as well as literary, artistic or scientific creations. Consequently, categories of traditional knowledge include, inter alia, expressions of folklore in the form of music, dance, song, handicrafts, designs, stories and artwork; elements of language; agricultural knowledge; medicinal knowledge (WIPO, 2001; Leistner, 2004). De Carvalho (1999, 2003) introduces an interesting distinction in this regard: ‘traditional knowledge *stricto sensu*’, encompassing the knowledge itself and ‘traditional knowledge *lato sensu*’, encompassing the former plus expressions of traditional knowledge.

Efforts have been made to classify the various types of traditional knowledge. In international discourse it is agreed that the term ‘traditional know-

<sup>1</sup> Convention on Biological Diversity (CBD), 5 June 1992. See <http://www.unep.ch/bio/conv-e.html>.

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