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**Tania Bubela and Richard Gold, *Genetic Resources and Traditional Knowledge: case studies and conflicting interests* Genetic Resources and Traditional Knowledge: case studies and conflicting interests** edited by Bubela Tania and Gold Richard, Elgar Edward, “Edward Intellectual Property and Global Development”, Cheltenham, UK, ISBN 978-1-84844-223-8

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***Genetic Resources and Traditional Knowledge: case studies and conflicting interests*** edited by Tania Bubela and Richard Gold

Edward Elgar, "Edward Intellectual Property and Global Development", Cheltenham, UK, ISBN 978-1-84844-223-8

This book looks at the definition and protection of traditional knowledge and the related issue of access to genetic resources. It addresses the question of the value of traditional knowledge and genetic resources in "indigenous" lands. But what exactly is traditional knowledge? It covers agricultural practices, ways of using the land and managing natural resources, plant selection methods, health practices, knowledge of the medicinal properties of certain plants *et cetera*, as well as cultural knowledge, such as dance, music and rituals. The book contains contributions from 16 authors and is divided into three sections. In the first section, the authors analyse the international conventions concerned with access to traditional knowledge and demonstrate how complex it is to have a coherent system. They look at the Declaration on the Rights of Indigenous Peoples, the Convention on Biological Diversity and the Nagoya Protocol on access and fair and equitable sharing of benefits, the WTO's Agreement on Trade Related Aspects of Intellectual Property Rights, the International Union for the Protection of New Varieties of Plants (UPOV), the FAO's International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR), and so on.

In the second section, the authors focus on analysing the implementation and effects of laws and national policies for the protection of and access to traditional knowledge. The analysis covers 4 countries: Brazil, Kenya, India and Canada. In the third section, Tania Bubela offers concluding remarks and suggests a new approach to the recognition of traditional knowledge by means of notions of redistributive justice and self-determination.

In the first section, questions essentially involve the coherence of public policies with regard to international conventions and their national transpositions. For example, the Convention on Biological Diversity recognises countries' sovereignty over genetic resources, while the Declaration on the Rights of Indigenous Peoples goes much further in recognising indigenous peoples' rights, particularly in connection with their traditional knowledge. In the same way, the ITPGR goes further than the UPOV's mechanism to protect plant varieties in recognising the role farmers have played for thousands of years in selecting plants, and therefore recognising their rights over their use of modern varieties. The authors then show that the intellectual property of biotechnological innovations and the appropriation of traditional knowledge have led to demands for the protection of traditional knowledge. This involves the proposal to implement a *sui*

*generis* and contractual system of “prior informed consent”. Currently, it is still a matter of defensive protection to ensure that patents cannot be filed without sharing the benefits by establishing the obligation to disclose the origin of the living matter used when filing for a patent application. The authors show that many studies have been conducted to analyse innovations’ dependence on traditional knowledge and on the various options to implement benefit-sharing. However, Dutfield warns against overestimating the value of traditional knowledge, which makes up only a part of available knowledge and also includes scientific information published in journals and books, inventions that have fallen into the public domain, *etc.* He therefore suggests a different approach to maintain these cultures and this knowledge, proposing to set up a fund-raising institution based on the use of traditional knowledge (inspired by SACEM, the French professional association collecting payments of artists’ rights and distributing the rights to the original songwriters, composers, and music publishers), which would also use the ITPGR model in which the multilateral exchange system is funded by voluntary donations or compulsory contributions when intellectual property rights have been established blocking access to the innovation<sup>1</sup>. Ultimately, if it is difficult to protect traditional knowledge, is it possible to prevent appropriations through patents? Although not entirely new, this approach is well documented in the book. It also involves recognising unwritten rights that are generally not recorded in any medium. At stake here is the possibility of translating traditional knowledge “chemically” (*i.e.* scientifically) so that it can be used as a precedent to prevent abusive appropriation by means of patents. It is no longer a question of sharing since there are no longer patents, but there is no longer appropriation without sharing, which is, nevertheless, quite an achievement.

The first case to be presented in the book’s second section is Brazil. The authors demonstrate that even though public policies are well-intentioned, especially with regard to the possibility for local populations to veto the use of their knowledge, the effective scope of this is sometimes limited. The difficulties in its implementation and the system’s limitations are illustrated using examples that highlight in particular the costs of transactions, which indigenous communities are little able to afford. The authors then show the negative effects that these policies can have on local industries. Studies have shown that such policies can be more detrimental (restricting) for local industries’ development than they are for foreign industries due to the fact that the latter already have access to resources and knowledge through other means (*ex situ* collections, databases compiled before the Nagoya Protocol, which is not retroactive, and so on) that are not covered by the national law.

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<sup>1</sup> To date, the ITPGR’s funding method is proving limited, as far less money has been raised than was planned with regard to the FAO’s objective in terms of preserving and managing genetic resources for agriculture and food. The FAO is seeking a different, broader base.

Nonetheless, this law is still significant since, as Antunha Barbosa (2012) points out, the changes in the Brazilian constitution are interesting because it has moved on from the integration of Indians to the recognition of the primary legislation (traditionally occupied land, resources, *etc.*) and community rights. However, Barbosa (2012) makes it clear that these rights could be limited to state sovereignty and public interest. The question about land ownership, at least with regard to recognising indigenous peoples' land rights, is very important because it will be at the crux of the analysis to resolve the conflict of uses that could be associated with this type of development. Indigenous populations do not reject development; it is just that they do not wish development merely to be synonymous with assimilation.

In Kenya, there are more than forty ethnic groups and a sizable percentage of the population could be considered "indigenous". This raises a certain number of questions concerning how to manage individual knowledge that is shared collectively and how to manage national policies and customary laws that may cross national borders. One of the sensitive subjects in Kenya is land ownership because creating an ownership register or a database of medicinal plants can prove to be incompatible with customary laws defining access and user rights for resources outside the framework of land ownership rights. This can have a negative effect on managing territories as soon as customary laws are relegated to the sidelines.

The case study of India is confined to resources for agriculture. The authors demonstrate the limitations of the green revolution since the 1970s and the consequences on the erosion of traditional varieties that were no longer cultivated but nevertheless have not been conserved. They have moved from a system based on farmers' interdependence to one of farmers' dependence on a centralised system, and the bond between farmers has thus become passive. This has led to social movements against centralisation and the affirmation of the people, and more specifically, indigenous communities. Since this work was published, it is worth noting that the recognition of indigenous and local populations' knowledge in India has led to the rejection of Monsanto's patent application for a genetically-modified plant variety on the grounds that it was based on a local Indian variety without prior agreement from the local populations that maintained it.

The study of the situation in Canada is more detailed. Traditional knowledge involves far more than the use of genetic resources. It includes conservation methods, understanding of migration patterns, *etc.* This analysis focuses on the diversity of knowledge and the risk of its disappearance. The authors note the importance of the Royal Commission on Aboriginal Peoples, particularly in encouraging co-management and co-construction between indigenous communities and the State. This point is especially important, even if it does not go as far as the Declaration on the Rights of Indigenous Populations, since it does not grant them total freedom to manage territories and resources, or grant them self-determination. However, we should mitigate

this somewhat negative vision by explaining that it is a step in the right direction, especially in light of the Supreme Court's decision recognising oral transmission. Indigenous populations are better integrated in both managing territories and development projects that are no longer based on assimilation.

The third section is a constructive conclusion in which Bubela begins with the statement that traditional knowledge is not static. It evolves and adapts depending on the changes with which communities are faced. In order to be more effective, the author explains that the issue at stake today is the question of land ownership. At the moment, indigenous populations' rights are above all user rights regulated by the State. In order to improve the situation, the author suggests better redistributive justice via these populations' self-determination. This would go beyond questions of intellectual property that are ill-adapted to evolving knowledge, and move towards the right to cultural integrity. It is then a question of building development capacities that are compatible with communities' cultural integrity; this does not imply "setting their lifestyle in stone", or of wanting them to integrate by renouncing their culture. However, it is important to reduce the inequalities between indigenous peoples and the rest of the population with regard to access to healthcare and education without calling into question their lifestyle and culture. This means developing research capacities with indigenous populations—this is known as "participatory selection" to improve local plant varieties in most countries in the world.

By way of conclusion, I note that the book remains vague about one point—the fact that non-indigenous local populations appear to be ignored in the analysis. However, local communities that are not necessarily indigenous also possess traditional knowledge. It is unclear what the authors suggest with regard to managing this knowledge. This is even more important in light of what I mentioned earlier about Monsanto's being refused a patent in 2013 for biopiracy on these grounds.

In spite of this drawback, which is essentially a point that needs to be clarified, the book gives a good explanation of current models that are essentially based on ownership rights or intellectual property rights, and national policies within the framework of transposing international conventions. But are these models compatible with customary laws and the inalienable character of traditional knowledge? There is no black or white answer to this – limitations often emerge, and usually at the expense of indigenous populations and/or the creation and development of innovations. This is why different approaches should be devised. The key option put forward in this book is based on redistributive justice and self-determination, which should allow local populations to develop without necessarily being assimilated.

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