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Global Governance of Traditional Knowledge and its Justice Implications: A Case for an Alternative Approach

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Global Governance of Traditional Knowledge and its Justice Implications: A Case for an Alternative Approach[1]

Zuhre Aksoy

Introduction

The traditional knowledge of local and indigenous communities has increasingly become an object of political contention. On the one hand, the institutionalization of a global regulatory framework for intellectual property rights (IPRs) brought to the forefront where traditional knowledge stands in this scheme of privatization of knowledge. On the other hand, recognition of the significance of traditional knowledge in environmental protection, which became all the more pertinent in the context of global climate change, spurred debate about how this knowledge could be systematically integrated into international environmental efforts. In this regard, several institutional frameworks and agreements have been crucial in their recognition –and measures for protection- of traditional knowledge via a variety of mechanisms. These include the Convention on Biological Diversity (CBD), the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) of the Food and Agriculture Organization (FAO), and the World Intellectual Property Organization (WIPO), among others.

This paper aims to analyze the global governance framework for traditional knowledge provided by these international mechanisms, with a focus on traditional *agricultural* knowledge of peasants in centers of genetic origin/diversity. In these centers, mainly located in the global South, local farming communities, through their traditional agricultural knowledge, crucially conserve agricultural biodiversity. However, they are increasingly marginalized due to a number of factors, including pressures to produce for global markets. In this context, the question the paper will address is: *What are the justice implications of the existing global governance framework of traditional knowledge for peasants who are holders of traditional agricultural knowledge?* Relatedly, the paper will examine alternative mechanisms for the governance of agriculture, and traditional knowledge related proposals by transnational peasant movements such as La Via Campesina.

The first part of the paper will review the debate on traditional knowledge, with a focus on traditional agricultural knowledge as it relates to conservation of agricultural biodiversity. The second part will look at the global governance framework for traditional knowledge and the justice implications of the existing framework for holders of traditional agricultural knowledge. The final part of the paper will proceed to the discussion of what alternatives to existing mechanisms are envisioned by transnational peasant movements for food sovereignty.

1 Traditional Knowledge

Traditional Ecological Knowledge:

Despite the significance of traditional knowledge held by local and indigenous communities for environmental sustainability, these knowledge systems have long been unrecognized by the international community. It was only in 1980s that *traditional ecological knowledge* became a point of international debate (Berkes 2012; Dutfield 2001). Several developments fostered the recent growing interest in traditional knowledge, and the role it can play in the protection of environment. These include the establishment of a global intellectual property rights regime through the Agreement on Trade-Related aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO), which put under scrutiny the status of traditional knowledge in this global framework, as well as an increasing attention to the contributions that holders of traditional knowledge make to

[1] This is a draft paper. Please do not quote without the author's permission.

conservation and sustainable use of resources. As such, recent efforts to provide a governance framework for the protection of traditional knowledge reflect these considerations.

There are a variety of definitions of traditional knowledge, as by its nature traditional knowledge displays the very diversity of the processes of knowledge accumulation and use (Berkes 2012; Dutfield 2001). For the purposes of this paper, the definition of traditional ecological knowledge by Berkes as

> "*a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment*"

provides a crucial entry point (Berkes 2012: 7). Berkes points out the four interrelated levels of traditional knowledge: The first level comprises information about different animal and plant species and the larger ecosystem; the second level is the "resource management system;" at the third level are the social institutions which provide the context for rules and regulations for management; and the final level refers to the broader ideational framework or the worldview that governs the "knowledge-practice-belief complex" that defines traditional knowledge (Berkes 2012: 17-18).

Traditional Agricultural Knowledge:

Brush notes that traditional *agricultural* knowledge, as a crucial component of the process of conserving crop genetic resources by local farming communities in centers of origin and diversity, possess similar characteristics as traditional ecological knowledge and indigenous knowledge including "(1) localness, (2) oral transmission, (3) origin in practical experience, (4) emphasis on the empirical rather than theoretical, (5) repetitiveness, (6) changeability, (7) being widely shared, (8) fragmentary distribution, (9) orientation to practical performance, and (10) holism." (Ellen and Harris 2000, quoted in Brush 2007: 1502). Partly parallel to the four interrelated levels of traditional ecological knowledge Berkes indicates, Brush underlines several domains of agricultural knowledge, including substantive domains such as soil type, crop genotypes; management domains such as crop selection, irrigation techniques; and organizational domains such as land tenure (Brush 2007: 1502). Additionally, Brush emphasizes that "Traditional knowledge for crop genetic resources has both cognitive and biological aspects. The cognitive aspect is embodied in the nomenclatures, classificatory systems, and cultural practices of farmers, while the biological aspect is embodied in crop germplasm from generations of observation, election, exchange, and maintenance." (Brush 2005: 101).

Landraces, or traditional varieties of crops, cultivated by farmers for generations, provide the most significant component of the world's crop genetic resources. As all modern crops are derived from landraces, their cultivation at the local level has global implications. One important feature of crop genetic resources is that many of the centers of origin/diversity of the world's crops -Vavilov Centers- are located in Southern countries (Boyce 2013). Traditional agricultural knowledge is crucially linked to the process of conservation of crop genetic resources as part of agricultural biodiversity. Genetic diversity, Altieri states, is a "key component of traditional sustainable farming systems to manage risk and reduce reliance on agrochemicals." (Altieri 2003: 350). In his discussion of the role that small farmers have in conserving agricultural biodiversity, Boyce emphasizes the dynamism of 'traditional' agriculture: "in the farmers' fields, the process that Charles Darwin termed 'artificial selection' - natural selection guided by human hands- yields a constant stream of new varieties, adapted to changing needs and changing environmental circumstances." (Boyce 2013: 117). In this context, '...high diversity agriculture depends on the farmers' knowledge of different crop varieties and their relationships to microhabitat variations. Small farmers are the repositories of that knowledge' (Boyce 2013: 121).

The *ex situ* (off site) conservation of crop genetic resources, (i.e. the gene banks), is one of the means by which diversity is protected. In this regard, the Consultative Group on International Agricultural Research (CGIAR) is the body of network of international agricultural research centers, including the

International Maize and Wheat Improvement Center (CIMYYT) in Mexico and International Rice Research Institute (IRRI) in the Philippines among others, which maintain wide-ranging collections of plant genetic resources for food and agriculture. Yet, *ex situ* conservation is not adequate by itself, as the dynamism of farmers' practices discussed above can not be stored in gene banks, hence, *ex situ* conservation has to be complemented by *in situ* (on site) conservation of these resources by the farmers (Boyce 2013; Brush 2003).

At the same time, crop genetic resources and the related traditional agricultural knowledge are under increasing pressure due to a number of reasons. For example, in their discussion of agroecosystems, Perrings and Gadgil underline that "Market induced specialization, animal and plant selection, and modern plant and animal breeding have narrowed the genetic base of agriculture to the point where most of the global food supply derives from a handful of species...within each of these species there has been a substantial loss of genetic diversity" (Perrings and Gadgil 2003: 539). This is equally pertinent for traditional agricultural knowledge: Brush (2005: 105) emphasizes how 'Both the cognitive and biological aspects of traditional agricultural knowledge are endangered in the contemporary world by such processes as population growth, market development, technology diffusion and cultural change.'

The significance of traditional agricultural knowledge is evident in the fact that all modern crops are derived from the traditional varieties of crops developed by farmers in these centers of origin and diversity. Yet, while these varieties and the related traditional knowledge have been in the public domain, the formation and reinforcement of an increasingly privatized system for the management of plant genetic resources is in place, embodied in plant breeders' rights for "improved varieties" of seeds.[2] This system, at the international level, is institutionalized with the International Union for the Protection of New Plant Varieties (UPOV) Convention, first adopted in 1961 and revised several times, and the more recent Agreement on Trade Related Intellectual Property Rights (TRIPS) of the WTO in 1994, strengthening the system of private property in plant genetic resources. Article 27.3(b) of the TRIPS agreement requires that members "…shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof."[3] Cottier and Pannizzon underline that there is no explicit reference to traditional knowledge in the TRIPS agreement, and that "In practice, the flexibility inherent in the *sui generis* option has reportedly created more problems than solutions, and it has also proved ineffective as an instrument for addressing the protection of traditional knowledge as such." (Cottier and Panizzon 2006: 209).[4]

While the significance of traditional agricultural knowledge is evident, Brush emphasizes that one important difficulty in valuing and protecting traditional knowledge "is the disarticulation of different types of knowledge when that information is local, orally transmitted, practical, and fragmentary in distribution." (Brush 2005; 102). An additional difficulty in the study of traditional agricultural knowledge is how to link its various domains –substantive, management and organizational- discussed above (Brush 2005: 104). Such features of traditional agricultural knowledge make it difficult to identify and put a value on it.

As such, this is the context in which efforts for the protection of traditional knowledge is embedded, and as more details will be provided in the coming section, the increasing institutionalization of privatization with respect to plant genetic resources through intellectual property rights regime has created significant controversy over what the status and rights of holders of traditional knowledge will

[2] Plant breeders' rights are a hybrid form of intellectual property rights (Cullet and Raja, 2004).

[3] Agreement on Trade Related Aspects of Intellectual Property Rights, Annex 1c of the Marrakesh Agreement establishing the World Trade Organization, concluded on April 15, 1994. Available at: https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm accessed on January 20 2016.

[4] One point that should be noted is that with the Doha Declaration in 2001, the review of Article 27.3(b) of the TRIPS agreement includes discussions about the protection of traditional knowledge and folklore.

be. The next section will give an overview of the recent developments in the international realm for the governance of traditional knowledge.

2 Governing Traditional Knowledge and Justice

Recent accounts of global environmental governance have gradually come to focus on questions regarding equity and justice in relation to existing mechanisms of governance (Okereke 2008; Martin et al 2013, Suiseeya 2014). Okereke notes that

> 'International environmental regimes now have very significant distributional functions including granting access to shared common resources or the global commons, allocating property rights among states, determining and shaping the rules some aspects of international commerce, distributing the responsibilities and burdens of responses to global climate change and enabling the institutionalization of transboundary environmental rights. Furthermore, most regime texts now contain explicit (if contradictory) references to international justice' (Okereke 2008: 31).

At the same time, however, Okereke (2008: 31) importantly underlines scarcity of efforts about the substantive content of justice proposals in these frameworks and their concrete implications upon those who are affected by them. In this context, Schlosberg (2007) provides a discussion of environmental justice as comprising distribution, recognition, capabilities and procedure as mutually related multiple dimensions. In line with Schlosberg's framework, Martin (2013: 98) defines three of these dimensions as follows: 'Distributional justice concerns the principles and processes for sharing benefits and harms... Procedural justice is about who makes decisions, and how... Recognition justice is about power and respect-about whose culture and knowlege dominates or is dominated, and the social and economic structures that reproduce discrimination.' Finally, Schlosberg discusses capabilities approach to justice as comprising recognition, distribution and participation, which are viewed as components of capabilities which are inextricably linked, and drawing on Sen and Nussbaum, which are deemed 'necessary to transform goods into a good life.' (Schlosberg 2007: 34). Following Schlosberg, I will discuss the justice implications of the existing governance framework for traditional knowledge along these dimensions.

From 1980s onwards, there have been several efforts at the international level for the protection of traditional knowledge. One of the earlier instances where the importance of traditional knowledge for sustainable management of natural resources was recognized is the World Commission on Environment and Development Report: Our Common Future in 1987 (Berkes 2012: 3). Since then, in a variety of international environmental agreements, the need for the protection of traditional knowledge has been articulated. One important feature of the existing global governance framework for traditional knowledge is its decentralized nature, despite attempts (by the WIPO) to come up with a global agreement on the protection of traditional knowledge. The contentious nature of the issue is reflected in the ongoing debates within WIPO, which very recently decided to renew the mandate of its Intergovernmental Committee on Intellectual Propety, Genetic Resources, Traditional Knowledge and Folklore (IGC) with a

> '...focus on narrowing existing gaps, with open and full engagement, including text-based negotations, with the objective of reaching an agreement on an international legal instrument(s), without pre-judging the nature of the outcome(s), relating to intellectual property which will ensure the balanced and effective protection of genetic resources (GRs) traditional knowledge (TK), and traditional cultural expressions (TCEs).'[5]

The following section will focus on the governance mechanisms envisaged in three international instruments, namely, the CBD, the ITPGRFA and the WIPO which have been important in their recognition of traditional knowledge and proposals for its protection.

[5] WIPO 55th Session, October 5-14, 2015, Agenda Item 17. Available at http://www.wipo.int/export/sites/www/tk/en/igc/pdf/igc_mandate_1617.pdf , accessed on January 6, 2016.

3 The Convention on Biological Diversity (CBD)

The Convention on Biological Diversity (CBD) was opened to signature at the 1992 United Nations Conference on Environment and Development. The objectives of the CBD are the protection of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits that arise out of the utilization of these resources. Specifically with respect to traditional knowledge, article 8(j) of the CBD states that

> "As far as possible and where appropriate: subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".[6]

In this framing, while the significance of traditional knowledge is recognized, its protection is mainly left to states with broad flexibility in terms of how they would choose to 'preserve and maintain' traditional knowledge. Additionally, in conformity with the objectives of the CBD, which includes the fair and equitable sharing of benefits arising out of the use of genetic resources, the states will promote the application of traditional knowledge and the equitable sharing of benefits which accrue from its use.

Following the coming into force of the CBD, the Conference of the Parties (COP) meetings have been the venue for further elaborations about more concrete measures for the protection of traditional knowledge. In the third COP meeting in 1996, a decision on Article 8(j) was drafted stating the need to 'develop national legislation and corresponding strategies for the implementation of Article 8(j) in consultation particularly with representatives of their indigenous and local communities' (Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity, quoted in Dutfield, 2001: 262). In 1998, at the fourth Conference of the Parties meeting, a decision about making intellectual property related provisions of Article 8(j) and provisions of international intellectual property agreements mutually supportive was undertaken (Dutfield, 2001: 262). In this meeting, it was also decided to set up a Working Group focusing on the implementation of Article 8(j).

Following that, in 2000, the fifth Conference of the Parties meeting adopted a decision to endorse the programme of work on the implementation of Article 8(j). The objective of the programme of work is stated as: '...to promote within the framework of the Convention a *just* implementation of the Article 8 (j) and related provisions...., to ensure the *full and effective participation* of local and indigenous communities in all levels and stages of its implementation'[7]; with the principle that traditional knowledge should be given value and the same respect as other forms of knowledge. Accordingly, one element of the programme of work puts forward that parties should develop mechanisms to improve the capabilities of local and indigenous communities to participate in decision making processes related to the use of their traditional knowledge.

Concrete outcomes of Article 8(j) include the development of the Akwé:Kon Voluntary Guidelines for cultural, environmental and social impact assessment of developments which could have an impact on

[6] Convention on Biological Diversity. 1992. New York: United Nations.

[7] Convention on Biological Diversity. Programme of Work on the Implementation of Article 8 (j) and related provisions of the Convention on Biological Diversity. Decision V/16. Available at http://www.cbd.int/traditional/pow.shtml, emphasis added, accessed on January 18, 2016.

the sacred sites or land of local or indigenous communities.[8] Another crucial development is, after contentious negotations for years, the adoption of the Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from the Utilization of Genetic Resources (Nagoya Protocol), which entered into force in 2014. Nagoya Protocol is crucial because of its explicit reference to traditional knowledge as related to genetic resources (Tvedt and Schei 2014: 24). On access to traditional knowledge, Article 7 of the Protocol establishes that:

> In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.[9]

Chennells notes that importantly, the Protocol '...provides a binding Treaty framework promising benefit sharing not only to provider countries but also to the indigenous and local communities situated in such countries that are holders of TK and who are associated with genetic resources being provided.' (Chennells 2013: 166). At the same time, the accounts of the Protocol are widely different: In the words of Suiseeya, for example, 'The CBD secretariat characterized the agreement as "historic," emphasizing its balance of access and benefits, while also accounting for the role of traditional knowledge. Yet others have called the Nagoya Protocol as "a masterpiece of creative ambiguities," suggesting that it does little to address the justice concerns of ILCs.'[10] (Suiseeya 2014: 103).

The CBD establishes that '...conditions for access and sharing of benefits must be established between countries providing and using genetic resources and associated traditional knowledge, through bilateral contracts and on a case-by-case basis.' (Santilli 2012: 115). One point which should be noted is that the CBD establishes a system of conservation in essence focusing on wild biodiversity, hence, there have been questions about its applicability to governing cultivated biodiversity and related traditional agricultural knowledge, which appear to be limited. This is mainly because of the nature of crop genetic resources, the processes that maintain them, and traditional agricultural knowledge (Brush 2007; Santilli 2012). In this regard, a crucial question that Santilli (2012: 117) asks is: 'How can farmers, used to sharing and promoting exchange of genetic materials, knowledge, and agricultural experiences through social networks and regulated by local norms, define to whom these resources belong?' Santilli (2012: 117) further summarizes this problematic nature of the CBD succinctly as follows:

> 'Although the CBD does not exactly establish an 'owner' of genetic resources and associated traditional knowledge, its principles-prior informed consent and benefit-sharing with countries of origin and local communities-are based on the assumption that there are 'providers' and 'recipients' (or users) of genetic resources, and that they must establish, contractually, the conditions for access and benefit sharing (ABS). Genetic resources and traditional knowledge end up becoming commodities or merchandise, negotiated at 'market prices' which goes against the collective logic of how these resources and knowledge are generated and shared by local communities.'

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[8] Secretariat of the Convention on Biological Diversity. 2004. Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment Regarding Developments Proposed to take place on, or which are likely to Impact on Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities. Montreal. (25p). CBD Guidelines Series. Available at https://www.cbd.int/doc/publications/akwe-brochure-en.pdf accessed on January 18, 2016.

[9] Secretariat of the Convention on Biological Diversity. 2011. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of the Benefits Arising From Their Utilization to the Convention on Biological Diversity. Available at https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf accessed on January 13, 2016.

[10] ILCs refer to indigenous and local communities.

As evident from the above discussion, the current framework provided by the CBD for the protection of traditional knowledge emphasize the significance of traditional knowledge as related to equitable access and benefit sharing.

What do these show in terms of the justice implications of the CBD for traditional agricultural knowledge holders? The first point is that the CBD has been very important in terms of its explicit *recognition* of traditional knowledge and holders of traditional knowledge, and its emphasis on the *participation* of indigenous and local communities in decision making processes with respect to traditional knowledge and implementation, two crucial aspects of environmental justice that Schlosberg proposes. However, Long Martello argues that similar to other arrangements for the protection of traditional knowledge, in the CBD as well, the acceptance of holders of traditional knowledge as political actors could be possible by recognizing traditional knowledge as 'a resource', and 'a valuable commodity' (Long Martello 2001: 133). One can argue that this recognition of holders of traditional knowledge and traditional knowledge itself is qualified only with acquiescence by the local and indigenous communities of their particular role/position in the provision of this commodity. In this regard, Suiseeya's discussion of the negotiation process for the Nagoya Protocol provides important insights: Suiseeya (2014: 108, Table 1) notes that as one of the core negotiation points of the Nagoya Protocol, traditional knowledge related justice concerns in relation to ILCs included 'justice as recognition and distributional justice between ILCs, providers and users.' Throughout the negotiation process, a significant part of the debate was on existing instruments of justice rather than an engagement over the meaning of justice (Suiseeya 2014). For example, in relation to prior informed consent (PIC), which is '...the CBD's main instrument for justice as recognition and inclusion,' there was very limited debate over what in essence justice as recognition entails (Suiseeya 2014: 111).

In terms of participation, the CBD is viewed as an exemplary case in providing institutionalized channels for the participation of local and indigenous communities. However, even in this framework, for example, Suiseeya notes that during the negotiations for the Nagoya Protocol, ILC arguments for procedural justice stood out contesting the '...norms of inclusion as presence without influence or representation.' (Suiseeya 2014: 111). This is important since a mere presence or inclusion in the negotiation process does not necessarily entail impact over decision making. This problem becomes all the more complicated at the national level, as the CBD leaves ample room for states to negotiate with local and indigenous communities how to protect traditional knowledge and recognize holders of traditional knowledge, particularly in the context of asymmetric power relations between the state and local and indigenous communities.

On the other hand, the CBD has been at the forefront of the discussions about distributive justice, as its third objective about fair and equitable sharing of benefits is regarded as a model case of integrating equity concerns within an international environmental regime. However, there are again certain complications with regard to this aspect of justice as articulated in the CBD. Firstly, benefit sharing is largely viewed as linked to the commercial use of traditional knowledge (Swiderska 2011: 331). We see the continuation of this understanding in the process leading to the Nagoya Protocol: as Suiseeya discussess in terms of the ILC viewpoint in the context of the demands for distributive equity, that there was no debate over the 'meaning' of justice in benefit sharing, instead centering on '...instruments for benefits sharing based on a justice in exchange concept,' which is how it is framed in the CBD. (Suiseeya 2014: 109). Martin et al importantly underline how the framework offered by the Nagoya protocol

> '...seeks to limit potential distributional injustice arising from the disproportionate flows of benefits from genetic resources from South to North....By recognizing 'traditional knowledge', ABS agreements attempt to ameliorate the effects of past extraction. However, as Robinson (2010) shows through analyzing disputes on benefit flows around Thai rice genetic resources, policy around ABS tends to impose a single understanding of 'biodiversity', 'property', or 'traditional knowledge'.' (Martin et al 2013: 126).

Relatedly, in his discussion of the access and benefit sharing mechanism, De Jonge notes a variety of principles that are part of the debate: 'The principles of entitlement and desert are based on the sharing of benefits with those that have specific claims based upon the rights they hold or particular contributions they have made.' (De Jonge 2013: 248). When the focus is merely on *compensation*, then these principles come to the forefront. However, De Jonge aptly observes the problematic nature of this limited focus particularly for traditional knowledge as related to farming communities who contribute to maintenance of agricultural biodiversity:

> 'Looking at the principle of entitlement in this context, it appears that intellectual property rights would be the best instrument to protect one's traditional knowledge and to demand compensation for its use. Yet, in contrast to the knowledge that is developed by companies, universities and research centers, traditional knowledge holders cannot normally protect their knowledge through such rights...Also with respect to the principle of desert, the difficulty is again to decide and quantify who gets what share of the benefits if the knowledge is shared among communities, or even among different members within one community.' (De Jonge 2013: 249).

When it comes to the capabilities dimension of environmental justice which at the same time comprises all other dimensions, the issue is about provision of '...the basic needs and functioning of individuals and communities.' (Schlosberg 2013: 40). In this context, the question is whether the CBD with its mechanisms for the protection of traditional knowledge indeed paves the way for the capabilities of the holders of traditional agricultural knowledge to meet their basic needs, maintain and develop their livelihoods based on terms of their own choice and control over productive resources. Given the problems discussed above, there are significant limitations in the framework offered by the CBD and the related Protocol as to provide for the capability approach to environmental justice, mainly because the overall framework is reflective of a particular understanding of traditional knowledge as a commodity, which inevitably forces a division of knowledge from the very context it is produced, maintained and accumulated.

4 World Intellectual Property Organization (WIPO)

In addition to the CBD, the World Intellectual Property Organization (WIPO) is another venue where issues relating to traditional knowledge has been on the agenda since the 1980s. WIPO's approach to protection of traditional knowledge is noted as: '...the use of IP tools and principles to prevent unauthorized or inappropriate uses of TK/TCEs by third parties.'[11] Blakeney notes that in 1998-1999, responding to the demand of indigenous peoples' organizations for a global convention on the protection of traditional knowledge, WIPO engaged in a number of regional fact-finding missions, including Australia, Peru, South Africa, Thailand and Trinidad and Tobago (Blakeney 2009: 129). The missions were "on traditional knowledge, innovations and culture to investigate the needs and expectations of TK holders, bearing in mind the possible use of existing IPRs to protect their knowledge, innovations and culture." (Dutfield 2001: 268). Following that, the Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Folklore (IGC) was established in 2000. The work of IGC includes efforts towards the creation of an international agreement on the protection of traditional knowledge.

The WIPO breaks issues relating to intellectual property rights and traditional knowledge into two categories: one is *defensive protection* of traditional knowledge, which is to "...prevent the illegitimate acquisition or maintaining IP rights by third parties. Stated otherwise, defensive protection aims to

[11] World Intellectual Property Organization. 2015. Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions: Overview. , p.20. Here, IP refers to intellectual property, TK refers to traditional knowledge, and TCEs refer to traditional cultural expressions. Available at: http://www.wipo.int/edocs/pubdocs/en/tk/933/wipo_pub_933.pdf, accessed on January 18, 2016.

stop people outside the community from acquiring IP rights over TK and TCEs."[12] Such defensive protection mechanisms that were considered by the IGC include "the question of the recognition of orally disclosed TK; measures for improving the documentation of genetic resources and TK for use in patent procedures; and methods for improving the understanding of innovations within TK systems for the purposes patent search and examination." (Blakeney 2009: 130). The second category includes *positive protection* of TK, which is about "...granting of rights that empower communities to promote their TK/TCEs, control their uses by third parties and benefit from their commercial exploitation."[13] These could include *sui generis* legislation developed at the national level by some countries to protect TK. In relation to this, Cottier and Panizzon state that efforts by WIPO include designation of model laws, and the establishment of databases to assist national legislative processes for the protection of traditional knowledge (Cottier and Panizzon 2006: 210). WIPO has also put forward certain criteria for a national *sui generis* system, which suggests "first seeing how existing national mechanisms of intellectual property can be more effectively used to protect TK before introducing protection at the international level." (Cottier and Panizzon 2006: 214). Additionally, the IGC has elaborated the development of Intellectual Property Guidelines for Access and Benefit Sharing Contracts (Blakeney 2009: 130).

Given its mandate, WIPO considers issues on the protection of traditional knowledge as to how it relates to the existing intellectual property regime, and how traditional knowledge could be situated within this regulatory framework. Interestingly, Drahos notes that "One of the WIPO's early conclusions was that intellectual property can protect some items of TK, but at some point 'existing IP mechanisms cannot fully respond to the characteristics of certain forms of traditional knowledge, namely, their holistic nature, collective origination and oral transmission and preservation.' " (WIPO, 2001, p.216, quoted in Drahos, 2011: 234). Yet, despite this acknowledgement, and that the recognition of customary laws is one of the issues debated at the WIPO which could provide an alternative to the intellectual property rights regime, Swiderska argues that there is an emphasis to ensure that the measures for the protection of traditional knowledge to be in conformity with the current intellectual property rights protection, "which largely separate traditional knowledge from the cultural and spiritual values that establish its collective ownership (Swiderska 2011: 336).

In terms of the justice implications of WIPO with regard to the governance of traditional knowledge, its very *recognition* of TK and TK holders is a crucial aspect of the WIPO's framework. At the same time, through fact-finding missions and other mechanisms, the participation and empowerment of local and indigenous communities is viewed as an important component of WIPO's efforts. However, Noble pertinently notes the following:

> '...WIPO's sense of justice is tethered to participation based principally on consenting to engage in liberalizing discourses of property. As such, it is IP participation—and its attendant instruments of translation—that are crucial in animating WIPO's justice: the promise that through dialogue and participation with the system, its presumed benefits and protections may be distributed more equitably, more justly, so to speak.' (Noble 2007: 344).

In this context, one can argue that the dimensions of environmental justice: recognition, participation, distribution and capabilities as manifested in WIPO's framework are indeed conditional upon acceptance by the holders of traditional knowledge of intellectual property rights as the major frame within which articulations of TK is possible. Importantly, Dutfield and Suthersanen argue, the actual holders of traditional knowledge and their representatives

> "have serious concerns that WIPO's mandate to promote intellectual property conflicts with their wish to roll back intellectual property regimes they find intrusive, and that the intellectual property focus of discussion on traditional knowledge, inevitable perhaps for

[12] Ibid, p. 22.
[13] Ibid., p.22.

such an organization, is too constraining since it reduces a highly complex issue to the technicalities of the formal intellectual property rights of patents, copyrights, trademarks, trade secrets, and geographical indications." (Dutfield and Suthersanen 2008: 343).

5 The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

With regard to plant genetic resources for food and agriculture, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is the most important international agreement setting up the framework for the regulation of these resources and related traditional knowledge. It entered into force in 2004, establishing a *multilateral system for access and benefit sharing*, applying to certain crops and forages. In accordance with the CBD, the ITPGRFA recognizes the sovereign rights of states over their genetic resources.

In relation to traditional knowledge, the concept of "farmers' rights" as finalized in the Treaty is crucial. Farmers' rights became a focal point throughout the process of the negotiations for the ITPGRFA, as it stands at the very center of controversy crystallized with institutionalization of plant breeders rights (PBRs) as a form of intellectual property right. In relation to farmers' rights, Article 9.1 of the Treaty recognizes the

> "enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in centres of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world".[14]

Santilli notes that 'The ITPGRFA, in its Article 9, also protects farmers' rights to traditional knowledge relevant to the PGRFA, which includes innovations, practices and knowledge related to seeds and agricultural systems.' (Santilli 2012: 215). Article 9.2 of the Treaty gives governments the responsibility for implementing farmers' rights, which include the protection of traditional knowledge, and the right to participate equitably in benefit sharing and in national decision making about plant genetic resources.

Blakeney underlines that one of the assumptions of Article 9 of the ITPGRFA "is that the landraces used by traditional farmers are a dynamic genetic reservoir for the development of new varieties and for the transmission of desirable genetic traits. The TK of local and indigenous communities is similarly perceived." (Blakeney, 2009: 125). Blakeney also notes that the issue of farmers' rights is framed in terms of equitable sharing of benefits with farmers who conserve crop genetic resources and thus contribute to innovations in plant breeding, and that "Inevitably, any calculation of the equitable share, which traditional farmers and indigenous communities might enjoy under a Farmers' Rights or Traditional Knowledge regime, will be arbitrary." (Blakeney, 2009: 125).

As Brush notes, claims of rights by one community is open to challenge from other communities because of continous seed flow and exchange between communities, which may lead to significant problems including arbitrary allocation of these rights (Brush, 2007: 1508-1509). At the same time: "Defining knowledge rather than genetic resources as the subject matter of Farmers' Rights is problematic because farmers' knowledge is local, widely shared, changeable, and orally transmitted" (Brush, 2007: 1509). In parallel, Borowiak (2004: 528) argues that the campaign for farmers' rights in a more general sense has tried to generate a new type of right that "finds *purchase within the discourse on property*." While this form of right have been important for the recognition of farmers, in practice, "It is unclear what the subject matter of the rights are, who holds the rights, what particular actions are being demanded of whom, and who is responsible for enforcement." (Borowiak, 2004: 529).

[14] FAO 2009. The International Treaty on Plant Genetic Resources for Food and Agriculture. Available at ftp://ftp.fao.org/docrep/fao/011/i0510e/i0510e.pdf accessed on January 20, 2016.

These points are crucial in terms of delineating the distributive justice implications of farmers' rights. While the international *recognition* of farmers' rights, their contributions to a crucial public good and their traditional agricultural knowledge is of utmost importance, as the discussion above illustrates, equitable benefit sharing as the mechanism by which *distributive justice* will be realized is prone to several challenges. At the same time, it is not clear whether/how governments will provide the responsibility of implementing farmers' rights, which comprise the protection of traditional knowledge. Many NGOs viewed the International Treaty as a mechanism that transfers responsibility for the implementation of these rights from the FAO to national governments, yet not able to pose a real challenge intellectual property rights regimes and trade and environmental policies that threaten genetic diversity (Zerbe, 2007).

In terms of participatory dimension of justice, in their discussion of how small farmers view the ITPGRFA, Pelegrina and Salazar (2011: 176) make an important observation that relatively small number of farmers and their organizations attended the meetings of the Governing Body despite invitations, though the numbers are gradually increasing. One important point the authors emphasize is the following: 'Farmers, from local and national organizations in developing countries, who participated in the Governing Body meetings often wonder whether their presence mattered, as they can not follow the discussions nor find that their interventions were heard.'(Pelegrina and Salazar 2011: 176). This crucial point about *participation and justice* can be viewed as a recurring theme throughout the international mechanisms that comprises protection of traditional knowledge discussed above, mainly that mere presence does not always involve a genuine and equal inclusion of those groups who will be most affected by the decision that will be undertaken. Even in the CBD, we have seen that this was a point of contention from ILC participants.

Hence, while a crucial attempt at creating a regime for the recognition of the rights of local communities of farmers conserving genetic resources and their traditional agricultural knowledge, there are certain limits of the approach offered by the ITPGRFA for the protection of TK in terms of its justice implications. That said, one point that should be underlined is that the multilateral approach of ABS embraced by the ITPGRFA is much more appropriate in comparison to the bilateral approach of the CBD. Particularly important from a capabilities approach to justice is the question of whether benefit sharing as embraced by the ITPGRFA that is to be derived from the commercialization of plant varieties can provide a positive componentas follows:

> 'These benefits are to be deposited into an appropriate mechanism, such as a Trust Account, which the Governing Body can utilize to implement the ITPGRFA. Such funds could be used not only to compensate identifiable TAK holders but also to subsidize traditional farming practices that contribute genetic resources to the Multilateral System, thus ameliorating the problem of defining and identifying specific TAK holders.' (Guerin-McManus, Nnadozie and Laird 2002, pp. 333-359, cited in McManis and Teran 2011: 165).

Inasmuch as this sounds promising, there are important caveats: First, as Brush importantly underlines, there are problems stemming from both '..the long lag time between access to genetic resources and commercialization,' and '...identifying the contribution of a specific resource within the complex pedigree of an improved crop variety...' (Brush 2005: 83). Secondly, Brush notes that the envisioned fund within ITPGRFA is based on benefit sharing from the commercialization of improved varieties, however, that the building of capabilities of farmers to continue the stewardship of crop genetic resources and associated traditional agricultural knowledge should be based on'...traditional transfer of international capital: development assistance focused on programs to improve rural incomes in Vavilov Centers.' (Brush 2005: 109). This can be one but crucial aspect of the governance of traditional knowledge from a capabilities approach to justice, as it recognizes on the one hand the significance of traditional knowledge holders and at the same time puts forward the obligation on the part of the international community for the provision of conditions that can enable traditional knowledge holders to meet their basic needs and continue their stewardship of crop genetic resources and traditional agricultural knowledge.

After this discussion of the three global mechanisms that include protection of traditional knowledge as part of their framework, in the following section, I will focus on the food sovereignty movement and their framing of traditional knowledge and how this relates to the debate on justice and governance.

6 Alternative conceptualizations of justice as related to traditional knowledge

La Via Campesina is a transnational agrarian movement epitomizing the food sovereignty movement. The call for food sovereignty, defined by la Via Campesina as:

> 'The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations ... Food sovereignty prioritises local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal - fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability. Food sovereignty promotes transparent trade that guarantees just income to all peoples and the rights of consumers to control their food and nutrition... It ensures that the rights to use and manage lands, territories, waters, seeds, livestock and biodiversity are in hands of those who produce food.'[15]

entails an overarching critique of the existing global governance of agriculture. The model of agriculture endorsed by food sovereignty movement crucially brings traditional knowledge at the core of agricultural practices. The idea embedded in this framework is not a romantic idealization of traditional agriculture which completely rejects scientific knowledge and modern technologies: rather, as Desmarais (2002: 101-102) observes, the framework offered by La Via Campesina '...entails recapturing aspects of 'traditional' or 'local' knowledge combining it with new technology when and where it is appropriate to do so.' Relatedly, Martinez-Torres and Rosset (2010: 168) underline that as opposed to industrial farming, the food sovereignty framework foresees a '...mixture of traditional knowledge and sustainable agro-ecologically based-farming practices.' An important point here is the recognition of the importance of traditional knowledge as part of the peasant identity, and restoring the respectable status of traditional knowledge on par with scientific knowledge. For example, the Sustainable Peasant Agriculture Commission of La Via Campesina in 2009 noted that:

> '...Peasant based sustainable production is socially just, respects the identity and knowledge of communities...This peasant agriculture is dynamic, integrates innovations, and is based on a blend of traditional and modern knowledge and agroecological technology...It sees peoples, indigenous and traditional knowledge and experiences as key to the development of this model of production.' (La Via Campesina 2013:).[16]

Martinez-Torres and Rosset (2014: 987) note that the commission stated a revised version this vision after '...a lot of political debate and DS[17] between different (cosmo)visions.' In this revised version the commission notes the following on agroecology, which has become a common framework of the movement that challenges the dominant model of agricultural production that relies on extensive use of chemical inputs to increase productivity:

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[15] La Via Campesina 2007. Declaration of Nyeleni. Available at http://viacampesina.org/en/index.php/main-issues-mainmenu-27/food-sovereignty-and-trade-mainmenu-38/262-declaration-of-nyi, Accessed on January 13, 2016.

[16] La Via Campesina 2013. From Maputo to Jakarta: 5 years of agroecology in La Via Campesina. Available from: http://futureoffood.org/pdfs/LVC_2013_From_Maputo_to_Jakarta.pdf Accessed on January 13, 2016.

[17] DS refers to dialogo de saberes, which Martinez-Torres and Rosset translate as: 'dialog among different knowledges and ways of knowing.' (Martinez-Torres and Rosset 2014: 980).

> '...We believe that the origin of agroecology lies in the accumulated knowledge and wisdom of rural peoples, organized in a dialog among different kinds of knowledge ("dialogo de saberes") to produce the "science," movement and practice of agroecology.' (La Via Campesina 2013: 70).

Indeed, Martinez-Torres and Rosset argue that the very endurance of La Via Campesina as a movement which comprises 'immense diversity' within has been possible because of the process of dialogo de saberes: 'It is a process whereby different visions and cosmovisions are shared on a horizontal equal-footing basis. Part of it can be thought of a peasant/indigenous way of solving or avoiding conflicts, because there isn't one knowledge to be imposed on others.' (Martinez-Torres and Rosset 2014: 980). The vision of agroecology and the way it was brought into articulation within the movement is reflexive of the process of dialogo de saberes (Martinez-Torres and Rosset 2014). In the words of Holt-Gimenez and Altieri, agroecology is '...knowledge intensive (rather than capital intensive), tends toward small, highly diversified farms, and emphasizes the ability of local communities to generate and scale up innovations through farmer-to-farmer research and extension approaches.' (Holt-Gimenez 2006, quoted in Holt-Gimenez and Altieri 2013: 92). In terms of how the vision of agroecology is concretized, Martinez-Torres and Rosset underline these practices of campesino-a-campesino (peasant to peasant) method[18] that goes back to 1970s and which is embraced by some members of La Via Campesina (Martinez-Torres and Rosset 2014: 14).

The view of La Via Campesina on traditional knowledge is also solidly articulated in its Declaration of Rights of Peasants-Women and Men[19], *Article V The right to seeds and traditional agricultural knowledge and practice*, which states that: 'Peasants (women and men) have the right to conserve and develop their local knowledge in agriculture, fishing, livestock rearing', and that 'Peasants-women and men have the right to use their on technology or the technology they choose guided by the principle of protecting human health and environmental conservation.'[20] In terms of its relation to farmers' rights, one point that should be underlined is that peasants' rights framework, while incorporating farmers' rights, '...is not limited to, farmers' rights over crop genetic resources; it encompasses a much broader range of rights, such as the right to life and an adequate standard of living, land, freedom of association and access to justice.' (Peschard 2014: 1086). La Via Campesina, in their critique of the ITPGRFA argues that despite the existence of the Treaty, many of the countries which have signed the Treaty do not implement farmers' rights, in its stead, they have institutionalized intellectual property rights on seeds.[21]

The vision of the movement including its embracing of agroecology, as well as its definition of peasant's rights puts traditional knowledge at the center of agricultural production process, and is an

[18] Martinez-Torres and Rosset define campesino a campesino as '...a social process methodology, that is based on farmer promoters who have innovated new solutions to problems that are common among many farmers or have recovered/rediscovered older traditional solutions, and who use their farms as their classrooms to share them with their peers.' (Martinez-Torres and Rosset 2014: 992).

[19] In October 2015, the United Nations Human Rights Council decided that the intergovernmental working group, mandated to finalize and submit to the Council a draft UN declaration on the rights of peasants and other people working in rural areas, to continue its work for the next two years. See La Via Campesina 2015. Victory of the Peasants' Movement in the struggle for the recognition of their rights within the UN. Available at: http://viacampesina.org/en/index.php/main-issues-mainmenu-27/human-rights-mainmenu-40/peasants-right-resources/1873-victory-of-the-peasants-movement-in-the-struggle-for-the-recognition-of-their-rights-within-the-un Accessed on January 13, 2014.

[20] La Via Campesina 2009. Declaration of Rights of Peasants-Women and Men. Available at: http://viacampesina.net/downloads/PDF/EN-3.pdf Accessed on January 11, 2016.

[21] La Via Campesina, 2009. Seed Treaty: La Via Campesina Declaration. Available at: http://viacampesina.org/en/index.php/main-issues-mainmenu-27/biodiversity-and-genetic-resources-mainmenu-37/709-seed-treaty-la-via-campesina-declaration Accessed on January 11, 2016.

essential element of the overall demands for food sovereignty. This vision at the same time is inextricably linked to justice, which is a fundamental component of the discourse on food sovereignty. This is visible not only in the peasants' rights framework of La Via Campesina, but acutely evident in several calls of the movement, including their very recent call in the wake of the negotiations for the UNFCCC's (United Nations Framework Convention on Climate Change) COP 21:

> '…we in La Vía Campesina declare once again that Food Sovereignty – based on peasant agroecology, traditional knowledge, selecting, saving and sharing local adoptive seeds, and control over our lands, biodiversity, waters, and territories – is a true, viable, and just solution to a global climate crisis caused largely by TNCs. To implement Food Sovereignty, however, we need far-reaching change. Among other things, we need comprehensive agrarian reforms, public procurement of peasant production, and an end to destructive free trade agreements (FTA's) promoted by TNCs. In short, *we need justice – social, economic, political, and climate justice*.'[22]

Food sovereignty movement proposes a framework in which peasants, as holders of traditional knowledge are duly recognized, with demands for meaningful participation by the peasants in the decision-making processes that have a direct impact upon their livelihoods at various levels of polity, including international, national and local. Perhaps most importantly, from a capabilities approach to justice as endorsed by Schlosberg, this is the framework which places the ability of peasants to maintain their control over productive resources in agricultural production at its center, that focuses on the production process as chosen by peasants, meeting their basic needs and maintaining the livelihoods of their own choice. Hence, the focus on traditional knowledge here is not an instrumental one, it is part of the definition of a peasant identity, and of agricultural production that is socially, ecologically and economically just. As such, the food sovereignty movement offers a promising approach to the governance of traditional knowledge within a holistic framework that does not separate traditional knowledge from the very context that it nourishes and is developed, and within these demands the interrelated dimensions of environmental justice are manifested in a coherent manner.

Conclusion

In essence, as the above analysis shows, there are a number of different international instruments addressing the protection of traditional knowledge, representing a decentralized governance framework, and they have very importantly provided for the recognition of traditional knowledge at the international level. However, a closer evaluation of these frameworks for the protection of traditional knowledge shows that these are mainly embedded in the existing intellectual property rights regime. Hence, many of these efforts are trying to find how mechanisms of intellectual property could protect traditional knowledge, with the ultimate objective of regulating traditional knowledge in a way that does not run counter to the global regime created through the TRIPS agreement.

This framing of the governance of traditional knowledge is problematic in terms of the justice implications it entails. Firstly, we have seen that while the *recognition* aspect of environmental justice is strongly present in three of the mechanisms discussed above, this recognition cannot be comprehended as separate from distributive and participatory dimensions of justice. Yet, as traditional knowledge is understood in a particular way that is strongly linked to its commercialization, and as embedded within the broader IPR regime, the distributive aspects of justice as manifested in the three mechanisms suffer since the very nature of traditional knowledge simply does not fit into this framework, hence leading to complications and inequities at multiple levels of polity. At the same

[22] La Via Campesina, 2015. Peasant Agriculture is a True Solution to the Climate Crisis. Available at: http://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/-climate-change-and-agrofuels-mainmenu-75/1853-peasant-agriculture-is-a-true-solution-to-the-climate-crisis Accessed on January 11, 2016. (emphasis added)

time, the recognition of and participation by local and indigenous communities as holders of traditional knowledge in decision-making process becomes conditional upon their consent to this overarching framework without an ability to question it. What is more is that even in mechanisms such as the CBD where participation by local and indigenous communities are more institutionalized, there are questions about whether the interventions of these groups are actually integrated into issues discussed and decisions undertaken. Finally, from a capabilities approach to justice, the way traditional knowledge is in essence instrumentalized in order to be recognized, is detrimental to the very capabilities of holders of traditional knowledge to continue their livelihoods and practices. This is mainly because traditional knowledge as such is divorced from the context in which it nourishes.

In this regard, particularly in terms of crop genetic resources and traditional agricultural knowledge, one important point that should be underlined is that "both crops and the knowledge systems are dynamic", and "...it is erroneous to imagine that traditional agricultural knowledge can be preserved as a given inventory of information, nomenclature, or local understandings of crops and crop ecology." (Brush, 2005: 106). As such, protection of traditional agricultural knowledge should aim at preserving the very *context* of the practices that enable the evolution and conservation of genetic resources, rather than diversity or the knowledge *per se* (Brush, 2005: 106-107). This necessitates that the direction of the efforts at the international level should be to provide for the local communities the capability to continue their practices of crop genetic resource conservation and enable the continuity of flow and accumulation of traditional agricultural knowledge. This point becomes all the more crucial as it directly links to a justice as capabilities approach. Only by integrating the multiple dimensions of justice, namely, recognition, participation and distribution and how these work together bringing about the capability of individuals and communities to '...transform goods into a good life.' (Schlosberg 2007: 34), it becomes possible to protect traditional agricultural knowledge. In this regard, La Via Campesina's framing of peasant identity, traditional agricultural knowledge, and demands for the institutionalization of mechanisms that enable the participation of peasants in decision making process at all levels of polity, from the local national to the global, and for distributive justice provides a crucial framework in terms of a capability approach to environmental justice.

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