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TRADING KNOWLEDGE IN A GLOBAL INFORMATION SOCIETY

The Southern Dimension of TRIPS and GATS

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**Global Wordings and Local Meanings: The Regulation
of Traditional Knowledge in India and Brazil**

Introduction¹

In many countries, most notably in the southern hemisphere, indigenous groups and traditional communities live in close interaction with their natural environment. Based on centuries-old experiences, they have learned how to make use of local animals and plants in order to cope with their daily needs. In many cases, their experiences are embedded in a context of complex socio-cultural practices that are closely associated with cosmological, epistemological, and transcendental convictions. Customary laws regulate the access, transmission, and diffusion of knowledge within the communities (Gudeman 1996; Rao 2006). In some cases, local communities try to keep certain elements of their knowledge secret, since they consider it to be sacred and thus inalienable (Interview 186). In other cases, they refuse to allow a commercial exploitation of their knowledge because of its spiritual significance (Malayali 2009). Generally, indigenous and local communities insist on their right to decide by themselves and by their own rules the conditions under which, if at all, they are willing to disclose their knowledge.

During the last 30 years, ‘traditional knowledge’² has aroused the attention of scientists, corporations, and environmental groups. Both scientists from public research institutions and corporate actors from the life sciences and agriculture industry perceive traditional knowledge as a means with which to accelerate their research into new drugs and farming methods (Dutfield 2011; Pandikumar et al. 2011). More recently, environmental non-governmental organisations have started to make use of indigenous knowledge for climate protection schemes like the Clean Develop-

ment Mechanism (CDM) or Reducing Emissions from Deforestation and Degradation (REDD) programmes (Debbarma 2006). Their varying motivations notwithstanding, most external actors only perceive traditional knowledge as useful raw material for their own purposes, tending to ignore its socio-cultural ramifications and disregarding the customary rights of the affected communities (Agrawal 2002).

Within multiple international forums, negotiators from emerging and industrialised countries, industry representatives, scientists, civil society actors, and indigenous groups try to come to a common understanding on mutually acceptable standards for bio-explorations and related activities. Although there is no single international treaty that exclusively deals with traditional knowledge, many agreements, conventions and resolutions touch upon this issue. However, the international “regime complex” (Raustiala/Victor 2004) contains many ambivalent, inconsistent and even outright contradictory prescriptions, which leaves some room for interpretation during the course of domestic implementation.

This paper addresses the impact of the international regime complex on national regulatory initiatives with regard to traditional knowledge. On the domestic level, it focusses on diverging regulatory approaches in India and Brazil. The Indian eco-capitalist model prioritises economic development, scientific research, and, albeit to a lesser degree, environmental protection. Brazilian regulations in this field, in contrast, are inspired by the leitmotif of *socioambientalismo*, through which the economic and scientific exploitation of traditional knowledge is balanced with the respect for indigenous and local communities’ customary rights. The article shows that the international framework supports Indian regulations, whereas the Brazilian approach is destabilised by international commercial and intellectual property law.

The remainder is organised as follows. Section 1 focusses on the international level of traditional knowledge regulations. Section 2 and 3 describe the Indian and the Brazilian regulations with regard to their political priorities and their respective effectiveness against the backdrop of the international framework. The paper concludes with a few remarks on the preponderance of an eco-capitalist conception of knowledge that undermines alternative (traditional) ways of thinking and living.

I. Traditional knowledge in the international arena

Since the beginning of the colonial era, indigenous communities' nature-related knowledge has attracted the attention of scientists and researchers. Based on observations and interviews, explorers like Alexander von Humboldt 'discovered' new species, which were further investigated by researchers in the botanical gardens of their homelands. Botanists like Carl Linnaeus developed zoological and botanical taxonomies based on the insights of indigenous groups (Brush 1996). While this kind of unregulated knowledge transfer had largely remained undisputed, the interaction between local communities and external actors has taken centre stage of an international debate since the 1980s (Bastos 2009).

There are several reasons for an increased attention to traditional knowledge policies. Firstly, the research on biodiversity-related knowledge has dramatically intensified since the life-science and agro-industries have begun to use bio-explorations as a means to accelerate their research into new drugs and farming methods (Dutfield 2011; Pandikumar et al. 2011). Secondly, environmental groups have identified traditional knowledge as an important tool with which to preserve biodiversity. Increasingly, their conservationist activities are related to climate protection schemes like the Clean Development Mechanism (CDM) or REDD (Reducing Emissions from Deforestation and Degradation) programmes (Debbarma 2006). Thirdly, governmental actors from developing countries perceive the genetic diversity of their natural resources as an economic asset ('green gold') that has to be protected from an unremunerated extraction ('biopiracy') by foreign researchers (Dutfield 2004).

Discussions picked up pace during the course of the pre-negotiations on the Convention on Biodiversity (CBD), when developing countries' governments and non-governmental environmental groups formed an alliance in order to prevent what they perceived as an exploitation of the Global South. Whereas governmental representatives prioritised the economic value of their countries' biological resources, environmental groups focussed on the preservation of nature as an end in itself. Since they generally approved an economic utilisation of biological resources, business actors and industrialised countries abstained from an outright rejection of their claims. Instead,

they succeeded in avoiding stricter rules and enforceable standards for bio-prospecting activities (Bastos 2009: 33ff; Raustiala/Victor 2004).

The convention stipulates that biological resources and associated traditional knowledge must be regarded as property that is owned by the nation-state of its origin (Götting 2004). Indigenous local communities are conceptualised as 'knowledge holders'. Although the convention vaguely mentions their 'prior informed consent' (PIC), it focusses on the commercial exploitation of genetic resources and associated traditional knowledge. The CBD stipulates that any bio-prospection shall be subjected to 'fair and equitable access and benefit sharing' (ABS) between all stakeholders involved. The preponderance of an economic utilisation of traditional communities' knowledge is inspired by the idea that monetary compensation should serve as an incentive to preserve natural resources and to share indigenous knowledge with external actors. However, the CBD lacks any indication of how to resolve the complex technical and distributional questions which follow from these provisions. The recently agreed Nagoya Protocol, an amendment of the CBD, slightly reinforces the procedural rights of traditional and indigenous communities, but generally remains as vague as the CBD itself.

Indigenous lawyers argue that international environmental law must be read in the light of other United Nations resolutions and declarations. They often refer to the International Labor Organization (ILO) Convention No. 169. Although the convention does not directly address the regulation of traditional knowledge, it clearly supports indigenous claims for self-determination and the respect for traditional communities' customary law. In recent years, indigenous advocacy groups have won another victory on the international level. They successfully insisted that the UN Declaration of Indigenous Rights (United Nations 2007) endorse the concept of 'free, prior and informed consent' (FPIC), which also includes the right of indigenous communities to decide by themselves and by their own customary rules whether or not they want to disclose their knowledge.

However, the international recognition of traditional communities' rights remains quite weak, for several reasons. Apart from the fact that many industrialised countries did not ratify either the CBD (for instance, the US) or the ILO Convention (the case of Germany, for example), international environmental and indigenous rights treaties lack effective

enforcement mechanisms that would ensure the compliance of its signatory states. Moreover, indigenous representatives often claim that the international secretariat of the CBD supports ABS, but yet does not perceive PIC as a substantive clause that has to be recognised as a goal in itself. Whenever they call for a concretisation of PIC, the CBD secretariat, state representatives and transnational environmental groups remain noncommittal (CBD 2011). The same holds true for other international organisations and mechanisms that deal with environmental issues and climate protection, e.g. the UNFCCC or the World Bank's Forest Carbon Partnership Facility (Thompson et al. 2011; Eastwood 2011).

Even worse, traditional communities' rights are seriously undermined by international trade treaties operating under the umbrella of the World Trade Organization (WTO) and the World Intellectual Property Organization (WIPO). Of utmost importance is the Agreement on Trade-Related Intellectual Property Rights – TRIPS (WTO 1994). Due to the intensive lobbying efforts of US and European industry representatives and open threats from the US government, nearly all developing and emerging countries have signed the WTO agreement (May/Sell 2006). Although its wording does not explicitly address traditional knowledge, TRIPS stipulates that “patents shall be granted in all fields of technology” (TRIPS, Art. 27).

This does not mean that traditional knowledge is directly patentable, since it does not meet the necessary requirements. Quite to the contrary, traditional knowledge per se is excluded from patent eligibility, because it is considered not to be ‘novel’ in the sense of an individually accountable invention (Dutfield 2011). However, the TRIPS agreement stipulates a dichotomy between patented innovations which must not be imitated without the consent of the patent holder, and not-patentable technological knowledge, which is perceived as a public good and free to be used by everyone. This means that researchers can obtain patent protection for inventions that are derived from the utilisation of traditional knowledge. The treaties thus clearly favour the life sciences industries (mainly in industrialised countries) to the detriment of the Southern provider countries (Rosendal 2006).

For almost 15 years, both indigenous groups and governments from developing countries have demanded that TRIPS be amended to endorse the recognition of traditional knowledge related to biodiversity. In 2004, Brazil

forged the coalition of the 'Friends of Development' in order to advance an amendment to TRIPS that would introduce a 'disclosure requirement'. The amendment would request patent applicants to declare whether their invention is based on biological and associated knowledge resources. In the case of bio-prospecting, they would have to prove that they respected all relevant regulations in the source countries. Moreover, developing countries demand that the lack of accurate, or use of misleading, information in patent applications would lead to the revocation of a patent. While environmental groups remain on the sidelines, governmental representatives from industrialised countries strongly reject this claim. The most vociferous opponents are from the US, Germany, Great Britain and France (Interview 187), whose governments are intensively lobbied by their domestic life science industries (Interview 055, 063, 420). Under these circumstances, it appears very unlikely that a recent resolution of the European Parliament (2012) to link TRIPS with the CBD will eventually be supported by the EU Commission or the member states in the council.

All in all, it seems fair to say that the international framework of traditional knowledge regulation remains ambiguous at best. In the context of environmental treaties, traditional knowledge is predominantly perceived as a means to preserve natural resources by means of its potential economic valorisation. This perspective significantly differs from ILO and UN conventions, which stipulate the acceptance of indigenous communities' customary rights. However, both the focus on environmental protection and traditional communities' rights are in stark contrast to international commercial law, which by and large endorses the economic interests of industrialised countries and their corporations. Due to the ambivalences of the international regime complex, the specific balance between the various interests in the field of traditional knowledge policies seems to depend on the domestic implementation.

2. India: Traditional knowledge as national wealth

The Indian debate on traditional knowledge is characterised by fragments of the internationally prevailing perspectives on the one hand and a reflection of the country's colonial past on the other. Indian scientists, civil

society representatives, and corporate and political actors are convinced that traditional knowledge should be used to sustain environmental, economical, and developmental goals at the same time (Interview 138, 135, 143). The eco-capitalist perspective often goes hand in hand with post-colonial and Hindu-nationalist attitudes. India's biodiversity is regarded as a national asset that has to be protected against the intrusion of foreign 'biopirates' (Interview 131, 134). In this context, the TRIPS agreement is often portrayed as a resumption of colonial dictatorship by different means. Politicians, practitioners and academics claim that industrialised countries compel India to protect their industrial inventions from imitation while at the same time 'plundering' India's biodiversity (Shiva 2001). Under these circumstances, traditional knowledge is considered to be of national importance (Mukherjee 2004; Kaushik 2004), and its richness should be used to compete with the former colonial rulers (Dutfield 2004).

Indigenous voices are hardly ever heard in the Indian debate on traditional knowledge. Although their absence is usually explained by a lack of interest, illiteracy, and poor linguistic capacities, field research on a local level reveals that there are many members of indigenous communities and traditional healers who can and do express themselves quite clearly on traditional knowledge policies (Interview 308, 307). However, they often suffer from political repression at the hands of the local government, in the form of military operations on their territories, and of violent threats from private landlord armies. Although most indigenous groups claim the right to self-determination as regards their traditional knowledge, the major prerequisite to defend their land and life often prevents them from a more substantial involvement with what is perceived as a comparatively less important issue (Interview 308).

Due to the absence of indigenous voices, the Indian approach to traditional knowledge regulation mirrors the prevailing elite consensus. Its main focus is on the prevention of piracy (Kaushik 2004; Damodaran 2003). On the basis of the National Biodiversity Act and the Biodiversity Rules, foreign bio-prospectors must apply for a permit, if they attempt to access local communities' knowledge or to acquire intellectual property protection (e.g. patents) for inventions that are based on traditional knowledge. They have to address their request to the National Biodiversity Authority (NBA), whereas Indian bio-prospectors can directly refer to the State

Biodiversity Boards (SBBs) in order to accelerate the approval procedure (Damodaran 2003). The authorities should take into account the objections or defences of local Biodiversity Management Committees (BMCs), which are supposed to represent the interests of traditional groups at community (Panchayat) level; however, they are not required to follow their recommendations (Kaushik 2004).

Both the NBA and its subordinated administrative units are characterised by serious institutional weaknesses (Interview 133). The NBA itself is poorly staffed and ill-equipped to fulfil its tasks (Interview 137, 138, 144). So far, the authority has neither established clear standard operating procedures nor implemented any provisions against illicit bio-prospecting activities (CAG 2010). As regards the subordinated regional units, many SBBs have not been established, or only exist on paper. With the exception of Kerala, local biodiversity management committees have been only sporadically established, and their relationship to other community bodies has not been defined for the time being (Interview 141). Thus, it seems fair to say that the whole monitoring structure for bio-prospecting activities appears fragile at best.

However, at the same time, there is a vast multiplicity of initiatives to document and to catalogue biological resources and associated traditional knowledge all over the Indian subcontinent (Venkataraman/Latha 2008). The most prominent, internationally recognised project is the Traditional Knowledge Digital Library (TKDL) under the auspices of the Council of Scientific & Industrial Research (CSIR). So far, the project is focussed on written traditional knowledge that is extracted from the Hindu religious writings, but it is planned to extend the scope of the TKDL to oral traditions. Apart from the TKDL, many non-governmental organisations, corporations, and hybrid entities are involved with documentation activities on a local scale. In some cases, the projects are financed by international organisations (e.g., The World Bank), foreign development organizations, or transnational environmental groups (Interview 138, 144, 146).

Generally, the legal status of the various documentations and databases remains unclear at the current time (Misra 2007). Whether traditional communities' preferences and their customary laws are acknowledged or not, depends on the concept of the various documentation initiatives. Many non-governmental organisations, the activities of which are infor-

mally sponsored by state authorities and/or corporations, completely ignore the CBD requirements of prior informed consent and deny any substantial benefit-sharing (Sharma 2006; Interview 122, 141). Some transnational environmental groups perceive the consent of indigenous communities as an unnecessary burden because of the supposedly superior importance of their preservationist goals (Interview 144, 337). Even in those projects which are financed by international organisations, there is often no safeguard mechanism to ensure that indigenous claims are seriously taken into account (Interview 317).

Nevertheless, the various documentation projects enjoy the support of most stakeholders, because they serve several purposes at the same time. Firstly, from the perspective of environmental groups, the documentations are an opportunity to gather relevant data in respect of preservation priorities and climate protection programmes. In some cases, they can also sell the acquired knowledge to Indian or international corporations in order to finance their preservation projects (Interview 144). Secondly, the collected knowledge may serve the development of local villagers (Gupta et al. 2003), a process which is mainly approved by those public servants who attempt to modernise the rural society by integrating its population into the Indian economy.

Thirdly, and most importantly, the collected data serves the interests of Indian corporations, because they can use the documentation and registers as a protection against patent applications both inside and outside India. As soon as foreign bio-pirates have disclosed their discoveries by means of a patent application (mostly in the US or in Europe), the Indian government or Indian firms can oppose their patent claims on the ground of 'prior art', as described in the documentations (Kaushik 2004). At the same time, Indian corporations may use these applications as an indicator for a promising market opportunity and commercialise the already documented knowledge by themselves. Alternatively, they can also use this option as a bargaining chip in order to negotiate better contract conditions in joint ventures with international firms (Interview 138).

Due to the weak institutionalisation of the National Biodiversity Authority, indigenous communities cannot expect to be compensated for the use of their knowledge in most of these cases (Interview 122). It is even less likely to assume that they would receive any support from the authori-

ties if they decided not to disclose their knowledge. The ignorance of their customary rights with regard to traditional knowledge often goes hand in hand with a violation of indigenous land tenure rights (Ramdas 2012). All in all, the prevailing ignorance of indigenous customary rights reinforces the opposition of indigenous groups to governmental activities and increases their sympathies for terrorist (Naxalite) groups (Interview 138, 141), which in turn helps the Indian political, economic, and environmentalist elite to justify an ongoing “accumulation by dispossession” (Harvey 2003).

3. Brazil: A precarious balance

In Brazil, the debate on traditional knowledge regulation is dominated by the antagonism of two opposed camps with regard to the specific modalities of access conditions. Scientists, most notably from public research institutions, perceive biodiversity-related traditional knowledge as a mine of information that should be explored in order to enhance pharmaceutical and agronomic research (Interview 174, 190). As regards the latter, they are strongly supported by the *agronegócio*, i.e. Brazilian agricultural corporations, and by the Ministry of Agriculture (Interview 183, 192). Proponents of facilitated access regulations often refer to TRIPS and WIPO. They claim that the commercial utilisation of traditional knowledge assets could be helpful to in enhancing Brazil’s competitiveness on the world market, but they also use ethical considerations (healthcare, world food situation, environmental needs) to substantiate their arguments (Interview 219, 192, 183).

To a certain degree, multinational pharmaceutical and agricultural corporations support the scientists interested in using traditional knowledge to further research. Large international companies sponsor the conferences of scientists, corporations, non-governmental organisations, and politicians in order to influence public opinion and pressure the Brazilian government. Transnational environmental groups like Greenpeace and the World Wide Fund for Nature (WWF) partially support these moves, as long as the demand for an economic exploitation of traditional knowledge is linked to a sustainable preservation of nature or to the mitigation of climate change (Interview 196, 213). However, the relationship between

Brazilian and transnational actors appears quite ambivalent. International environmental groups are often met with distrust, as their influence on Brazilian politics is perceived to be illegitimate (Interview 199). Moreover, Brazilian scientists and corporate actors are quite suspicious of multinational firms because they fear that international actors “just take the knowledge and run away” (Interview 220).

The rather loosely organised supporters of facilitated access modalities face an organised and strong opposition from a network of indigenous and traditional communities. Their claims are not confined to self-determination with regard to traditional knowledge, but also include land rights and human rights in a broad sense (Interview 186). The issue-linkage is helpful in forging a coalition among different ethnic groups across and even beyond the Brazilian territories, since they are closely linked to other Latin and North American indigenous peoples (Interview 188, 196). Moreover, indigenous representatives regularly take part at UN conferences, which helps to pressurise the Brazilian government. At the same time, indigenous and traditional communities are supported by Brazilian non-governmental organizations and by left-wing politicians and bureaucrats, whose political careers often originated in social movements (Interview 182, 223). Notwithstanding finely nuanced differences, traditional communities, activists, politicians, and bureaucrats within this coalition agree on the concept of *socioambientalismo* (social environmentalism), by means of which social and ecological priorities are placed over short-term economic gains (Santilli 2005).

Despite the precarious balance, indigenous communities and their allies could benefit from a window of opportunity at the beginning of the new millennium. Due to a publicly scandalised case of alleged biopiracy, the President of the Republic (Fernando Henrique Cardoso), drew on a legislative initiative of the Congress which had been already advanced by Marina Silva, a left-wing senator and former activist of the rubber tappers' movement (Interview 182). After a series of amendments, the presidential decree no. 2.186/2001 still today serves as the basis for the regulation of traditional knowledge in Brazil. It declares that biological resources and associated traditional knowledge are state property (*bens da união*). At the same time, indigenous groups and traditional communities are granted perpetual, unalienable usufruct rights. The decree stipulates that their customary laws

shall be respected in any case of access to their resources and the associated knowledge (Santilli 2005: 186ff). That is why the Brazilian government refrains from a generalised traditional knowledge documentation programme, which is opposed by the representatives of indigenous groups.

The most important element of the Brazilian regulation is the establishment of a rigorous authorisation process for the access to traditional knowledge (Azevedo 2005). The procedures are organised by the Conselho de Gestão do Patrimônio Genético (CGEN) and the Instituto do Patrimônio Histórico e Artístico Nacional (IPHAN). While both authorities decide in consultation with state departments, indigenous communities, civil society actors, scientists and corporate actors can participate at the meetings as observers. Any application for bio-prospection is subjected to the assessment of the prior informed consent of the affected communities and the subsequent conclusion of an access and benefit sharing agreement.

Applicants have to inform the communities in comprehensible terms about the research goals, the geographical and temporal extension of their project, and expected (e.g. economic) outcomes. The communities are free to decide by their own rules, whether and under which conditions they agree to bio-prospecting activities on their territories. If needed, potential bio-prospectors can be requested to hire an anthropologist, who must learn the relevant indigenous languages and study their customs in order to confirm that the decision to disclose the knowledge is based on the prior informed consent of the community. The bio-prospector has to display evidence before the CGEN (or the IPHAN) that he has fulfilled these conditions before he is allowed to negotiate an access and benefit agreement with the community. Only if the authorities have also verified that the ABS agreement meets the will of the indigenous groups, is the bio-prospection project legally approved (Bucher 2008: 212ff).

Brazilian authorities attempt to prevent the avoidance of the approval procedure by strict controls. In recent years, IBAMA (the governmental environmental protection agency) has caused a stir with large-scale crackdowns on alleged offenders. Additionally, the Brazilian public prosecutor's department (*Ministério Público*), the Brazilian military forces, and the intelligence service are involved, through the persecution of illegal bio-prospecting activities (Interview 173, 189, 191). Apart from command-and-control structures, Brazilian regulations also draw on an incentive system

for legal bio-prospection. According to the Brazilian patent law, inventions that are based on traditional knowledge are principally patentable, but applicants must procure certification from the authorities, by which they prove that they had abided to the rules of the CGEN / IPHAN authorisation process. The nexus between patent law and access conditions is expected to enforce Brazilian traditional knowledge regulations within the domestic jurisdiction (Interview 163, 172).

However, the enforcement of Brazilian regulations is seriously impeded by the context of the international regime complex. While the nexus between traditional knowledge and patent regulations at least partially deters Brazilian researchers from illegal bio-prospecting activities, multinational corporations are not affected by these rules (Hathaway 2004), as long as they do not apply for a patent within the Brazilian jurisdiction. Due to the lack of an internationally binding disclosure requirement (see section 1), they are not required to declare the sources of their inventions in their patent applications in the US or in Europe. As Brazilian authorities respect the will of indigenous groups and refrain from documenting their knowledge, it is nearly impossible for them to procure any evidence that domestic regulations have in fact been infringed (Interview 189, 199).

The enforcement problem has far-reaching consequences, because the lack of international acceptance also destabilises the Brazilian regulation on the domestic level. Brazilian scientists and corporations rightly claim that they are seriously disadvantaged. Whereas they are compelled to adhere to strict authorisation procedures, foreign competitors can ignore these rules without punitive consequences (Bastos 2009). That is why Brazilian researchers and industry representatives vociferously argue for an easing of access conditions, even if they admit that the recognition of indigenous customary rights should be maintained (Interview 174, 220).

4. Conclusion

The previous sections show that traditional knowledge policies are shaped by a complex interplay between international law, domestic regulations, and local practices. Although the international framework does not determine a unique approach to reconcile the diverging interests in this

field, it offers an ideological base that sets the course for national regulatory initiatives through its impact on the effectiveness of varying national approaches.

The international framework is predominantly characterised by a capitalist perception of knowledge. This holds equally true for trade and environmental law as well as for the activities of the relevant international organizations (Zeller 2008). Alternative perspectives, as suggested by the ILO convention and the UN Declaration on Indigenous Rights, are not completely ruled out, but remain rather marginalised. The case studies of India and Brazil illustrate that the international framework still leaves room for some flexibility with regard to domestic priorities, but clearly favours the logic of commodification. Whereas the Indian approach, which is to document traditional knowledge for economic and environmental purposes, is facilitated by the CBD and international patent law, the Brazilian approach, with its focus on indigenous self-determination, suffers from a lack of an international enforcement mechanism, which also destabilises its application on the domestic level.

In sum, the international framework ideologically favours the perspective that traditional knowledge is a potential commercial good, the utilisation of which should serve economic, developmental, and environmental goals. Alternative approaches that focus on indigenous customary rights and traditional communities' self-determination are not completely ignored, but their practical application is seriously impeded. While it seems premature to assess whether the submission to an (eco-)capitalist logic is the only practicable alternative (Harvey 1996), the article indicates that further research must simultaneously address both the international and the domestic level in order to understand the dynamics of traditional knowledge policies.

- 1 The paper summarises initial findings from a research project funded by the German Research Foundation (Project SFB 700-TP D7). Empirical evidence was obtained by document-based process tracing and 110 interviews in Geneva, Munich, Berlin, Brussels, India, and Brazil between 2009 and 2012. All interview partners were ensured confidentiality by not revealing individual names or other information that might endanger their anonymity. I am deeply indebted to Bineet Mundu for his support during the field research in Jharkand (India). Without his help, I would not have been able to conduct an in-depth research on the local level. A preliminary version of the

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- 2 This paper focuses on oral traditional knowledge related to biodiversity. While it is acknowledged that traditional knowledge is sometimes stored in religious texts and may also refer to cultural practices without any natural substrate (Mills 1996), this subject matter is left out for the sake of simplicity. In a similar vein, the paper does not differentiate between indigenous and other traditional communities, because all these groups face the same conflicts with regard to bio-prospecting activities.

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- Interview 134: Representative of an Indian law firm, 22.2.2011, New Delhi.
- Interview 135: Indian Lok Raja member, 21.2.2011, New Delhi.
- Interview 137: Representative of an Indian think tank, 24.2.2011, New Delhi.
- Interview 138: Representative of an Indian research institute, 25.2.2011, Ahmedabad.
- Interview 141: Indian Raja Sabha member, 28.2.2011, New Delhi.
- Interview 143: Representative of an Indian ministry, 1.3.2011, New Delhi.
- Interview 144: Representative of an Indian NGO, 2.3.2011, New Delhi.
- Interview 146: Representative of an Indian ministry, 3.3.2011, New Delhi.
- Interview 163: Representative of a Brazilian lawyers' association, 25.7.2011, Rio de Janeiro.
- Interview 172: Representative of the Brazilian patent office, 27.7.2011, Rio de Janeiro.
- Interview 173: Representative of the Brazilian public prosecution department, 28.7.2011, Rio de Janeiro.
- Interview 174: Representative of a Brazilian research institute, 29.7.2011, Jacarepaguá (RJ).
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- Interview 183: Representative of a Brazilian ministry, 3.8.2011, Brasília.
- Interview 186: Kazique of an indigenous community, 3.8.2011, Brasília.
- Interview 187: Representative of a Brazilian ministry, 4.8.2011, telephone interview.
- Interview 188: Representative of an indigenous community in Roraima (CIR), 4.8.2011, telephone and skype interview.
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- Interview 190: Representative of a Brazilian research institute, 5.8.2011, Brasília.
- Interview 191: Representative of FUNAI, 8.8.2011, Brasília.
- Interview 192: Representative of a Brazilian ministry, 8.8.2011, Brasília.
- Interview 196: Representative of a Brazilian NGO, 11.8.2011, Brasília.
- Interview 199: Representative of the Brazilian public prosecution department, 14.8.2011, Brasília.
- Interview 213: Representative of a transnational NGO, 24.8.2011, Brasília.
- Interview 219: Representative of a Brazilian industry association, 29.8.2011, São Paulo.

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Interview 308: Representative of an adivasi community, 22.2.2012, Jharkand.
Interview 317: Representative of an international organisation, 27.2.2012, New Delhi.
Interview 337: Representative of a transnational NGO, 7.3.2012, New Delhi.
Interview 420: German pharmaceutical industry representative, 14.9.2012, Berlin.

Abstracts

In many countries of the Global South, indigenous communities have learned how to make use of the local biodiversity. However, their traditional knowledge has aroused the attention of scientists, corporations, and environmental groups. Most of these actors only perceive traditional knowledge as useful raw material for their own purposes and disregard the indigenous customary rights which are associated with its dissemination. The resulting conflicts are shaped by national regulations and an international regime complex of environmental and commercial law. This paper addresses the impact of the international regime complex on national traditional knowledge regulations. It compares the eco-capitalist approach in India with the more inclusive concept in Brazil with regard to their respective political priorities and their effectiveness against the backdrop of international agreements.

In vielen Ländern des globalen Südens verfügen indigene Gemeinschaften über beträchtliches Wissen zur Nutzung der lokalen Biodiversität. Ihr traditionelles Wissen hat das Interesse von Wissenschaftlern, Unternehmen und Umweltschutzgruppen geweckt. Externe Akteure begreifen traditionelles Wissen jedoch oft nur als Inspiration für eigene Untersuchungen und missachten gewohnheitsrechtliche Praktiken zu dessen Verbreitung. Die hieraus resultierenden Konflikte werden von nationalstaatlichen Regulierungen und internationalem Handels- und Umweltrecht geprägt. Der Artikel behandelt den Einfluss des internationalen Regimekomplexes auf nationalstaatliche Regulierungsversuche. Er vergleicht den

öko-kapitalistischen Ansatz in Indien mit dem inklusiveren Konzept in Brasilien in Hinblick auf die jeweiligen Zielsetzungen und ihre Effektivität vor dem Hintergrund internationaler Vereinbarungen.

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