THE ABS CAPACITY DEVELOPMENT INITIATIVE

L'INITIATIVE DE RENFORCEMENT DES CAPACITES POUR L'APA

National Studies on ABS Implementation in Brazil, India and South Africa

Comparative Analysis

In Collaboration with the Governments of Brazil, India and South Africa

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The ABS Capacity Development Initiative, in collaboration with the Governments of Brazil, India and South Africa, commissioned national studies in each of these countries to examine key elements of national ABS frameworks as well as lessons learned from their implementation with a view to inform the implementation of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol). These studies are available at http://www.abs-initiative.info/countries-and-regions/global/india/second-abs-dialogue-on-key-challenges-and-practical-ways-forward-for-the-implementation-of-the-nagoya-protocol/

Based on the information contained in each of these national studies, comparative tables were prepared with a view to highlight some of the key elements of the national ABS frameworks in each country, information related to providers and users of genetic resources as well as ABS agreements.

It should be noted that neither the studies nor the tables reflect developments underway to adapt national ABS frameworks in light of the new requirements of the Nagoya Protocol.

Four separate tables are contained in the attached document as follows:

Table 1: Overview of key elements of national ABS frameworks in Brazil, India and South Africa

Table 2: Provider related issues

Table 3: User related issues

Table 4: ABS agreements

These tables are complementary to the national studies and based on the information provided in the national studies.

Table 1: Overview of key elements of national ABS frameworks in Brazil, India and South Africa

	Brazil	India	South Africa
Competent national authority	**Genetic Heritage Management Council** (*Conselho de Gestão do Patrimônio Genético - CGEN*) Not yet notified, but carries out the responsibilities listed in Article 13, paragraph 2 of the Nagoya Protocol	**National Biodiversity Authority (NBA)** **State Biodiversity Boards (SBB)** **Biodiversity Management Committees (BMCs)** Foreign nationals and companies and non-resident Indians seek access through NBA Indian nationals and companies seek approval from SBBs	**Department of Environmental Affairs, Minister of Water and Environmental Affairs**
Scope	**Access to components of 'genetic heritage' and associated traditional knowledge** Access comprises three activities: *Scientific research* = research conducted on samples of genetic heritage for non-commercial purposes *Technological development* = systematic activity on the basis of existing knowledge aimed at the production of specific innovations or the development or modification of existing products and processes for economic gain (CGEN Technical Guidance Note no. 4) and	**Access to biological resources (BR) by foreign and Indian natural or legal persons, for research and commercial utilization.** **Applications for intellectual property rights (IPRs) in or outside India for any invention based on any research or information on BR obtained from India** Normally traded commodities are exempted from the purview of the Act (section 40 Biological Diversity Act (BDA)). 190 commodities notified so far Collaborative research also exempted from the purview of the BDA, subject to their conforming to the policy guidelines issues or	**Export and bioprospecting of indigenous genetic and biological resources**

	Brazil	India	South Africa
	Bioprospecting = exploratory activity aimed at identifying components of genetic heritage and/or information concerning associated traditional knowledge with potential for commercial use (Provisional Act, Art.7)	being approved by the Government of India.	
Ownership (GR/aTK)	Biological resources are considered collective goods Ownership of genetic resources is not specifically attributed in law, but the *Provisional Act* acknowledges that rights over genetic resources are vested in the owners of the property where sampling occurs. *Traditional knowledge (TK*) associated to the conservation and sustainable use of biodiversity and genetic resources is the property of the community that holds the knowledge.	Rights over BR are vested in the State, however benefits from their utilization are extended to the conservers. Genetic resources are covered by the definition of BR. Provisions applicable to the ownership of BR are also applicable to traditional knowledge (TK) associated with BR. Therefore TK associated with genetic resources is owned by the "benefit claimers" as in the case of genetic resources and BR.	Landowner owns biological and genetic resources on or under his property Indigenous knowledge holders and indigenous knowledge practitioners are the custodians of the indigenous resources in accordance with customary laws and practices of their particular community. Indigenous communities have rights over their traditional knowledge when there is a common understanding that a specific community discovered or developed the knowledge. However, knowledge that is widely known or shared among a number of communities is considered in the public domain.
ABS measures adopted	**One Provisional Act (*Medida Provisória 2.186-16, 23 August 2001)*** *Three Decrees:* on the composition and	**Biological Diversity Act, (BDA) 2002** **Biological Diversity Rules (BDR) 2004**	**The National Environmental Management Biodiversity Act, 2004 (Act No.10 to 2004) (NEMBA)**

	Brazil	India	South Africa
	operations of the CGEN (*Decreto 3.945, 28 September 2001*), on penalties applicable in cases of infringements of ABS rules (*Decreto 5.459, 7 June 2005*), and on distribution of shared profits and royalties when the Union is a party to an ABS contract (*Decreto 6.915, 29 July 2009*)) Forty one CGEN Resolutions Nine Technical Orientation Notes 1,316 Access Authorizations approved by the CGEN and other accreditation bodies 192 Trustee Institutions accredited (comprising 358 separate *ex-situ* collections) Cross-references to four related legal instruments (laws on the protection of plant varieties, intellectual property, indigenous rights and the decree establishing the National Biodiversity Policy) Fifteen CGEN decisions on procedures [all figures as of December 2013]		**Bioprospecting, Access and Benefit-sharing (BABS) Regulations (No. R138 of 2008)** Policy on indigenous knowledge systems Bill on the Protection, promotion, development and management of indigenous knowledge systems National recordal system Patents Amendment Act of 2005

	Brazil	India	South Africa
PIC procedures: • **for research** • **for commercialization** • **delays in obtaining PIC** • **for what period of time** • **permit issued**	**PIC procedures** Distinction is made between the prior consent of the provider and the access authorization granted by the government. **For research** *Collection of Biological Resources for scientific research where actual access to genetic resources or TK is not involved* is not subject to ABS legislation. A separate set of procedures has been established to deal with these situations (see report for further details) The procedures *for access for scientific research involving TK* involve application to the CGEN for authorization - bearing in mind the *exemptions* established by CGEN Resolution 21 for some types of basic research **For commercialization** The procedures for access for the purposes of technological development or bioprospecting, whether to genetic heritage, associated traditional knowledge or both, involve *application to the CGEN* for authorization. The key conditions for approval by the CGEN and the other accredited bodies of	**PIC procedures** PIC procedures vary depending on the individual/institution seeking access and the purpose for which PIC is sought. **PIC required for research or commercial utilization or bio-survey and bio-utilization** by any person other than resident Indian **PIC required for the transfer of the results of research** relating to BR to foreign nationals, companies or non-resident Indians **No PIC required for conducting research** in India for citizens and institutions based in India **No PIC required** from NBA **for collaborative research projects** involving the transfer/exchange of BR or information between institutions, including government sponsored institutions of India and similar institutions in other countries, if such research is in conformity with the "*Guidelines for International Collaborative Research Projects Involving Transfer of Exchange of BR or information relating thereto between institutions including government sponsored institutions and such institutions in other countries*"	**PIC procedures** PIC of relevant stakeholders with respect to access to BR/GR and/or ATK must be granted and MAT established before permit can be granted by competent national authority. No need for bioprospecting permit for research carried out in South Africa For research carried out outside of S-Africa, BABS regulations and other relevant laws apply For commercialization purposes outside of Africa, need for integrated export and bioprospecting permit If two phase approach (research/discovery phase and commercialization phase), PIC and MTA required for research phase, new PIC and benefit-sharing agreement required for commercialization phase. Triggers for commercialization defined in NEMBA. **Delay in obtaining PIC** Average of four months for issuance of permit (once all relevant info provided

	Brazil	India	South Africa
	authorization to access a component of genetic heritage and/or associated traditional knowledge comprise submission of: • Proof of legal status of the institution and of the signatory • Proof of institutional standing and capacity • Identification of an accredited trustee institution that will hold in a permanent collection a voucher specimen of the genetic resources involved • A legal binding declaration on the part of the applicant institution that, if the access sought is for scientific research only, all activities will be restricted to this end • A research project specifying the intended use of the the genetic resources or TK and containing: introduction, justification, objectives, methods and expected results. • Proof of prior consent of the provider, i.e.: - the local or indigenous community, - the responsible official body (i.e. at federal, state or municipal level) when access will involve a component of genetic heritage	**If results of research likely to lead to IPRs**, collaborating partners are to enter into agreement with NBA on sharing of benefits before filing of application for IPR. **New PIC is required** if BR initially accessed for research purposes is to be used for commercial purposes or in the case of an application of an IPR for any invention based on any information or research on a BR. **Delays in obtaining PIC** 6 months from date of receipt for access to BR for research or commercial utilization 3 months for approval of the transfer of research relating to BR for commercial utilization to foreigners (nationals, companies or non-resident Indians) **Period of time for which awarded** In most cases, granted for one to two years **Written agreement** The approval for access is granted in the form of a written agreement between NBA and the applicant and contains the terms and conditions of access.	by applicant) **Validity of the permit** Bioprospecting permit issued for 3 to 5 years

	Brazil	India	South Africa
	collected in a protected area - the landowner when access will involve a component of genetic heritage sampled on private property, etc. • Mutually Agreed Terms, in a form of contract. **Delays in obtaining PIC** Once PIC has been obtained from the provider and an application for access is submitted to the relevant authority. If the objective is scientific research, a permit is issued in 20 days, on average. If the objective is bioprospecting or technological developments, the best case scenario is from *four to six months*, however the majority of applications *are likely to take a lot longer* depending on availability of relevant information by applicant at the outset. **For what period of time** It is determined on a case-by-case basis and typically granted for a period of two to five years. **Permit issued** The authorization published in the Diário Oficial da União		

	Brazil	India	South Africa
	Summary published on the CGEN Secretariat website Written confirmation in triplicate distributed as follows: one copy on the project file at the CGEN's Secretariat, a second to the applicant institution and the third to the project coordinator.		
Mutually Agreed Terms • **between who?** • **key elements: benefit sharing, others**	The Provisional Act establishes the requirement for a contract (**CURB,** Contrato de Utilização do Patrimônio Genético e de Repartição de Benefícios - Utilization of Genetic Heritage and Benefit Sharing Contract) when the access activities to be undertaken on a component of genetic heritage or associated traditional knowledge involve economic use (i.e. activities considered by the legislation as bioprospecting or technological development). **Between who?** Generally, the parties to the CURB depend on who is the provider of the GR/a TK and where it is accessed: • *ex situ*: collection or original provider • *in situ*: management authority (conservation area), community and	**Between who** MAT are mostly negotiated and signed between the accessor and the NBA. The NBA consults the SBBs who in turn are to consult the BMCs concerned. **Content** MAT address the conditions of access and the benefits to be shared between both parties. Separate formats developed for the following agreements: • access to BR for research/bio-survey and bio-utilization • access to BR for commercial uses • transfer of research results • seeking IPRs • third party transfers.	**Between who** MAT are reached between the providers of the resource and the users. A material transfer agreement and a benefit-sharing agreement are required. **Content** • MAT cover conditions of access and use of the resources, and benefits to be shared. • MAT stipulated in Material Transfer Agreement and Benefit-Sharing Agreement. • MAT is a condition for obtaining PIC of provider. MTA and BSA needed for approval of Minister. • Standard formats for MTA and BSA available in BABS regulations. **Benefit-sharing**

	Brazil	India	South Africa
	Union (indigenous lands), land owner (private land)[1] **Content** All CURBs are required to contain the following basic information: (i) purpose, identification and quantity of samples, intended use; (ii) duration; (iii) form of fair and equitable sharing of benefits and, as appropriate, access to and transfer of technology; (iv) rights and responsibilities of the parties; (v) intellectual property rights; (vi) rescission; (vii) penalties; (viii) subject to the law of Brazil. When the Union is one of the parties the CURB will be subject to the provisions of the public law regime. The terms of the contract will not take effect until approved by the CGEN. All parties involved, providers and users, must be identified together with their credentials.[2]	**Benefit-sharing** Benefit-sharing is determined on a case by case basis. NBA may impose terms and conditions for ensuring equitable benefit-sharing arising from the use of BR, as follows: • grant of joint ownership of IPRs to the NBA, or to benefit claimers if identified • transfer of technology • location of production, research and development units in such areas, which will facilitate better living standards to the benefit claimers • association of Indian scientists, benefit claimers and the local people with R&D in BR and bio-survey and bio-utilization • setting up of venture capital fund for assisting the benefit claimers • payment of appropriate monetary compensation and non-monetary benefits to the benefit claimers	• All monies arising from BSA are to be payed into the Bioprospecting Trust Fund. Director General of DEA is responsible for administering the Fund. Benefits paid out annually to beneficiaries. • Non-monetary benefits administered at community/provider level with assistance of DEA, as needed

[1] Note: in case of national security area, you need the consent of the National Defense Council, but the benefit-sharing takes place with the land owner; in case of a marine area/the continental shelf or EEZ, you need the consent of the Navy, but the benefit-sharing takes place with the Union.

[2] In the case of the users, this includes the Brazilian applicant for access authorization and any institution, Brazilian or foreign, that will hold the samples following transportation or shipment.

	Brazil	India	South Africa
	Benefit-sharing: 5 possible categories of benefits: • profit-sharing • payment of royalties • access to and transfer of technology • free licensing of products and processes • capacity-building of human resources **Distribution of benefits** Profit-sharing and royalties when the Union is the beneficiary are to be allocated as follows: • when access in areas belonging to the Union: 50% to National Environment Fund and 50% to National Scientific and Technology Development Fund • when access in territorial waters, continental shelf or the EEZ: 25% to National Environment Fund, 25% to National Scientific and Technology Development Fund and 50% to Naval Fund. When accessed from private property, nature of benefits to be determined directly with provider. Criteria for benefit-sharing were also developed for access to genetic heritage for commercial purposes under the	Quantum of benefits is to be determined between the person applying for access and the NBA, in consultation with local bodies and benefit claimers. **Distribution of benefits** If benefits are monetary, NBA can direct amount to be deposited in NBF. However, if BR obtained from specific individual or group of individuals or organization, the NBA may direct that the amount be paid directly to them. BDA provides for constitution of funds at national, state and local level: NBF, State Biodiversity Fund (SBF) and Local Biodiversity Fund (LBF).	

	Brazil	India	South Africa
	following circumstances: • from a commercial enterprise where identification of the original provider is not possible • from an area belonging to the institution that undertakes the access • from an area whose owner renounces the right to benefits • from an ex situ collection held by the institution that undertakes the access when sample was collected prior to the collection of the first Provisional Act in June 2000		
Compliance	Bearing in mind that the legally-responsible user will in all cases be a Brazilian institution, the Provisional Act requires all those who use or economically exploit components of genetic heritage or associated traditional knowledge to ensure that such activities conform to the provisions of the Provisional Act and subsequent instruments *(Article 34*). Article 30 of the Provisional Act establishes administrative sanctions for non-compliance*. According to the gravity of the non-compliance, one of thirteen categories of punishment can be applied.* These are: (i) warning, (ii) fine, (iii) seizure of samples and equipment, (iv) seizure of derived products, (v) suspension of the sale of	Half yearly reports are to be provided to NBA, as provided for in the agreements referred to above. In case of non-compliance, the NBA can revoke the approval granted to the applicant and cancel the agreement entered into between NBA and the applicant. Revocation of the access granted can be done on the basis of a complaint or *suo motu* under the following conditions: • Violation of the provisions of the Act or conditions on which access granted • Non-compliance of the terms of the agreement • Failure to comply with any of the	Permit holder to submit status report to the Minister on an annual basis. Dispute settlement procedures to be addressed in agreement (mediation, arbitration) Number of offences established Penalties include jail time and fines

	Brazil	India	South Africa
	derived products, (vi) suspension of activities, (vii) partial or total closure of the facility, activity or business, (viii) suspension of register, patent, licence or authorization, (ix) cancellation of register, patent, licence or authorization, (x) loss or reduction of government incentives or tax benefits, (xi) prohibition or suspension of access to official credit, (xii) intervention in the business, (xiii) five-year ban on participation in contracts or any other business dealings with public bodies.	conditions of the access granted • On account of overriding public interest or protection of the environment and conservation of biological diversity.	
Relevant stakeholders	Universities and research institutions *Ex situ* collections, in particular the 192 institutions and their 358 collections accredited as trustees by December 2013 Indigenous and local communities Business sectors that use genetic resources Protected area managers at federal, state and municipal levels The 19 federal bodies that comprise the CGEN The organizations with permanent observer status on the CGEN representing	Research community and universities Commercial establishments such as seed industry, pharmaceutical, cosmetic, and food and drink manufacturers Local communities including agriculturists and horticulturists	Research community Universities E*x situ* collections Indigenous and local communities Private land owners

	Brazil	India	South Africa
	indigenous and traditional communities, NGOs, state-level environment agencies, the scientific community, the office of the federal prosecutor-general, and business federations		

Table 2: Provider related issues

	Brazil	India	South Africa
Where are genetic resources generally accessed?	The 103 benefit sharing contracts approved by or lodged with the CGEN in the period 2004 to March 2013 and that have been reviewed under the consultancy show that the geographical spread is varied and covers all the biomes in Brazil (Amazonia, semi-arid, tropical savannah, Atlantic Forest, Pantanal wetlands, southern grasslands and marine), although there appears to be *a predominance of forest biomes* (Amazonia and Atlantic Forest). The breakdown is as follows: Amazonia 40 contracts, Atlantic Forest 38, Central Savannahs (Cerrado) 5, Semi-arid (Caatinga) 4, Marine and Coastal 2, Marine 1, Pantanal wetlands 2, Savannahs/Atlantic Forest 5, Savannahs/Semi-arid 1, Semi-arid/Atlantic Forest 1, others 4. The geographical spread of the scientific research authorizations approved by the other bodies has not been analysed.	Greatest demand for access is in the agricultural sector followed by forest areas	Greatest demand for access to GR is in plant material both harvested in the wild and cultivated
Direct access to genetic resources by foreigners or through intermediaries?	Foreign institutions or researchers may only participate in sampling activities in Brazil in accordance with the provisions of the Provisional Act as far as the ABS aspects are concerned and in accordance	In most cases, genetic resources are accessed *ex situ* by foreigners. There is no evidence of direct bioprospecting by foreigners in India.	Mostly accessed from *ex situ* collections Foreign individuals/entities expected to apply jointly with South African individuals/entities for bioprospecting or

	Brazil	India	South Africa
	with the overall legislation on foreign participation in scientific expeditions and research in Brazil, as administered by the CNPq (National Council of Technological and Scientific Development). *As far as the ABS aspects are concerned the foreign institution may participate in collecting and access activities in partnership with a Brazilian institution, where the Brazilian institution is the lead partner, the applicant for authorization and legally responsible.* All institutions involved need to meet the institutional criteria – prior experience in biology, necessary infrastructure, facilities and skills.	GR are accessed from intermediaries with agricultural universities playing an active role in this respect.	export permits Majority of foreigners access GR from *ex situ* collections through collaboration with local institutions.
Role of intermediaries	In relation to foreign users, see above. Otherwise, providers seem in the main to be private landholders and local communities, with official bodies of the three levels of government (federal, state, municipal) figuring when sampling occurs in protected areas. Users appear to be in the majority public university and research institutions, followed by private sector applicants Finally, the system requires that applicants	Intermediaries, in particular, agricultural universities, play an important role in ABS as they are assisting foreigners in accessing the BR. These universities are working in collaborative research projects involving the use of BR accessed from India with foreign legal and/or natural persons. Commonly traded commodities are available with the traders. Not clear whether traders are also supplying	**Universities and research institutions** play an important role in ABS. They are actively involved in extensive research work, partnering with local and foreign institutions and local communities and/or individuals. *Biotraders* also facilitate access to raw material of BR for further R&D in foreign countries.

	Brazil	India	South Africa
	for access to identify an accredited trustee institution that has agreed to receive and include in a permanent *ex situ* collection a voucher specimen of the genetic resources being accessed. Currently over 350 collections have been accredited. Their parent institutions are overwhelmingly public universities and research institutions. The trustee institutions do not play a role in the decision on authorizing access by the applicant, rather they provide a guarantee that a voucher specimen of the genetic resource in question will be permanently kept under appropriate *conditions so as to permit further access and taxonomic research.*	biological material not included in the notified list of commonly traded commodities.	
Main providers *in situ*	The analysis of 103 benefit sharing contracts submitted to the CGEN up to March 2013 (70 approved in the period 2004-2012 and 33 under examination) shows that in 61 cases the provider was a community association or cooperative of local producers or non timber forest product gatherers, and one was an indigenous community. 52 provider parties were identified, mostly private individuals or companies. (The total number of provider parties identified is greater than the number of contracts as some contracts involve more than one provider.)	Local communities	GR often sourced from biotraders and indigenous and local communities GR mainly accessed from private and communal land

Table 3: User related issues

	Brazil	India	South Africa
Main users	The same analysis of 103 contracts shows the following breakdown of the user sectors involved: • Cosmetics 79 • Pharmaceutical research (public) 10 Pharmaceuticals (private) 4 • Joint cosmetics and pharmaceuticals 3 • Others 6 • Unidentified 1 The purposes of the access are: • Raw materials 20 • Research 14 • Final product 64 • Raw materials • Final product 5 As previously explained, under current legislation foreign institutions can only access Brazilian genetic resources in partnership with Brazilian institutions. There are few examples of such partnerships, and some of those that exist may be partnerships between an overseas parent company and its Brazilian subsidiary. There has been recent cases of partnership between a Brazilian company	Main user is the research community. In most cases GRs used for basic research. Most researchers are Indian residents. In few cases GRs are accessed for commercial utilization.	Research community and private sector.

	Brazil	India	South Africa
	that provides supplies and overseas developers company. However the number of access authorizations for scientific research involving genetic resources or traditional knowledge with no commercial intent is far greater than the number of applications considered by the CGEN. In the three year period 2010-2012 IBAMA, CNPq and IPHAN approved between them 1057 research authorizations. These do not require a benefit sharing contract and thus are not included in the study.		
Sectors most interested in accessing genetic resources	See above. There has been a preponderance of applications from the cosmetics and pharmaceutical sectors. There have been few applications from industrial and biotechnology sectors.	When GRs accessed for commercial purposes, they are accessed by agricultural sector (seed industry), pharmaceuticals and cosmetics sectors followed by others.	Cosmetics, nutraceuticals, pharmaceuticals, biotrade.
User obligations in country	Access to genetic material obtained from international centres or third countries and that has not been collected in Brazil is exempted from the requirements of authorization.	Patents Act 1970 provides that a patent applicant should disclose the source and geographical origin of the biological material in the patent specification when used in an invention.	To be addressed in the review of the legislation to address the new obligations under the Nagoya Protocol. Patents Amendment Act of 2005 establishes that an applicant for any patent furnish information on the role by any indigenous biological resource, indigenous genetic resource or traditional knowledge used in an invention.

Table 4: ABS agreements

	Brazil	India	South Africa
How many agreements concluded?	In the period 2002-2013 98 CURBs were registered, of which eleven involved associated traditional knowledge. 29 CURBs were registered in the period 2004-2011, 34 in 2012 and 35 in 2013, of which two involved associated traditional knowledge.	117 agreements concluded until October 2013, out of a total of 844 applications.	17 permits issued 72 MTAs 32 BSAs
Non-commercial or commercial	The breakdown of the 34 contracts approved in 2012 is as follows: • 32 genetic heritage (10 technological development, 22 bioprospecting and technological development) • 1 associated traditional knowledge (1 technological development, 2 bioprospecting and technological development) • 1 genetic heritage and associated traditional knowledge (1 bioprospecting, 1 technological development, 4 bioprospecting and technological development) *Note:* a contract (CURB) only required when the access activities to be undertaken on a component of genetic heritage or associated traditional knowledge involve economic use.	In most cases were for non-commercial utilization. Few for commercial utilization.	All permits issued are for commercial utilization.

	Brazil	India	South Africa
Benefits derived • **Types of benefits** • **How shared?**	There has been no systematic survey of benefit flows and an analysis of existing contracts recently undertaken concludes that identifying the real experience of benefit sharing is hampered by a lack of data and of any existing obligation on parties to inform the CGEN of what benefits have accrued and how these have been shared. **Types of benefits** However, the analysis of the 103 contracts studied shows the breakdown of agreed benefits to be shared as follows: mixed monetary and non-monetary benefits 72; monetary benefits 15; potential monetary benefits 12; potential mixed monetary and non-monetary benefits 3; unspecified 1. Potential benefits are those which are agreed under the contract but where no benefit sharing has yet occurred or cannot be verified. **How shared?** Sixty cases were found where monetary benefits were agreed on the basis of a percentage (varying from 0.05% to 5%) of net earnings. Of these 53 stipulated a percentage lower than that of the ITPGRFA reference value (0.77%).	ABS agreements have yielded benefits although they are very few. 90% of monetary benefits have come from a single case and source: Pepsi Co India Holdings Pvt. Ltd (PepsiCo) for seaweed export. Benefits accrued have been largely monetary in nature but very few. Benefits are to be shared with BMCs for the protection and conservation of BR and TK, however this has not yet been implemented. In one case (PepsiCo) training was provided to women self-help groups. Generally, locals get employment opportunities where the resources are collected.	No specific information on benefits derived from the agreements mentioned above are included in the study. However examples of agreements below refer to monetary and non-monetary benefits. Monetary benefits include: • annual royalty on net proceeds • upfront payment paid into Bioprospecting Trust Fund • 8% of milestone payment on all income received from licence (Lipia Javanica project) Non-monetary benefits include: • scientific knowledge of researchers • job creation from the cultivation of resource • sustainable employment • equipment and infrastructure to support the community • environment and conservation education • technology transfer

	Brazil	India	South Africa
Examples of agreements	The study refers to a survey of 103 contracts that haven't been identified in detail. The study quotes though concrete benefit-sharing provisions of those agreements. They include: • "Fixed value payment of [***]. The Association will enjoy exclusivity in the supply of the product. The user will fund the forest certification procedure. The community will receive payment equivalent to 0.5% of the net earnings deriving from the sale of products containing the resin." • "Should commercialization occur, benefit sharing is to be provided for and the rate of benefits to accrue to the Federal Government, the formula to be used in calculating the benefit, the transfer procedures and the duration are to be stipulated by means of an addendum to the contract. The benefits may include non-monetary benefits of up to 50% of receipts with the proviso that IBAMA will determine the goods and services that constitute such benefits." • The percentage to be applied to the net receipts from the sale of products that contain the [***] active essential oil:	**PepsiCo exported 2000 MT seaweed to Malaysia, Philippines and Indonesia** • Seaweed grown by fishing communities • Collected, baled and exported by women self-help groups trained by the company • NBA paid royalty at 5% of FoB amounting to Rs. 3.9 million by exporter. • Efforts by SBB to from BMCs of the 754 benefit claimers across four districts. • Access permits now stopped due to claims that seaweed becoming invasive species. **Bio India Biologicals Company exported 2000 kg of Neem leaves to Japan** • Collected from Amarchinta village BMC, Mahboobnagar district, Andhara Pradesh • NBA paid a royalty of 5% of FOB amounting to Rs. 55 035 by the exporter which transferred Rs. 20 000 to the BMC for planting Neem saplings and creation of awareness about BD conservation. **Natural Remedies Pvt. Ltd, Bengaluru, purchased kalmegh, a medicinal herb**, from BMC of Malajkand in the Balaghat district of MP. They paid Rs. 21 000 directly to the BMC. Ayurvedic doctor from Pune applied for a certificate for obtaining a patent for an **Ayurvedic anti snake venom** comprising	**HGH Pharmaceuticals (Pty) Ltd (2009)** • Commercial product developed based on cultivated plant material and extracts from Sceletium tortosium • *Monetary benefits* to San and Nama communities • *Non-monetary benefits* include enhancement of scientific knowledge of researchers employed at the South African Consortium, HGH Pharmaceuticals as well as job creation from the cultivation of the BR. **Edakenu Muthi Futhi Trust (2011)** • Permit for cultivation, processing and marketing of herbal products containing active ingredients from 78 IBR • Beneficiaries are Edakeni community, Senzokuhle Food Production Cooperative Ltd and Enzangakho Consultancy Benefits include: • Monetary: 50% of profits generated by business go to the Trust • Non-monetary: sustainable employment, equipment and infrastructure, environmental and conservation education, training on

	Brazil	India	South Africa
	- 0.15% in the case of products containing the name of the active ingredient on the product label; - 0.05% in the case of products that contain the active ingredient in their composition without mentioning the name on the label. Part of the value generated will be allocated to the establishment of the protected area's deliberative council provided for by the reservation's management plan. The balance will be deposited in the provider's bank account. The provider is responsible for determining the projects to be supported by the monies received, but these must comply with current legislation and the principles of the CBD." • "Setting up an in situ collection of regional species. Human resource training and technical assistance for the maintenance and expansion of the collection and a contribution to the upgrading of the infrastructure for drying specimens. Additionally the donation of seedlings of existing medicinal species to the current collection." • "The provider requires that all payments	four medicinal plants. Tablet "Pinak" acts as a temporary relief before victim is taken to hospital. NBA fixed BS at 2% of gross sales or gross revenue of the product. Once product commercialized, applicant paid Rs. 3940 as benefit-sharing to NBA.	agro-processing **Council for Scientific and Industrial Research (CSIR)** Cultivation of Lippia Javanica, distillation and extraction of the oil for the commercial production of mosquito repellent candles Non-monetary benefits: • community owned enterprise at the cultivation site • employment of Giyani community in the cultivation, harvest, oil distillation and manufacture of mosquito repellent • technology transfer Monetary benefits: • 8% of milestone payment on all income received from the license

	Brazil	India	South Africa
	under the rubric of benefit sharing be applied to projects for the conservation and sustainable use of biodiversity with the aims of (a) improving the management of areas where species *** is found, (b) supporting social organization and strengthening the supply chain, (c) valuing traditional knowledge, (d) benefitting all the localities involved, (e) carried out by participative means involving producers, representatives, users and third parties."		
Contribution to conservation and sustainable use	34 of the 103 contracts examined provide for benefits with socio-environmental or conservation objectives. Examples are provided above.	Only financial benefits so far. Small amounts have therefore made no significant contribution to conservation and sustainable use of BD in the country.	Conservation benefits have included: • genetic information contributes to conservation objectives, such as the prevention of gene pollution • support to conservation through bursaries • training on sustainable harvesting methods • environmental and conservation education • resource assessment and regulated quantity of authorized indigenous biological resources for wild collection/harvesting • biodiversity management plan for species