The Balancing' Act





Experiences with Access and Benefit Sharing (ABS) under India's Biodiversity Regime

Kanchi Kohli Shalini Bhutani

Campaign for Conservation and Community Control over Biodiversity

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Abbreviations

ABS	Access and Benefit Sharing
BD	Biological Diversity
BMC	Biodiversity Management Committee
CBD	Convention on Biological Diversity
COP	Conference of the Parties
CSIR	Council of Scientific and Industrial Research
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CWSRI	Central Wool and Sheep Research Institute
DBT	Department of Biotechnology
FAO	Food and Agriculture Organisation of the United Nations
FOB	Free on Board
GBMR	Genetic and Biological Materials or Resources
GE	Genetically Engineered
GMBSM	Global Multilateral Benefit Sharing Mechanism
Gol	Government of India
GR	Genetic Resources
ICAR	Indian Council of Agricultural Research
INFC	Indian NGO Forum on CBD
IR	International Regime
IPR	Intellectual Property Right

KSCSTE	Kerala State Council for Science, Technology and Environment
MAT	Mutually Agreed Terms
MoEF	Ministry of Environment and Forests
NBA	National Biodiversity Authority
NCL	National Chemical Laboratory
NGO	Non-Governmental Organisation
NGT	National Green Tribunal
NP	Nagoya Protocol
PIC	Prior Informed Consent
PIP	Pandemic Influenza Preparedness
R&D	Research and Development
RTI	Right to Information
SBB	State Biodiversity Board
SHG	Self Help Group
TBGRI	Tropical Botanic Garden and Research Institute
ТК	Traditional Knowledge
USA	United States of America
WHO	World Health Organisation
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation

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The authors are thankful for this opportunity to do research and analysis on access and benefit sharing (ABS), drawing upon empirical evidence and locating it within the larger global politics. The study also provided us the opportunity to gain firsthand understanding of the ABS system in the country.

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Methodology

The research covered work at all levels of the institutional structure. While the focus was clearly on experiences of the SBBs and the communities with ABS in different parts of India, the research also included going through the ABS approvals, and understanding the dynamics between the National Biodiversity Authority (NBA), SBB(s) and other government institutions leading up to ABS agreements.

The constant monitoring of the implementation of the Biological Diversity (BD) Act through our campaign list serve (BiodWatch@yahoogroups.com) helped in staying con-



Interaction of the authors with members of the Payong BMC in South Sikkim in September 2012.



nected with developments as they were happening. We perused the available data and information put out by the NBA. We also interacted with chosen SBBs and Biodiversity Management Committees (BMCs).

The team also undertook the task of collating all the available State Biodiversity Rules, and studying the provisions in these relevant to the ABS discussion. Where there were gaps, we filed requests and followed through under the RTI law. There were a few things that stood out in the process – the legal illiteracy and ignorance about the law alongside the lack of full understanding of the BD Act and its differing interpretations which have impacted the actual implementation. Further, each state and each case brought out the disconnect of the ABS process from how local communities approach a particular biological resource and related knowledge, as well as the varied dimensions and unique problems embedded in the ABS framework.

During the study we also had occasion to both initiate and participate in several events and processes on the issue of ABS. We were part of the initial meetings that led to the formation of an informal network – Indian NGO Forum on CBD (INFC). As a build-up to the international conferences of the Convention on Biological Diversity (CBD) in India, several regional and thematic meetings on biodiversity, law and ABS-related issues were organised by INFC in different parts of the country. We were able to contribute to these efforts and also realised in the process that every such meeting brought up several concerns about the ABS regime.

We participated in the Open-ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol on ABS (ICNP2), in July 2012, in New Delhi. We also closely tracked the discussions at the Eleventh Conference of Parties (COP11) of the CBD, held in India, in October 2012.



A sharing meeting on ABS conducted by the authors on October 26, 2012 at the TERI Retreat at the outskirts of Delhi city. (Rapporteur's Report available)

After the CBD COP11, we organised a national-level meeting in New Delhi, during end of October 2012, specifically on the issue of ABS. This was conducted as a de-briefing of the COP11 decisions relating to the international regime (IR) on ABS, while consulting with the real 'stakeholders' on the way forward. At the meeting, the team shared some of its preliminary findings of the study on ABS in India, undertaken during the months preceding the meeting.

The research exercise, thus far, has attempted to firstly, capture the range of motivations that drive access to biological material and knowledge, and secondly, highlight the diverse shapes and forms the benefit sharing agreements take, due to the different ways in which the various institutions in the biodiversity regime understand and implement the benefit sharing agreements.

Meanwhile, the NBA had announced the country's first 108 ABS agreements. The collective processing of these, further informed our assessment and analysis. The findings from the field trips were processed together by both the authors, and the writing of this study was also undertaken as a joint exercise.



Meeting of authors with members of the BMC in Rohna village, District Hoshangabad of Madhya Pradesh in March 2012.

Preface

A 'balancing act' is used to describe a difficult situation that requires handling several different dynamics and priorities at the same time. Sometimes it requires bringing together imperatives and actions, which otherwise stand in conflict with each other, defeating the very purpose of why a balance was envisaged in the first place. In law, *balancing* is a decision-making method used at times by courts to weigh competing rights.

'Access' and 'benefits' too are competing for equal position in law and its implementation. Clearly, there are conflicting objectives to be realised in the grant of access to biological resources or people's knowledge, and the harnessing back of 'benefits' in a fair and equitable manner, with all involved. This is what international policy discourses and corresponding national legislations are attempting to respond to, by developing frameworks for determining access and benefit sharing (ABS). When juggling divergent interests — traders, scientists, corporations, communities and conservationists — administering ABS mechanisms is an ambitious attempt to ensure a fair deal for each of them. Doing justice to all is the challenge for those administering ABS.

For many people that, in part, is the problem —the attempt in law (both at the international level and national level) to put inherent opposites on the same weighing scale. The international law has tried to balance all these through one instrument —the Convention on Biological Diversity (CBD). In the global space, the rights of mega-biodiverse provider countries need to be balanced with the responsibilities of high-technology user countries. However, in the ABS framework designed under the CBD, and in its practice, it is the political economy that determines this balance. This is controlled by those individuals who have the power to interpret its contours and shape its understanding. This might be the state, the governing elite or in few cases the representatives negotiating on behalf of the communities.

This study is an inquiry into whether India's domestic legislative measure — the Biological Diversity Act, 2002 — can in compliance with CBD become that *balancing* force. Locating the legal regime in real time, it asks the question: Can the ABS framework developed under the Act actually tip the balance in favour of community sovereignty, sustainable use and biodiversity conservation? Or does it force notions of balance and goodwill into what are otherwise deep-rooted conflicts over control?

For the former to happen and the right balance to be achieved, ABS as an operative concept has to accommodate opposing prerogatives and re-design itself, as sometimes the nature of access itself would mean that only a few would benefit. Moreover, in the domestic spaces, upon granting access and while effecting benefit sharing, the status of the user and the provider need to be equalised, which is not possible in most instances. Given the realities under which the law operates and the ABS regime functions, evidence points to deepening inequities and growing disparities.

Finally, as in a circus trick gone wrong, if ABS fails as a 'balancing act', all things associated with it are at risk of tumbling down.

1 The Contours of Access and Design of Benefit Sharing

As per simple non-legal definition the word access means approaching or entering a place or actually obtaining or retrieving a material object. The term has acquired very specific meaning in the context of biological resources and people's knowledge. For generations human societies have survived and built civilisations through everyday access of biological material for food, fuel, fibre and fodder. Apart from meeting subsistence-level needs, access for local trade and exchange of biological products has generated livelihoods. What this consistent dependence established is a range of socio-economic inter-relationships, locally applicable technologies and cultural practices which dynamically evolved in a range of living ecological systems. This is what made one part of a country different from another while binding people living in similar ecological systems, even across international political boundaries.



Over the years the political economy of access to biological diversity (BD or biodiversity) and the related human knowledges began to matter. As world economies grew so did trade in biological material, for use in pharmaceutical, agribusiness and the life sciences industry. At the same time another trend surfaced; the public sector research and development (R&D) institutions were becoming more responsive to market opportunities or needs of the industry, at the cost of the larger public good and welfare for which they were set up. For instance, the Indian Council of Agricultural Research (ICAR) has set up its own registered company – AgrInnovate India Limited– to facilitate commercialisation of its research outputs.¹ However, there is neither an overarching national or regional policy framework to restrict unethical and exploitative access, nor any regulatory processes by which such access can be minimised, impacts mitigated and/or profits shared.

CBD, National Sovereignty and ABS

Today, the international law, which is the focal point for global discussions on access to biological material and related knowledge is the Convention on Biological Diversity (CBD). The CBD emanated from the growing concern, worldwide, to protect biodiversity loss and check 'biopiracy'. Even though the process to formulate such global measures had started in 1988,² it was at the Rio Earth Summit in 1992 that the CBD was opened for signature. It finally came into force on December 29, 1993. This history is important to locate the progression of how the terminologies of 'access' and 'benefit sharing' came to be established within this international framework.

The Convention insists that access to genetic resources and reciprocal transfer of technologies must be relevant to the purposes of conservation and sustainable use of biodiversity. This is clearly laid out in Articles 15 and 16 of the CBD, and has a bearing on how ABS is located within India's



BD Act, 2002. The Article 15 of CBD made a crucial change to the manner in which biodiversity would be owned, protected and governed. It also established whose consent would need to be taken prior to access. It was within the framework of the Convention that it was clearly established and agreed upon by governments that the CBD recognises the sovereign right of states (nation states, or countries) over their natural resources. Therefore, the authority to determine access to genetic resources also vests with the national governments and is

¹Indian Council of Agricultural Research. AgrInnovate India Ltd. http://www.icar.org.in/en/AgrInnovate-India-Limited.htm

²Convention on Biological Diversity. History of the Convention. http://www.cbd.int/history/

subject to national legislation. Accordingly, any related contractual agreement in the remotest part of a country, even with existing custodians or stewards of biodiversity and knowledge, would now need to be governed by the frameworks devised by national governments. Consequently, prior informed consent (PIC) was envisaged with the recognisable 'contracting party'-the national governments.

The politics of global conventions and representative decision making has brought us to a point where genetic material, biological diversity and related knowledge are controlled and owned by national governments. It is only through them that any proposals of access and benefit sharing can be facilitated. Bringing on board people and communities, who have evolved socio-economic and cultural practices around biodiversity and traditional knowledge systems, has become a half-hearted administrative exercise.

Box No. 1: Fifteen points on access to genetic resources laid down in Article 15 of the CBD

- 1. Countries have sovereign rights over their natural resources.
- 2. National governments have the authority to determine access.
- 3. Access to genetic resources (GR) is subject to national legislation.
- 4. No CBD country will impose restrictions on access that go against the CBD objectives.
- 5. Every CBD country will facilitate access.
- 6. Access to GR must be for environmentally sound uses.
- 7. Only the country of origin can provide access as per CBD.
- 8. Else the country providing access must have acquired the GR in accordance with CBD.
- 9. Access shall be on mutually agreed terms (MAT).
- 10. Access to GR shall be subject to PIC.
- 11. Scientific research on the acquired GR must be with the full participation of the provider country.
- 12. Every CBD country must have laws and policies for benefit sharing.
- 13. The results of R&D must be shared in fair and equitable way on MAT.
- 14. Benefits arising from the commercial and other utilisation of GR must be shared likewise.
- 15. Developing countries may make use of the financial mechanism of the CBD to set up the necessary benefit sharing mechanism.

CBD's approach to ABS

What is also important to note is that CBD approaches the issue of access to biodiversity primarily through an understanding of the 'genetic material'. In simple biological interpretation this means a cell or an organism that forms the basis for experimentation or scientific research. For instance, it is the basic genes of a rice variety which will be sought when it is accessed for laboratory research purposes. Local communities have rarely separated a seed, medicinal plant, bird or insect from its habitat, even during experimentation to create new varieties or medicinal compounds. Controversial as it may seem, it is possible that when CBD laid out the framework for access and defined benefit sharing, it may have largely had in view the interests of the scientific community, corporate businesses and public sector researchers.

Once the nature of access was established, its owners recognised and sustainable use emphasised, the CBD text created space for *fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.*³

There are many loose ends around benefit sharing that have been tied up as the CBD progressed over the last two decades, each one subject to multiple negotiations within the convention and the diverse external influences from various trade related treaties. For instance, the nature of appropriateness of access or levels of fairness has seen many derived meanings in the framework's national legislation and subsequently in the implementation of these objectives.⁴ Further, access and benefit sharing have also been revisited and redefined a few times within the CBD framework itself. The most critical has been the establishment of the inseparability of access and benefit sharing, as two sides of the same coin. It completely disregards the possibility that sometimes access can be so disenfranchising that it goes against the tenets of conservation and sustainable use, leading to the degradation of the biological resource or people's

³Convention on Biological Diversity. Article 1 on Objectives. https://www.cbd.int/convention/articles/? a=cbd-01

⁴The CBD does not define either access or benefit sharing in its original text. It only defines 'sustainable use' which means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. (http://www.cbd.int/convention/text/)

knowledge. In such instances sharing of benefits might be deceptive or misleading.

Therefore, both the nature of access and how benefit sharing will actually take place have become very crucial points in policy discourse. This is also due to the increased interest of the life

sciences and other trade sectors (like pharmaceuticals) to access biodiversity on one hand, and on the other the push-back from conservationists, rights activists and governments to ensure that the benefits accrue to the countries or communities from where the material or knowledge has been procured. The urgency of this discourse is heightened by the fact that despite the CBD being in place for two decades and many countries having introduced their own domestic laws (India's BD Act was instituted in 2002), it has not been possible to check the rampant instances of what is termed as 'biopiracy' or theft of biological material and knowledge (ironically 'biopiracy' is a word that does not occur in the CBD text).

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India, Biological Diversity and ABS

India is a mega biodiversity country endowed with immense biological wealth and intellectual heritage. The diversity is visible across species and ecosystems, be it in agriculture, forestry, livestock and poultry sector or the marine, coastal and even desert and mountain landscapes. The long history of interaction of human beings with their biodiverse natural environment has also resulted in the vast informal knowledge of seed varieties, animal care, herbal cures and diagnostic skills in local systems of medicine. This has made the country particularly attractive to bioprospectors and vulnerable to 'biopiracy'.

It is an established fact that access to and trade in biological material has a long history including from India. Be it medicinal plants, forest produce, crop seeds or animal breeds these have been a part of both human interactions and transactions for centuries. New technologies that made it possible for 'developed' countries to identify and isolate the genetic parts

> of these biological resources, altered not only how R&D is done but also what is being transacted or exchanged – the genetic material (and not the whole plant, fruit, seed or animal). However, the formalisation of the frameworks defining the legality of ABS has been relatively recent, both internationally and in India.

It is evident that science and technology have put pressure on law and policy to keep pace – thus, the pressure to create an ABS framework. A legal framework and policy environment is needed for ABS to be effected. Yet it is the technology providers and user countries that have attempted to shape the legal framework internationally, which in turn has a direct bearing on how it plays out at the domestic level. In order to be able to critically assess both the political and practical efficacy of these newly emerging legal and policy designs, meant to institutionalise the practice of ABS, it is also important to delve deeper into the past experiences with biodiversity-based enterprises and agreements.

Do they present lessons on the feasibility of this concept? Where does the issue of ownership of genetic and biological materials or resources (GBMR) figure in these experiences and does the CBD framework offer any way out for it? Moreover, how do various examples of biodiversity based enterprises or local trade orient themselves into becoming fair benefit sharing agreements?

2.1 India Pre-CBD

Prior to the CBD or the BD Act, the transfer of GBMR between countries was not happening entirely in a law and policy vacuum. However, there were neither any common practices nor means to track the movements of GR across borders. While some transactions were regulated, particularly those between research institutions of different countries or international gene banks, several others went under the radar. Since genetic wealth was regarded as the 'common heritage of humankind', it was considered acceptable for any and everyone to freely access and use it as they pleased. Therefore, there was also no recognised need to recompense the country of origin even though local people were seeking solutions for the continuing misappropriation of both their resources and knowledge without their consent. 'Biopiracy' was rampant and there were no agreed protocols for benefit sharing between the users and providers.

One instance of bioprospecting that is labelled as India's 'first ABS case' came to the fore, pre-CBD. It happened within India and pertained to the Tropical Botanic Garden Research Institute (TBGRI), based in Kerala. The TBGRI accessed the knowledge and the plant on which it is based *— Arogyapacha —* from some representative members of the Kani tribe, residing in the forests of the Western Ghats, in the southern state of Kerala. This case dates back to the late 1980s; more importantly it was pre-1992, which meant that the two relevant laws were not in force:

- at the international level, the CBD was not yet in place and therefore there was no globally agreed concept of ABS
- at the national level, the 73rd (commonly referred to as the Panchayati Raj Act) and 74th (the Nagarpalika Act) amendments to the Constitution of India had not come into effect

The NBA's fact sheet on Access and Benefit Sharing Experiences from India states that the country's engagement with ABS goes back to the time when the TBGRI accessed material and knowledge from the Kanis. The NBA claims that such initiatives were progressive, noteworthy and ensured that local communities were recognised and rewarded for providing the genetic resource and associated traditional knowledge that resulted in commercialisation of a drug with anti-fatigue properties called 'Jeevani' (Bhatt et al, 2012; NBA, 2012). During those times, there was no PIC, which came into being later in the CBD and the Nagoya Protocol (NP). So the sharing of 'benefits' was an act of benevolence by some well-meaning scientists of the TBGRI.

What the Kanis (or rather a few representatives from the Kani tribes from several villages who entered into this arrangement with the TBGRI) did not have then, which the BD Act provides now, is the right to negotiate and claim benefits. But this right to negotiate is embedded in the market place, and moreover the law does not respect or recognise their right to say 'no'.

The Kerala Kani Samudaya Kshema Trust was established in the mid-1990s by the Kanis with assistance from the TBGRI. A sum of money, part of the upfront license fee paid by the company Arya Vaidya Pharmacy (Coimbatore) Ltd. to the TBGRI, was transferred to the account of the Trust, to be used for the benefit of the tribals in that area. Several years on, the registered Trust lies defunct, and for their own medical needs, the members of the tribal community have to travel out of their village in the forest, which has neither quality healthcare nor reliable public transport. Meanwhile, Arogyapacha continues to be commercially used in medicinal applications by small and large pharmaceutical companies.

The TBGRI is a public sector R&D institute functioning under the Kerala State Council for Science, Technology & Environment (KSCSTE), Government of Kerala. However, the Kani case did not set a precedent that other public sector R&D institutions, at the central or the state level, imi-



The Kani case happened at a time when the Kerala State Biodiversity Board did not exist. Surprisingly though even after 2008 when the Board was set up, it has had no real meaningful contact with the Kanis. However, through 2009-2013 the Board has been processing access applications, 15 of which were forwarded to it by the NBA. In one case (ref. NBA/Tech Appl/9/506/12/12-13/1170) it denied consent to a Canadian seeking approval to document traditional knowledge of Adivasi mahouts in Wayanad Elephant Camp, Kerala. (For more see section on Approvals on: www.keralabiodiversity.org)

tated or replicated. Neither was the sharing done again by TBGRI. Yet this case is held up and positively highlighted as the 'first ever *model* (sic) of benefit sharing'.

Since the Kani case, TBGRI has been continually involved in bioprospecting. The Institute has a dedicated division on ethnomedicine and ethnopharmacology, which focuses on traditional knowledge (TK) and TK-based R&D. Many of the projects therein are supported by the Central government. For example, there was a project in 2009 funded by the Department of Biotechnology(DBT), on scientifically validated nutraceuticals from medicinal plants of the Western Ghats, wherein a patent was sought on the isolation of an active fraction.⁵

⁵TBGRI. (2009). TBGRI Annual Report. http://www.jntbgri.in/jntbgri/NEWS/AnnRep2009.pdf

TBGRI asserts that prior informed consent of gram panchayats⁶ is being taken, as in the case of its programme on 'Systematic Documentation of Traditional Knowledge from the Oral Tradition'.⁷ But in the case of grant of a patent, the question is whether the local healers will be acknowledged and a

benefit sharing agreement signed between them and the Institute. Amongst the ABS agreements perused by the authors (based on approvals for seeking intellectual property right (IPR)) none pertained to TBGRI. But there were instances of other public sector institutes like the Council of





The Trust building constructed in the 90s in the vicinity of the forest-dwelling Kanis lying in disuse today and (above) the rusted lock on its door.

⁶Gram panchayat (literally meaning the village council/assembly) is a unit of local self-government at the village or small town level in India.

⁷TBGRI. (2009). TBGRI Annual Report. http://www.jntbgri.in/jntbgri/NEWS/AnnRep2009.pdf

Minutes of the 13th Authority Meeting Date: 28.01.09

13.28. 5 - ADDL. AGENDA : IPR agreements of CSIR:

Based on the letter vide no.NBA/Tech Appl/9/109/07/08-09/333 dt.23.01.09 sent by NBA in connection with signing of agreements for 205 applications submitted for seeking IPR to Director General, Council of Scientific and Industrial Research and to the Head, Intellectual Property Management Division. Dr. R. K. Gupta and Dr Naresh Kumar (Member Representative of DG CSIR) attended the Authority meeting and participated in the discussion. Considering that CSIR is a public organization and in order to encourage innovations by the scientists who are also engaged in generating public goods and services, it was decided that in the instant cases the agreements with CSIR may be approved with 2 % of royalty on benefit sharing. The action on this matter may be expedited on priority as otherwise it will tantamount to violation of the provisions of the Biological Diversity Act and Rules.

The meeting ended with the Vote of thanks by the Chair.

Source: Section containing minutes of Authority meetings under 'Public Information' on NBA's site http://nbaindia.org/blog/311/24/2/meetings.html

Scientific and Industrial Research (CSIR) that have sought IPRs. (Ref. NBA/ Tech Appl/9/109/07/08-09/333 dt. 23.01.09).

2.2 India's Law and Institutional Framework for ABS

India's Biodiversity Regime

India's Biological Diversity (BD) Act is a law enacted to set up a biodiversity regime to implement the CBD in the domestic context. The BD Act has prescribed an institutional framework to implement the three objectives of CBD — conservation, sustainable use and equitable sharing of benefits arising out of the use of biological resources and related knowledge. In 2003 a National Biodiversity Authority (NBA) was set up by the Ministry of Environment and Forests (MoEF).⁸ Subsequently, State Biodiversity Boards (SBBs) have been set up in 26 states. The 11-member SBBs have representation from the concerned departments of the state government and biodiversity 'experts'. No local communities are represented here.

At the local level the BD Act mandates seven-member Biodiversity Management Committees (BMCs) to be set up by every local body. The BMC is the lowest rung of the institutional structure. The NBA and SBBsare

⁸National Biodiversity Authority. http://nbaindia.org/content/16/14//introduction.html

required by law to mandatorily consult the BMCs while taking any decision relating to the use of biological resources and associated knowledge that are within the territory of the BMC. It is supposed to deliberate on access applications routed to it by the NBA via the SBB. Even though there are no functioning BMCs in many states, yet the work of processing access applications has continued unabated at the NBA level since 2004. The NBA is central to the process of screening and approving access applications (See flowchart below). An Expert Committee on ABS, with 21 members, functions within the NBA as a standing committee to process access applications.

Different configurations within the NBA deal with the processing of access applications till they culminate into ABS agreements. These are:

- the NBA Secretariat
- the Expert Committee on ABS for processing the applications
- the NBA members' meeting that ratifies the Expert Committee's recommendation for approval
- any other technical experts to whom an issue may be referred to be able to arrive at a decision

At an NBA meeting in November 2011, it was decided that *when there is a precedent in respect of a particular bioresources is cleared (sic) by the Authority, then the Secretariat may clear applications of similar nature.*⁹ A checklist for processing applications in the NBA Secretariat has also been finalised. At the subsequent meeting of the Authority in May 2012, five access applications that were cleared by the NBA Secretariat were placed before the members for post-facto approval.¹⁰

Sections 3, 4 & 6 of the BD Act, 2002, together with Rules 14-19 of the corresponding Biological Diversity Rules, 2004, lay down the procedure to be followed for access to Indian biological resources and/or associated traditional knowledge. The law, in line with the CBD, makes clear that the main focus is to regulate the use by foreign persons. However, the proposed guidelines on ABS are yet to be finalised by the Ministry of Environment and Forests. In fact, there was some resistance from Indian

⁹Minutes of the 24th Meeting of the NBA. (May 23, 2012). National Biodiversity Authority. http://nbaindia. org/uploaded/pdf/Proceedings_of_24th_Authorty_meeting_23.05.12_1.pdf

The ABS process in India



Source: NBA 2012 Docket 'Century in ABS'

industry (such as Ayurvedic medicine manufacturers), which does not want any kind of procedural delay in gaining approval for accessing the raw material they require. Moreover, the Ayurvedic companies do not want the herbs that they grow to be subject to any ABS requirements.

The NBA views ABS as a 'large scale financing mechanism', which would generate the necessary funds for conservation. But the ABS system will generate funds only upon commercial utilisation. Therefore, the irony is that both for the purpose of sharing benefits with communities and for conservation activities, the NBA is relying on commercialisation of GR and TK.

For the CBD requirement of prior informed consent, the NBA has to ensure meaningful participation of the local communities from where the GBMR and traditional knowledge is accessed. For that it has to re-direct every query regarding access to the relevant SBB(s). So it depends very much on the strength, interest and capacity of the SBBs to carry through the consultation with the BMCs or local peoples, where such BMCs have not yet been formed. A table detailing the manner in which access to GBMR is dealt with in the State Biodiversity Rules (of 16 states) is provided in Annexure 1.

Box No. 2: Types of access applications users may submit to the NBA

The NBA receives access applications in a prescribed format along with the required fees in Indian National Rupees (denoted as INR or RS):

Form I: Application for access to biological resources and associated traditional knowledge (Fee Rs.10,000/-)

Form II: Application for seeking approval for transferring results of research (Fee Rs. 5,000/-)

Form III: Application for seeking prior approval of NBA for applying for intellectual property right (Fee Rs. 500/-)

Form IV: Application for third party transfer (Fee Rs.10,000/-)

Agenda for 14th Authority Meeting of NBA dt.21.07.09 at New Delhi
24 Proceedings of the Expert Committee on Determination of Equitable Benefit Sharing held on 14.05.09 at Head office of National Biodiversity Authority, Chennai
 Application Number: NBA/Tech Appl/9/256/09 Applicant Name: Shri. Sanagar Dinakar Haribahu, Shri. Ballal Renuka Bharat, Malkapur Po., Near Vitthal Temple, Tal-Shahuwadi, Dist – Kolhapur, State – Maharashtra, Pin: 415 101.
3. Form used and Date: Form III, 15-03-2009
4. Name of the project: Invention of herbal antiretroviral agent against HIV infection / AIDS.
5. Type of Bioresource : Picrorrhiza Kurroa – Kutki or Kutka (Scrofulariaceae).
6. Geographical Location: The Biological resource of origin is Himalaya and the plant grows at the height of 3000 to 5000 m. The plant was collected from Himalayan regions and at low temperature results of tissue culture are promising.
 Remarks: R&D activities carried out at: Yashwantrao Mohite College, Bharati Vidyapeeth University, Department of Microbiology, Erandwane, Pune – 411038.
A. Analytical Note on the Case: -
B.Decision: -
Recommended for approval.
 Recommended that 2% of royalty and / or Licence fee shall be given to NBA towards National Biodiversity Fund.

Example of Form III-type access granting approval for applying for intellectual property right on a herbal invention. Source: Section containing minutes of Authority meetings under 'Public Information' on NBA's site http://nbaindia.org/uploaded/docs/14_authorityminutes_010909.pef



The Naga Mirchi was granted an IPR and registered as an agricultural good with a geographical indication at a time when the BD Act was in force. Question is if the NBA's permission was sought under Form III-type access approval. The larger unaddressed issue also is whether such an IPR facilitates the *in situ* conservation of the chilli varieties and actually benefits small local farmers in Nagaland.

2.3 The Practice of ABS

The legal provisions dealing with grant of access were brought into effect in 2004 after the NBA became fully operational. During its second meeting in 2004, the NBA processed the first eight applications for access of biological resources that it had received. By its third meeting in July 2005, the ABS agreements for access, material transfer and intellectual property rights were being prepared by the NBA using the expertise of lawyers from various government departments. However, there was concern amongst researchers and non-governmental organisations (NGOs) that SBBs had not been formed in all states, which also meant that there were no functioning BMCs in those states at that time (Bhutani and Kohli, 2012).

In 2005, at an NBA meeting members stressed the need to prioritise commercialisation with fair and just benefit sharing, because out of all the resources spent by the NBA till that point, not one rupee had gone to the communities whose knowledge and resources they are supposed to protect (Bhutani and Kohli, 2012). Back in 2007, in an NBA meeting to discuss benefit sharing it was also clearly highlighted that PIC will form the basis for designing any benefit sharing mechanism or framework. However, it was not specified at what level this PIC will operate and the meeting concluded that further elaboration was needed to formulate policies that will accurately reflect the philosophy of ABS (NBA, 2007).

In July 2012, at a meeting prior to the Eleventh Conference of Parties (COP11) ICNP-2¹¹ the MoEF announced that India has 100 agreements related to ABS (OneWorld South Asia, 2012). The ABS fact sheet brought out by the NBA in October 2012, affirms this and states that the revenue generated through benefit sharing accounts for a total of Rs. 43,39,698 in the ten years of existence of the BD Act in India. It is important to understand that these 100 cases pertain to instances (until July 2012) where agreements were signed. There have been instances where the NBA has granted approval for access to an applicant but a formal agreement between the two sides has not been executed subsequent to the grant of approval. By October 2012, another eight ABS agreements were announced, taking the total to 108. This does not necessarily mean benefit sharing arrangements have been attempted or realised. Even in the cases where benefit sharing has happened, it is limited to payment of a royalty or fee to the NBA. A few examples in the subsequent sections delve deeper into the issue.

While the Government of India (GoI) and NBA cite the 108 instances as successful examples of ABS, a clear set of guidelines on benefit sharing are yet to be made public; even though NBA claims that it has developed a set of terms and conditions for ABS agreements. The total number of applications received by the NBA is 684, as per publicly available information as of December 2012. This number is very low for 10 years; therefore, it is possible that most access is taking place without approvals.

Complex as the realm of benefit sharing is, the NBA and international protocols are seriously pushing for contractual arrangements to be established so that monetary gains and joint intellectual property rights can be obtained. While the NBA receives maximum number of applications for IPR,

¹¹The Second Meeting of the Open-ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (ICNP-2) was held at the Vigyan Bhavan Convention Centre in New Delhi from July 2-6, 2012. More details of the agenda items and related notifications are available at http://www.cbd.int/icnp2/.

this category of approvals has brought in the minimum amount of monies. A paltry amount of Rs. 3,940 out of a total of Rs. 43,39,698 has been received by the NBA as royalty so far, from patent applications that have been approved (NBA, 2012). There are several other such asymmetries that have surfaced from the experience of implementing ABS.

More interestingly, though the entire legal edifice for fighting 'biopiracy' was set up, through regulating the use of India's biological materials and know-how when accessed by foreign persons, most of the ABS agreements till date have been signed with Indians! Barely about a score of agreements out of the total are with foreign entities. (See Annexure II). It is difficult to compute the exact number and the precise amount received from overseas as benefit sharing since full information is not publicly available. The ABS system in the country is yet to become a means to address the real problems for which it was set up for.

Table No. 1: NBA's first 100 ABS agreements (as of July 2012)				
Form	Category	Applications Received	ABS Agree- ments Signed	Amount Received (INR or RS) as BS
I	Access to GBMR and/or TK	111	17	Break-up figure not known
II	Transfer of Research Results	35	12	Break-up figure not known
III	IPR	477	54	3940
IV	Third Party Transfer	61	17	Break-up figure not known
	TOTAL	684	100	43,39,698

Compiled by authors from information in NBA Docket 'Century in ABS'

a) When NBA Grants Access, Seeks Benefit Sharing

The sections above have clearly highlighted the procedure prescribed in India's BD Act to seek approval and to gain access to GBMR and TK. Contrary to the NBA's stated position that there exists a formal mechanism within the national rules for benefit sharing, such processes are far from specified. The NBA has recently claimed that the four forms (Box No. 2) appended to the Biological Diversity Rules, 2004, are to be considered as *ABS agreements under the Biological Diversity Act* (NBA, 2012). A closer reading of these forms reveals that these are primarily application formats to be used by accessors¹² or IPR seekers to take permissions from the NBA.

When it comes to benefit sharing the forms seek the details of economic, biotechnological, scientific or any other benefits that are intended, or may accrue to the individual/organisation due to the access, IPR,



After approval for access is granted to an applicant by the NBA an ABS agreement is executed in duplicate, stamped with the official seal and duly signed on non-judicial stamp paper by the authorised officer of the Authority.

commercialisation or the transfer of research results. These details are sought only from the applicant seeking access; thereby, the onus of disclosure is on the applicant entirely. In order to understand why this is problematic, it will be essential to assess a few of the 108 agreements, which the NBA claims are ABS agreements based on the formats provided (Forms I to IV – Box No. 2). Alongside and upfront, what needs to be reiterated is that the NBA or the SBBs do not have a final set of guidelines and procedures whereby benefit sharing can be done in a fair and equitable manner.

Who benefits from red seaweed?

M/s. Britto Seafood Exports Pvt. Ltd., Chennai, signed an agreement with the NBA to export 28 metric tonnes of Kappaphycus alverazii (red seaweed), collected by women's self help groups (SHGs) from Palk Bay, Mandapam and Rameshwaram areas of Tamil Nadu, to Vietnam. This agreement for commercial utilisation was signed on July 9, 2010, where it was clearly stated that the red seaweed would be cultured by women SHGs using bamboo

¹²The term accessor is used to refer to the applicant seeking approval for access of GBMR/TK or IPR under the Indian biodiversity regime. It is used interchangeably with the term 'user' on whom benefit sharing obligations would arise upon an ABS agreement being signed with the NBA.

racks following which it will be used to manufacture carrageenan. This kind of Kappa-carrageenan is used mostly for breading and batter due to its gelling and thickening properties.

What is interesting is that the clause 7.2 of this agreement states that the NBA shall direct M/s. Britto Seafood Exports Pvt. Ltd. to share the benefits as per subsection 2 and 3 of Section 21 of the BD Act, which is where the types of benefit sharing are listed. In the application form the identified benefit claimer

was a small company M/s. Aqua Clinic Centre, Mandapam, Tamil Nadu. It was also agreed upon between the accessor and the NBA that benefits will accrue to the community, as poor fishermen would find employment through seaweed farming as the product will be procured from the fisher folk at a fixed and assured market price. Subsequently, the SHGs will be involved in the processing of the seaweed. Moreover, India will earn foreign exchange from the export. No BMCs were consulted before approval for access was granted, as mandated under the law. M/s. Britto Seafood Exports paid the NBA a royalty of 5% of free on board (FOB) value of the export consignment. This is one of the ABS agreements signed by the NBA.

While the primary issue here is the lack of benefit sharing with either the fishing community or the red seaweed collectors and processors, it also raises a larger question – whether benefit sharing is possible at all. The other issue relates to the varying notions of who is a benefit claimer. For M/s. Britto, the intermediary company, M/s. Aqua Clinic Centre, whichprocured the seaweed, was the benefit claimer and not the fisher folk or SHG members. The sanctity of benefit sharing proposed by M/s. Britto and approved by the NBA, was limited to believing that poor fisher folk will profit from a fixed market price. This was no different from a local trade agreement, and the BD Act did not add any value to the deal. It added an additional layer of permission from the NBA and payment of a royalty. This and other examples in this study throw light on the complex nature of biological resources and knowledge, and the problems related to attributing ownership to one or a few.

There is an administrative burden for grant of access, created by the regulatory processes specified in the BD Act. Even though the NBA is able

to recover some costs from the fees that are charged with every case of access, there is no study done on the costs of the administrative burden. Considering the nature and quality of transactions on the access side – maximum applications for IPR which attracts the lowest fee of Rs. 500 – and the ratio of how many actually result in ABS and even lesser that result in commercial exploitation of the IPR, there is clearly a need for a review. The institutional structure for collection of 'benefits' is a hugely costly affair; no big returns are accruing from it. The onus of setting up such a system, for the developed world to abide by, lies with the biodiversity rich provider country, creating a double burden – of protecting its biodiversity and managing a working ABS system. Therefore, in the Indian context a cost-benefit analysis needs to be done to check whether the country is spending more than it is getting back through the ABS system. If it is so, then the belief that ABS as a concept and practice can generate wealth is illusory, and has to be revisited.

b) When NBA Asks the State Boards

As per the response received by the authors from the NBA, to a *Right to Information* (RTI) application in March 2012, it appears that there are 162 instances where the Authority has referred applications to the relevant SBBs for response or consultation/consent for access of bio-resources. A further break-up of the statistics reveals that out of the 162 applications, 129 were related to Form III (seeking NOC for obtaining IPR) and following that were 21 applications under Form I (to access biological resources and TK). Five applications were received for transfer of research results (Form II) and another seven were for third party transfer of the accessed biological resources (Form IV). The leading states from where responses were sought include Tamil Nadu (33), Gujarat (30), Andhra Pradesh (22), West Bengal (20) and Kerala (15). In West Bengal, 18 out of the 20 applications referred to the SBB by the NBA were for seeking approval for IPR. In some cases the NBA has sought responses from multiple states.

While numbers might be important, they might not do complete justice to the story. Scrutinising some of the instances where the SBBs have given consent, it appears that some of the cases should have been perused more critically to examine the implications of access and to evaluate if there is an even remote possibility of benefit sharing.

Who does the Garole belong to?

One such case was regarding the access to the genomic DNA (25 samples each) of two Indian sheep breeds—Deccani and Garole—by the Plant Molecular Biology Unit, Division of Biochemical Sciences, National Chemical Laboratory (NCL), Pune. Blood samples of these two breeds were collected from the Sundarbans region in West Bengal and the Southern Peninsular region and transferred to Dr. James Kijas, Principal Research Scientist, Commonwealth Scientific and Industrial Research Organisation (CSIRO) Livestock Industries, Queensland Bioscience Precinct, Australia. The date of the agreement was November 26, 2009. The Garole is a native and local variety of sheep, with distinct characteristics, found in the extended coastal areas of Sundarbans in West Bengal. There has been growing interest in this small sheep for its mutton production as well as wool.

A related development reported in September 2009 would also be of interest here. There was a news report in The Telegraph highlighting that two research teams from the Central Wool and Sheep Research Institute (CWSRI) in India had independently developed crossbreeds of the Garole sheep and sheep from Rajasthan and the Deccan region, which could produce more lambs per ewe, harnessing a special gene possessed by the Garole (Mudur, 2009). The CWSRI did not inform either the SBBs or the NBA about this. According to the news report cited above, the research may have replicated results obtained in Australia (inadvertently) with Garole as far back as two centuries. The Garole sheep is stated to have been sent to Australia two centuries back, albeit not for pedigree boosting purposes. They probably cross bred with native Australian varieties of sheep and helped increase the number of lambs in those breeds in Australia. This was scientifically established a few years back by researchers. Therefore, it can be assumed that the demand for genomic samples from NCL on behalf of CSIRO were also to carry out further research on this property of the Garole breed.

The practice of exchanging research results and perhaps even germplasm continues in the name of biotechnological advancement, even as the Garole sheep rearers in India are completely out of the picture, despite being the original stewards of the GR. What is ironic is that the West Bengal SBB has granted approval for this application and the NBA has entered into the agreement with no reported consultations with the sheep rearers or related BMCs. Ironically NBA's ABS fact sheet (mentioned in the previous section), released at the time of the CBD COP11, held at Hyderabad in October 2012, considers this as one of the examples where ABS has been realised. It highlights that the NCL's dispatch was to CSIRO which is a member of the International Sheep Genome Consortium for Ovine HapMap¹³ project. It further highlights that the applicant/country would commercially benefit by having their breeds characterised genetically and evaluated for molecular diversity and genetic relationships with all other breeds in the study (NBA, 2012).

The NBA has, over the years, started seeking responses from SBBs regarding applications involving IPRs. In some instances the SBBs have been proactive in their suggestions and requested for a more detailed process before the approval is granted. In this regard it is interesting to note that in almost all instances where an IPR approval is involved, the response of the Gujarat SBB has been to suggest that the NBA organise public hearings in such cases and decide the issue. However, this has not been put into practice as yet.

One of the cases where the Gujarat SBB suggested this was with reference to the application by the Director, National Research Centre for Medicinal and Aromatic Plants seeking approval for access to a few medicinal plants — *Aloe barbadensis, Aloe africana, Aloe capensis, Aloe ferox.* This was to develop a novel method for preparing aloin from aloe through extraction and purification. It was envisaged that there will be widespread commercial utilisation of the same. The agreement which was signed with the NBA entails sharing 2% of the gross sales or gross revenue of the product derived from the use of the biological resource. When NBA had sought the response of the SBB, the latter had suggested that a public hearing be conducted in Anand, Gujarat. However, there is no evidence that this was done prior to the signing of the agreement in 2010.

c) When State Boards are Intimated

As per the BD Act, each time an Indian entity accesses biological/genetic material or people's knowledge, it is required to intimate the concerned

¹³The haplotype map, or 'HapMap' is a tool that is used by researchers to find genes and genetic variations that affect health and disease. In addition to its use in studying genetic associations with disease, the HapMap is a powerful resource for studying the genetic factors contributing to variation in response to environmental factors, susceptibility to infection, and the effectiveness of and adverse responses to drugs and vaccines (See: http://www.sheephapmap.org/participants.php and http://hapmap.ncbi.nlm.nih.gov/).

SBB(s). This is not necessarily in the form of seeking permission. However, depending on the different state biodiversity rules, the SBBs may have the authority to seek additional details and also lay down conditions for access. However, this aspect of ABS needs to be addressed through two dimensions, first, through the kinds of applications which have been received by the SBBs as intimations for access (which is prescribed under the BD Act), and second, through the efforts of the SBBs in attempting to ascertain the extent and nature of access that is taking place as well as making instances of benefit sharing possible.

Over the last few years SBBs have begun receiving a few applications intimating them about various kinds of access for commercialisation or transfer of research results. The state of Madhya Pradesh has one of the most active SBBs when it comes to receiving intimations as well as going after domestic accessors that have not informed the SBB; it also has a dedicated website dealing with ABS.¹⁴ The SBB has received several intimations directly from Indian accessors which includes M/s. Natural Remedies Pvt. Ltd., a manufacturer of Ayurvedic veterinary medicines based in Bengaluru.

The company approached the SBB with the specific purpose of seeking approval for commercial utilisation of various medicinal plants. Members of the SBB facilitated an ABS agreement for *Kalmegh (Andrographis paniculata)*, a medicinal plant, between the Malajkhand municipal BMC in Balaghat and M/s. Natural Remedies. As a result ten tonnes of *Kalmegh* had been collected and sold at the rate of Rs. 25/kg as of March 2012. The price of *Kalmegh* in the nearby town of Itarsi was Rs. 4/kg. This collection had been done by the BMC not from community land in the municipal area or the farms but from the forest areas adjoining the municipality. The company has granted a bonus of Rs.10,000 to the BMC and has also offered to 'teach' local people how to collect and package the produce (Kohli and Bhutani, 2012).

NBA's 2012 fact sheet states that the Malajkhand BMC authorised an 'aspiring' SHG to do the collection of *Kalmegh* (NBA, 2012). This example clearly indicates that the trade agreement in the name of benefit sharing arrangement was facilitated by the SBB. This was done through the most conventional form of local procurement of the resource. Neither were the larger issues of custodianship and knowledge and availability of the

¹⁴MP State Biodiversity Board. http://www.mpsbb.info/ABSInfo.aspx

medicinal plant in other villages of the area taken into account, nor were other villages/panchayats or BMCs informed.

What difference did the existence of the BD Act, its provisions or the draft ABS guidelines make in this instance? But the NBA's 2012 set of case studies (Bhatt et al, 2012) considers this as an example which will allow for conservation and sustainable utilisation of the bioresource. Moreover, it propounds that the empowerment of the communities will make the consumers 'fall in line'. It does not address the fundamental issues of prior informed consent (PIC), impact assessment of the access and the custodianship of the biological material by a larger community. It also fails to follow what happens to the genetic material once it is accessed and taken away from the point of collection.

The herbs that didn't pass muster?

Another example of intimation to the SBB relates to a case in Sikkim. In May 2011, Dabur India Ltd. informed the SBB that it had collected samples of three high-altitude species viz. *Nardostachys jatamansi, Picrorhiza kurroa*

S. No.	Name of Party	Nature of Business/Profile	Applied for	Action taken by Board
1.	M/s Natural Remedies Private Limited	Manufacturer of Ayurvedic veterinary medicines	Commercial utilization of various medicinal plants	 Letter issued to the firm as per section 17 of M. P. Biodiversity Rules 2004 and section 07 of Biological Diversity Act 2002 asking for details of name, quantum, source and areas of extraction of bio-resources.
			under	2. Correspondence done with BMC Nagar Palika Parishad, Malajkhand.
	1.00	Intorna	then the reas	 Draft of mutually agreed terms and conditions for according approval of Access and Benefit Sharing sent to M/s Natural Remedies Private Ltd.
2.	M/s ITC (Application received from NBA)	Manufacturer of paper boards and speciality papers	Collection of Eucalyptus for research purpose	Correspondence done with BMC Janpad Panchayat Lakhnadon and BMC Nagar Panchayat Bhedaghat
3.	M/s Guruji Harbal Products	Manufacturer of Ayurvedic medicines	Commercial utilization of medicinal plants and herbs for manufacturing of ayurvedic medicines	Letter issued to the firm as per section 17 of M. P. Biodiversity Rules 2004 and section 07 of Biological Diversity Act 2002 asking for details of name, quantum, source and areas of extraction of bio-resources.
4.	M/s Pukhraj Herbals	Manufacturer of herbal extracts and dehydrated garlic	Commercial utilization of allium cepa, allium sativus, withania somnifera, eclipta alba species	Letter issued to the firm as per section 17 of M. P. Biodiversity Rules 2004 and section 07 of Biological Diversity Act 2002 asking for details of name, quantum, source and areas of extraction of bio-resources.

Information about MP SBB's responses to access applications received from the Board in an RTI reply.


Given the nature and extent of bioprospecting in Sikkim, the State and its Biodiversity Board face several challenges. There is a proposal to set up a North East office of the National Biodiversity Authority at Shillong, Meghalaya.

and *Swertia chirata* in 2008. These samples were brought to the company's plant tissue culture laboratory at Sahibabad, Uttar Pradesh. However, the scientific endeavour for which the collection was undertaken was unsuccessful. This information was revealed by Dabur only after an official of the SBB contacted the company officials telephonically, seeking an update on the case. (RTI response from the Sikkim SBB dated May 31, 2011; communication with officials in September 2012). Such an instance presents a scenario where the SBB has to rely entirely on the assurance of the company that the experiment had failed and that it has no further use for the germplasm collected.

Under normal circumstances, the Sikkim Biodiversity Rules has a detailed procedure which the SBB has to follow to respond to such intimations of access. It includes a detailed consultation with the local bodies (panchayats, hill councils, municipality) after issuing a public notice, and receiving formal consent of the communities from where the access took place. There is no confirmation that the procedure prescribed was followed. Since the company presented a no-success scenario, no attempt was made for benefit sharing. What is also critical to understand here is that often companies or accessors might inform the SBB post facto, but there is no mechanism to check, control or monitor this post-access scenario. This aspect is discussed in more detail in the next section.

There have also been cases of intimation of access for which the SBBs had to refer the matter to the NBA. In Andhra Pradesh, an application was received from Mr. Sriram Gangadhar of Bio-India Biological (BIB) Corporation, Nacharam, Hyderabad, for accessing 30 tonnes of *Glinus oppositifolius*¹⁵ (known commonly as bitter cumin or Indian chickweed or kadvi bhaji) in one year. Some species in the Glinus family are used as herbal remedies while others are consumed as food.¹⁶ While the SBB responded affirmatively to this application without any interface with the BMC or local body, it also referred the matter to the NBA seeking its intervention as the plant was going to be exported (RTI response from Andhra Pradesh SBB dated May 12, 2011).

In such a case, the onus of seeking the requisite permission and drawing any benefit sharing agreement is the responsibility of the foreign agency to which third party transfer is taking place and not the Indian company initiating the transfer. But wouldn't the onus also lie on the Indian agency (intimating the SBB) to inform its foreign collaborating counterpart? Moreover, wouldn't it be the responsibility of the SBB to restrict such access in consonance with the BD Act? In the above case neither of these happened, which shows a clear loophole in the law and its implementation.

d) When Benefits are Claimed by BMCs or Local People

Currently the way the ABS regime is designed it is seen as a top-heavy process, with the top-down approach when it comes to consulting SBBs/ BMCs and taking decisions. However, according to the Act BMCs are empowered to directly claim financial 'benefits'. They can charge fees from any person accessing or collecting any biological resource for commercial purposes from areas falling within their territorial jurisdiction (Section 41(3) of the BD Act).

¹⁵Wikipedia. Glinus oppositifolius. http://en.wikipedia.org/wiki/File:Glinus_oppositifolius_%28Bitter_cumin% 29_W2_IMG_0462.jpg

¹⁶Wikipedia. Glinus. http://en.wikipedia.org/wiki/Glinus

Most often, the official process for ABS is triggered when an accessor approaches the NBA at the national level. But there are processes at the state or local level that precede a formal application to the NBA. This usually begins with the accessor having done bioprospecting in an area or having sought material from a public sector institute sans the knowledge of the BMCs or local communities. Alternatively, the local people may directly negotiate with a prospective accessor. In such cases the demand for benefit sharing is initiated from ground up.

This was the case when a State Agriculture University (SAU) in the state of Karnataka shared genetic material of traditional varieties of brinjal with MAHYCO –a seed company in which Monsanto has a minority stake. The brinjal varieties were genetically engineered in the company's facilities to develop its proprietary transgenic Bt brinjal. The SAU transferred the genetic material without PIC of the local communities. In fact, the entire ABS process was by-passed despite the presence of a functioning SBB in the state. This matter was raised by several farmers groups and NGOs and a complaint was lodged with the Karnataka Biodiversity Board. The NBA took cognisance of the matter and after an inquiry determined that the company has violated the law. It has also decided to take legal action against the company. As per media reports in January 2013, a chargesheet has been filed against the company in a principal sessions court in Dharwad, Karnataka.¹⁷

Those who point to this simply being as a case of a state exercising its sovereign right over its own resources, are quick to forget the Kani case, which was also an instance of ABS involving the use of local GBMR by a state-run research institute.

Contrast this with the situation in Queensland, Australia. In Australia's north-eastern state of Queensland, a Biotechnology Code of Ethics (the Code) was developed, which provides an ethical framework to guide the development of biotechnology in Queensland.¹⁸ The Code, referring

¹⁷Chargesheet against Bt firm in biopiracy case. (January 19, 2013). Times of India. http://articles.timesofindia. indiatimes.com/2013-01-19/combatore/36431774_1_bt-brinjal-variety-bt-crops-mahyco

¹⁸Queensland Biotechnology Code of Ethics. (2006). http://www.industry.qld.gov.au/documents/Biotechnology/Code-of-Ethics-02_07.pdf

to the CBD, insists on both PIC from and reasonable benefit sharing arrangements with the local (in the Australian context, indigenous) communities. While the code is not legally binding, it is mandatory for all organisations undertaking biotechnology activities, including 'bio-discovery', if they receive state funding or assistance and/or enter into a benefit sharing agreement with the state, to abide by this code. This is particularly significant in the current context, given that most of the access is for the purposes of the biotechnology industry. It is imperative that state funded R&D institutions adhere to ABS principles (and follow PIC and benefit sharing) while bioprospecting for the purposes of genetic engineering (GE).

Box No. 3: Types of benefit sharing prescribed under the BD Act when either access takes place or approval for IPR is granted

- 1. Grant of joint ownership of intellectual property rights to either NBA or benefit claimers
- 2. Transfer of technology
- 3. Locating production and R&D units in areas beneficial to benefit claimers
- 4. Involvement of Indian scientists, benefit claimers and local people in the R&D activities
- 5. Setting up of venture capital funds
- 6. Payment of monetary compensation or non-monetary benefits

e) Post Access - Monitoring, Ensuring Benefit Sharing

While the first 108 ABS agreements between the NBA and different accessors may have been signed, now the challenge is how to monitor them. This will entail, among other things:

- 1. ensuring that the terms and conditions imposed therein are adhered to,
- 2. the resource/knowledge is not being used for other than the agreed purpose(s) and
- 3. the objectives of the CBD are not lost sight of.

The NBA is the key government body for the purposes of benefit sharing. It is the entity that determines what will be equitable benefit sharing in each case of access (read Section 21 along with BD Rule 20). This determination is regarded by the Act as equivalent to a decree of a civil court (Section 53 of the BD Act). The process for access to GBMR and associated TK also reiterates the independent enforceability of individual clauses. This means that even if the entire agreement is not enforced, the particular individual clause in the contract for ABS will be asked to be performed. The BD Rules insist that a provision be made part of all the ABS agreements to ensure that obligations in benefit sharing clauses will survive the termination of the agreement (BD Rule 14). Given that one of the main functions of the NBA, as detailed in the BD Rules, is to advise the Central government on any matter relating to BS, the NBA can also, under its general functions, recommend and modify the terms for collection of the benefit sharing fee. It is also tasked to collect, compile and publish technical and statistical data on BS.



No PBRs have been finalised in Himachal yet; but the work of processing of access applications continues.

Meanwhile, the NBA itself has felt the need to re-visit the template designed earlier for entering into ABS agreements. An Expert Committee on *Review of Agreement-formats* has completed its assignment. The members of the committee were to address the difficulties faced in implementing and monitoring the terms of benefit sharing even when they have been mutually agreed upon between the NBA and the applicants.

While non-compliance of the BS requirements is a punishable offence that can attract the penal provisions of the BD Act, there is no infrastructure or wherewithal to monitor all the ABS agreements.Rule 20 (10) of the BD Act clearly states that *(t)he Authority shall monitor the flow of benefits...in a manner determined by it.* However, the Authority has neither formulated the guidelines to describe the benefit sharing formula, nor issued the necessary notification in the Official Gazette to that effect.

As mentioned above, even though the BD Act lays down penalty provisions (Sections 55-57), the invocation of these clauses will depend on the NBA being aware that a certain condition of benefit sharing has not been



Copies of PBRs line the shelves of the SBB office in Thiruvananthapuram in Kerala, a state is second only to Madhya Pradesh in the number of PBRs documented across India. For more please read Experience from Kerala on Peoples' Biodiversity Register (PBR): http://nbaindia.org/blog/543/1/ Experiencefrom.html

complied with. Bank accounts are one way to keep tab on the compliance of BS conditions; if the monies are being received either in the National or the State Biodiversity Fund(s) all is well from the point of view of the government.

As far as the potential beneficiaries/'benefit claimers' are concerned, they need to be aware of the existence of the ABS agreement, which affects them and from which they can expect 'benefits' to flow. Benefit claimers get to know about ABS agreements only if, firstly, there is a process of consultation or their PIC has been taken at the time of approval, secondly, they had imposed certain conditions for BS and thirdly, the NBA or SBBs share back the details of the agreement(s) with them, as and when it is signed. Though BMCs are tasked with maintaining registers and other paperwork that record the benefit sharing and the mode of sharing, they are kept out of the decision making processes.

Above all, there is a need to have a streamlined procedure to approach either the NBA or the National Green Tribunal (NGT) if the user (the person who gains access) defaults. There is a prescribed Form VII by which BMCs or local communities can give notice of an alleged offence to either the NBA or the SBB. Since there are no ABS agreements prior to 2012, there is no evidence to verify if this procedure is being used by BMCs or local communities to complain about lapses in sharing benefits. The example of the Kani tribe (as discussed in the previous section) should serve as an important lesson that the much touted instance of ABS in India was an exercise in futility.

Outside India, many developed countries are not keen on either stringent monitoring or compliance mechanisms. They view these as added burdens, and would rather go with the business-as-usual approach. Countries like the United States of America (USA) have consistently resisted the two key measures that both India and the global law on the subject, the NP, talk about –checkpoints and a certificate of compliance. Overseas industry associations such as the European Forum of Farm Animal Breeders have cautioned European governments that strict ABS requirements by developing countries will become trade barriers.¹⁹

¹⁹The European Forum of Farm Animal Breeders. http://www.effab.org/

The International Regime on ABS (Nagoya Protocol)-Implications for Biodiversity Conservation and Community Control

t was concern outside the CBD circles about biopiracy and its international implications, expressed at the World Summit on Sustainable Development (WSSD), in 2002, that first pushed for a global protocol on ABS. An *Ad Hoc Open-ended Working Group on Access and Benefit Sharing* had been set up under the CBD in 2000. But the impetus came from the WSSD.

After years of debate over bracketed texts and the nitty-gritty of what constitutes a benefit sharing regime, a draft of the ABS protocol was prepared and presented in March 2010, when the Working Group concluded its meeting in the Colombian city of Cali. This draft protocol was to be the basis for an international regime (IR) on access and benefit sharing to be finalised at the CBD's Tenth Conference of Parties (COP 10), at Nagoya, Japan, in October 2010. Prior to the draft protocol, the Working Group had brought out the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilisation in 2002.

The idea behind the NP is to prompt users to choose states with clear and transparent access and benefit sharing legislation, in order to have more legal certainty, and to avoid problems during utilisation of another country's GBMR/TK.

No looking back?

A clear danger of putting in practice the Nagoya Protocol is that it will leave no room for looking back at the ABS system. The questions around the ethics and nature of R&D, and the treatment of biological diversity as mere genetic material to be used in laboratory research and compensated for by engaging representatives of communities and other such concerns will become immaterial to the debate. It will also lead to ignoring a key concern, which is, biological diversity and related knowledge cannot often be attributed to one individual, village or even a community prototype. Therefore, taking PIC from one or a few is not enough.

The matter of PIC amongst others, points to the imbalance between the NP and its parent treaty, the CBD. The CBD simply requires PIC; but the NP states that PIC must be subject to national legislation. This puts pressure on provider countries to have a law in place for ABS to be implemented, whether

or not it is workable or accepted as a concept entirely. More than ever before, signatory countries are compelled to prove that they have a working ABS system, no matter how complex, questionable and

exploitative these systems are. While the NP insists on provider countries having a clear point of access, it does not put corresponding obligations on the user countries to set up a clear, identifiable, national focal point for benefit sharing, which the providers can approach. So, the lack of balance between measures for access to GR and TK versus measures for user-compliance is obvious.

NP narrows the issue of benefit sharing to a bilateral arrangement – contract between user and provider– as against a multilateral system maintained in the Food and Agriculture Organisation's (FAO) Plant Treaty and the World health Organisation's (WHO) Pandemic Influenza Preparedness (PIP) Framework. In response, countries and regional groups like the African Group (A United Nations regional group consisting of 54 African member states) continue to argue for a 'user pays' global multilateral benefit sharing mechanism (GMBSM). Such a mechanism, as mentioned in Article 10 of the NP, can be invoked to ensure sharing of benefits derived from utilisation occurring outside the usual bilateral (PIC and MAT) ABS model. This would be applicable for GBMR accessed from areas beyond national jurisdictions e.g. from the high seas. The idea is to take a broad view of benefit sharing. The absence of a set of people claiming benefit at the receiving end or the lack of a national system of ABS should not allow the users to access/ use without sharing benefits. This is also part of the 'burden-sharing' that the CBD talks about.

Clearly, the NP doesn't provide the kind of balance that countries, and particularly provider communities within them, were expecting. The NP text does provide for an assessment and review option in four years time²⁰, and this must be exercised not only at the global level but within national spaces as well.

The status of acceptance of the Nagoya Protocol

The number of signatories to the Protocol as on the date of this publication is 92, and so far only twelve countries have ratified the Protocol. Apart from India, these are Seychelles, Rwanda, Gabon, Jordan, Lao People's Democratic Republic, Mexico, Fiji, Ethiopia, Panama with Mauritius and South Africa. Consequently, countries can be broadly classified into three categories, based on their status with regard to the CBD and the NP:

- 1. those that are parties to the CBD and therefore committed to its principles of ABS but are not parties to the NP,
- 2. those that are parties to both CBD and the NP and therefore committed to implement the IR and
- 3. those that are neither members of the CBD nor subscribe to the NP (such as the USA)

India and the Nagoya Protocol

India signed the Nagoya Protocol on May 11, 2011, and ratified it on October 09, 2012. The view of the Indian government as expressed by the MoEF is that (o)nce the Nagoya Protocol enters into force, the user country measures enshrined in it would oblige all Parties to provide that users of genetic resources within their jurisdiction respect the domestic regulatory framework of Parties from where genetic resources have been accessed, thereby addressing the concerns of misappropriation (Ministry of Environment and Forests, 2012).

²⁰Article 31 of the Nagoya Protocol

But there are fears within government circles that if the ABS regime becomes too burdensome then potential users would access GR/TK from countries that have the least regulation. So there is concern about frightening off prospective accessors and losing the opportunity of benefit sharing altogether. Another view held in certain sections of the Indian government is that since India is not only a provider country, but also a user country, too onerous ABS requirements may be slapped back on the country in reciprocity. It is this reasoning that has led to the official view that the BD Act is fully compliant with the NP, when it is not so in entirety (Kohli and Bhutani, 2011). Nonetheless, as a party to the NP, India is now under pressure to become fully compliant within the next two years.

During COP 10, held from October 18-29, 2010, in Nagoya, Aichi Prefecture, Japan, a revised and updated Strategic Plan for Biodiversity was also adopted which included, what is now popularly referred to as the Aichi Biodiversity Targets²¹, for the period 2011-2020. The Aichi Target 16 requires that by 2015 *'the NP on Access to Genetic Resources*



The status of the Nagoya Protocol was an important discussion at CBD COP11 held in India as also reflected in the COP's Decision XI/1.

²¹Convention on Biological Diversity. (2010). Aichi Biodiversity Targets. http://www.cbd.int/sp/targets/

and the Fair and Equitable Sharing of Benefits Arising from their Utilisation is in force and operational, consistent with national legislation.²²

On the implementation front, there is much local level capacity building to be done. In its own submission to the CBD Secretariat, the Gol has accorded high priority in the short term to increasing the capacity of relevant stakeholders in relation to ABS, with special measures to increase the capacity of local communities. The emphasis is particularly on enhancing the capacity of women within these communities in relation to access to GR and/or TK associated with GR.²³

The NP also contains provisions on cooperation to solve potential conflicts between states sharing the same GR. While fine-tuning its ABS framework, India will also need to think of the resources/knowledge that it shares with other countries in the South Asian region. The cross-border aspects and politics, which are likely to play up if and when the NP comes into force, are best tested out in the sub-region itself (see Table below).

Table No 2: Status of countries with regard to CBD and NP in the South Asian region				
Country	CBD Member	Nagoya Protocol	National Law	
Afghanistan	Yes	-		
Bangladesh	Yes	Signed		
Bhutan	Yes	Signed	Biodiversity Act, 2003 and ABS Policy, 2012	
India	Yes	Party	Biological Diver- sity Act, 2002 and Rules, 2004	
Maldives	Yes	-		
Nepal	Yes	-		
Pakistan	Yes	-		
Sri Lanka	Yes	-		

²²Convention on Biological Diversity. Target 16. http://www.cbd.int/sp/targets/rationale/target-16/

²³Convention on Biological Diversity. Submissions received for the Second Meeting of the Open-ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol on Access and Benefit-sharing. http://www. cbd.int/icnp2/submissions/

Other (user) countries

Other (user) countries have policies or guidelines to deal with their domestic players. For example, Australia has a national GR Policy: *Nationally consistent approach for access to and the utilisation of Australia's native genetic and biochemical resources (NCA)*, 2002²⁴ and so does Japan with its *Guidelines on Access to Genetic Resources for Users in Japan*, 2005.²⁵ Currently, the European Commission is working on a proposal for a draft regulation on *Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation in the Union*.²⁶ Given the nature of the issue, it is not sufficient for countries to simply have a domestic-level ABS system. The user countries must also provide for benefit sharing in their own jurisdictions when using India's GBMR/TK, and must also co-operate and be willing to comply with India's ABS regime. India will also need to monitor and respond to how its main user-country partners are preparing or not to ensure benefit sharing after access.

The United States — a major user country — advocates at the CBD and particularly at the World Trade Organisation (WTO) that there should be a national level contract-based ABS system outside the patent system. The US does not want any obligations related to ABS to interfere with patent legislation and the procedure to grant patents. This is a clear instance of trade interests and the language of trade colouring the implementation of what is a multilateral environmental agreement. But the US position, in part, stems from the Gol pushing for an internationally recognised certificate of compliance and demanding that it be linked to the patents process. As a step to operationalise the NP, the NBA is attempting to make its expression of approval for access double up as such a certificate. In other words a signed ABS agreement will also be regarded by NBA as such a valid certificate (on the basis of which a patent can then be granted).

²⁴Australian Government. Nationally consistent approach for access to and the utilisation of Australia's native genetic and biochemical resources. http://www.environment.gov.au/biodiversity/publications/access/ nca/index.html

²⁵Japan Bioindustry Association. Guidelines on Access to Genetic Resources for Users in Japan.www.mabs. jp/archives/pdf/iden_tebiki_e.pdf.

²⁶European Commission. Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation in the Union. http://ec.europa.eu/environment/biodiversity/international/abs/pdf/ PROPOSAL_FOR_A_REGULATION_EN.pdf

4 Concluding Observations: Tipping the Balance

he discussions and empirical information in this study leads to two clear presumptions in the conversations around ABS today. The first is that access to biological material for global trade is inevitable and thereby not to be restrained. Therefore, regulatory structures have to not just be facilitative of ABS but also have to promote the idea that the practice of access can encourage conservation. This is so that the concept can gain global acceptance. The Nagoya Protocol presents this conviction in its preambular text. The second presumption necessitates that benefit sharing arrangements are possible, desirable and thereby demonstrable. This is evident in the way ABS is being promoted in countries like India. It has led the national government and designated institutions in India to adopt the broadest interpretations of what benefit sharing would entail, while limiting it to the barest form of trade involving a single buyer and a single seller. Most examples of benefit sharing that have come to light are either one time purchases or assurances for the future.

> International protocols and national ratifications relating to ABS have not helped resolve the issue of the potential damage that could be caused by access itself. While core issues around custodianship, ownership of resources and attribution of knowledge remain unresolved, internationally binding guidelines now compel governments to

be bound by the flawed ideation of ABS. This will also mean numbers will need to be added, year after year, to prove that ABS arrangements are indeed functional. Countries like India are bound to add figures on the table and push for agreements that can pass off as benefit sharing to establish that their domestic arrangements are working.

Therefore, in the Indian context, it is not surprising that the SBBs view the purpose of preparing PBRs solely as an incentive to facilitate and encourage trade in biological material and knowledge. Many examples have been presented in this study to understand and highlight this aspect. Such a paradigm does not envisage conservation of biodiversity or knowledge as a necessary precursor to decisions around permitting access. It also relies heavily on transactions that can provide short term gains to some sections of the community, who are the deal-makers.

Even as ABS seems to be fast becoming an accepted norm internationally, there is absolutely no mechanism to ensure that either enforcement of processes of access or post facto monitoring will take place. The current examples present enough scenarios that show that agreements have been signed with accessors based on the belief that they will revert back to the NBA in case of any future commercial application or use of the material or knowledges accessed. There isn't one example within the 108 ABS agreements that engenders faith in the possibility of this happening. Moreover, neither the law nor the international legal framework has provisions to allow national governments (let alone local bodies) to go after accessors once the material has moved borders. Such material and knowledge blends so well into laboratory experiments that tracing it back to the source of access is close to impossible. Therefore, in the current scenario, corporations and private researchers are getting away by demonstrating their benevolence through first time payments of royalty to the NBA, as has happened in most ABS cases showcased so far in India.

Meanwhile, the basic concerns regarding loss of biodiversity, biopiracy, need for protection and continuation of locally relevant systems of knowledge and resource relationships remain unaddressed. There is no effort at all in any of the ABS documents (domestic or international) to curb illegal access or to restrict the significant private sector interventions, through funding or dictating research priorities in public sector institutions, thereby changing the very purpose for which research is being carried out. At the same time, alienating communities, through a multiplicity of committees and lack of decisive positions, has meant that the point from where access is taking place has remained unchecked. Even if the NBA and SBBs stretch their institutional and human resource capabilities many times over, the extent of access to medicinal plants, seeds, micro-organisms and GR, which is taking place in the country cannot be fathomed leave alone regulated.

One of the central arguments around ABS protocols and legally binding practices is that if access to biological material and knowledge cannot be restricted, it needs to at least go through the basic requirements of PIC and MAT, and present possibilities for identified benefit claimers to get a fair share of the proceeds. The fact that communities will have continued access to the resources and knowledge is demonstrated as a positive facet of ABS. Leave alone the presumptions about the future prospects with the accessed material and knowledge. A basic question which remains unresolved is whether local communities, who are deeply embedded in their socio-cultural scenarios, need to gain their rights within the ABS framework even if they don't believe that access should take place at all. Do the international protocols and national guidelines leave space for communities to exist outside these scenarios once access is granted? Or would the choice be to sign the contract or lose out in the biotrade race completely? Is that a real choice?

What needs to be understood is that the very pillars on which the concept of ABS rests are on shaky ground and showing cracks. It is unfortunate that countries like India are more committed to building the infrastructure to ensure that ABS happens, rather than attempting to deliberate the premises on which ABS is constructed. Representative participation of communities, dramatisation of ideal scenarios of ABS, retrofitting of enterprise histories into our ABS 'heritage' (as stated in recent NBA publications and statements) and the increase of cash in our national biodiversity coffers(by creating national funds through fees and royalties) have all fallen miserably short. Even while realising the conservation dream through the biodiversity law, the fundamental premise of community control is being challenged, business-as-usual continues to dominate the approval processes and agreement texts. Biodiversity justice seems a remote possibility where the balance tilts heavily on the side of access (regulated or indiscriminate) and the sharing of benefits is yet another government scheme for which targets have to be achieved. Countries like India need to lead the way not within the constraints of binding frameworks but by revisiting and recapturing the ethical debates around the nature of access, which has been currently hijacked by the global trade regimes. Efforts towards conserving biodiverse futures through conversations with community sovereignty as the fulcrum will be the greatest benefit which can be shared. This will sustain the current ecological ethos and will be a step towards strengthened futures.

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Annexure-I

Access and Benefit sharing in Central and State Biological Diversity Rules

- **BMC Biodiversity Management Committee**
- NBA National Biodiversity Authority
- SBB State Biodiversity Board

BMC's role in framing terms & fee for access to biological resources	ł
Revocation of grant of access	SBBs and BMCs to be informed about any revocation of access to BR so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources	1
SBB's techni- cal support to BMC	BMC will maintain a PBR & register for recording any access; NBA & SBB will guide BMCs for pre- paring PBRs
SBB-BMC	NBA will give direc- tions to SBB and BMCs for effective implementation of the Act
Consultation for granting access to biological resources	NBA will consult local bodies before granting any ap- proval to biological resources; consulta- tion not defined
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regarding approv- als, maintenance of data of traditional practitioners
Year	2004
State	Central

state	Year	BMC advising SBB, NBA	Consultation for granting access to biological resources	SBB-BMC	SBB's techni- cal support to BMC	Restriction on access to biological resources	Revocation of grant of access	BMC's role in framing terms & fee for access to biological resources
	2004	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners	SBB will consult the local body before granting any ap- proval to biological resources; consulta- tion includes steps (inter alia): (a) issuing of public notice, in local languages, about the proposal for access / collection; (b) discussion/ dialogue with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods	SBB will give direc- tions to BMC/ local bodies for effective implementation of the Act	SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by BMCs	Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected	BMCs to be informed about any revocation of access to biologi- cal resources so that they can prohibit the access. assess & recover for the damages	BMC at Mu- nicipality/Gram Panchayat level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties

BMC's role in framing terms & fee for access to biological resources		
Revocation of grant of access	BMCs to be informed about any revocation of access to biologi- cal resources so that they can prohibit the access, assess & recover for the damages	BMCs to be informed about any revocation of access to biologi- cal resources so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources	Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected	Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs	BMC will maintain PBR & register for recording any access in a manner as di- rected by the SBB (nothing mentioned on access & fee collection)
SBB-BMC	SBB will give direc- tions to BMC & local bodies for effective implementation of the Act	SBB will give direc- tions to BMC for effective implemen- tation of the Act
Consultation for granting access to biological resources	SBB will consult BMCs before grant- ing any approval to biological resources; consultation not defined	SBB will consult local bodies before granting any ap- proval to biological resources; consulta- tion not defined
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2005	2005
State	Kamataka	West Bengal

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vocation of BMC's role in tt of access framing terms & fee for access to biological resources	sto be BMC at Mu- med about nicipality/Gram evocation of Panchayat level as to biologi- may decide the may decide the terms on which they can access to bio- ass& assess over for the and associated ages knowledge to different parties
Restriction Rew n access to gran biological resources	y order of BMCs triction will inforr made only any fe er consulting access BMCs, local cal re- dies and hear-that t the person acces acces acces acces acces dama
SBB's techni- cal support to BMC	SBB will guide An BMCs for pre- paring PBRs, be paring PBRs, be ensure its legal aft provide guide- bo lines for terms inc of access & fee aff collection by BMCs
SBB-BMC	SBB will give direc- tions to BMC & local bodies for effective implementation of the Act
Consultation for granting access to biological resources	SBB will consult the local body before granting any ap- proval to biological resources; consulta- tion includes steps (inter-alia): (a) issuing of public notice, in local languages, about the proposal for access / collection; (b) discussion/ dialogue with the general assembly of the local body; and (c) formaticn about the proposal and its implications for conservation and livelihoods
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2006
State	Himachal Pradesh (draft)

Restriction Revocation of BMC's role in n access to grant of access framing terms biological & fee for access resources to biological resources	riction will informed about pality/Gram Zila amade only any revoca- panchayat level arconsulting tion of access may decide the provide and hear- resources so that it would permit the person they can prohibit access to bio-cted damages knowledge to different parties different parties and associated damages by the person arcow and associated damages by the person arcs as a logical resources arcs as a logical resources arcs arcs arcs arcs arcs arcs arcs arc
SBB's techni- R cal support to or BMC b	SBB will guide Any BMCs for pre-restr paring PBRs, be m ensure its legal after protection & the f provide guide-bodi lines for terms ing t of access & fee affec collection by BMCs
SBB-BMC	SBB will give advice & directions to BMC & local bodies for ef- fective implementa- tion of the Act
Consultation for granting access to biological resources	SBB will consult local bodies before granting any ap- proval to biological resources; consulta- tion includes steps (inter alia): (a) issuing of public notice, in local lan- guages, about the proposal for access or collection; (b)
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2006
State	Sikkim

BMC's role in framing terms t fee for access to biological resources	MC at Mu- cipality/Gram anchayat level ay decide the erms on which would permit ccess to bio- gical resources nd associated iowledge to fferent parties	MC at Munici- ality/Municipal orporation level ay decide the erms on which would permit ccess to bio- gical resources ord associated iowledge to fferent parties
Revocation of grant of access 8	BMCs to be B informed about n any revoca- P. P tion of access m to biological tt resources so that it they can prohibit a demages to d å d d	BMCs to be B informed about p any revocation of C any revocation of C access to biologi- that they can it that they can it prohibit the a access , assess & Ic recover for the al
Restriction on access to biological resources	1	Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by BMCs	SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by the BMCs
SBB-BMC	SBB will give direc- tions to BMCs for effective implemen- tation of the Act	SBB will give direc- tions to BMCs for effective implemen- tation of the Act
Consultation for granting access to biological resources	SBB will consult BMCs before grant- ing any approval to biological resources; consultation not defined	SBB will consult the local body before granting any ap- proval to biological resources; consulta- tion includes steps: (a) issuing of public notice, in local languages, of the proposal for access / collection; (b) discussion/
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners	MC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2008	2008
State	Kerala	Maharashtra

BMC's role in framing terms & fee for access to biological resources		1
Revocation of grant of access		BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources		Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC		BMC will maintain PBR & register for recording any access in a manner as di- rected by the SBB (nothing mentioned on access & fee collection)
SBB-BMC		SBB will give direc- tions to BMC & local bodies for effective implementation of the Act
Consultation for granting access to biological resources	dialogue with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods.	SBB will consult BMCs before grant- ing any approval to biological resources; consultation not defined
BMC advising SBB, NBA		BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year		2008
State		Manipur

BMC's role in framing terms & fee for access to biological resources	BMC at village council level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties
Revocation of grant of access	BMCs to be informed about any revocation of access to BR so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources	Any order of restriction will be made only the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal provide guide- lines for terms of access & fee collection by the BMCs the BMCs
SBB-BMC	SBB will give advice & directions to BMC & local bodies for ef- fective implementa- tion of the Act tion of the Act
Consultation for granting access to biological resources	SBB will consult the local body before granting any ap- proval to biological resources; consulta- tion includes steps (inter alia): (a) issuing of public notice, in local languages, about the proposal for ac- cess / collection; (b) discussion with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods.
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard-ing approvals, maintenance of data of traditional practitioners
Year	2008
State	Mizoram (draft)

BMC's role in framing terms & fee for access to biological resources	BMC may decide the terms on which it would permit access to biological resources and associated knowledge to different parties
Revocation of grant of access	BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources	Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal provide guide- lines for terms of access & fee collection by the BMCs the BMCs
SBB-BMC	SBB will give direc- tions to BMC/ local bodies for effective implementation of the Act
Consultation for granting access to biological resources	SBB will consult local bodies before granting any ap- proval to biological resources; consulta- titon includes steps (inter alia): (a) issuing of public notice, in local languages, about the proposal for access or collection; (b) discussion/ dialogue with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods.
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2008
State	Tripura

BMC's role in framing terms & fee for access to biological resources	BMC at Mu- nicipality/Gram Panchayat level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties
Revocation of grant of access	1
Restriction on access to biological resources	1
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal provide guide- lines for terms of access & fee collection by the BMCs
SBB-BMC	SBB will give direc- tions to BMCs for effective implemen- tation of the Act
Consultation for granting access to biological resources	SBB will consult BMCs before granting any ap- proval to biological resources; consulta- tion includes steps (inter-alia) : (a) issu- ing of public notice, in local language, about the proposal for access/collec- tion: (b) discussion/ dialogue with the general assembly of the proposal and its implications for conservation and livelihoods.
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2009
State	Andhra Pradesh

BMC's role in framing terms & fee for access to biological resources	BMC at Mu- nicipality/Gram Panchayat level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties	BMC at Elaka, Syiemship, Dol- loiship, Sird- arship, A'khing or any other similar body recognised by Khasi Hills Autonomous District Council, Jaintia Hills Autonomous District Council
Revocation of grant of access	BMCs to be informed about any revocation of access to biologi- cal resources so that they can prohibit the access, assess & recover for the damages	MCs to be informed about any revocation of access to BR so that they can prohibit the access & assess & recover the damage done.
Restriction on access to biological resources	1	any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by the BMCs	SBB will guide BMCs for pre- paring PBRs, ensures its le- gal protection & provides guidelines for terms of access & fee collection by the BMCs
SBB-BMC	SBB will give direc- tions to BMCs for effective implemen- tation of the Act	SBB will give direc- tions to BMC & local bodies for effective implementation of the Act
Consultation for granting access to biological resources	SBB will consult BMCs before grant- ing any approval to biological resources; consultation not defined	SBB will consult the local body before granting any approval to BR; consultation includes steps (inter alia): (a))ssuing of public notice, in local languages, of the proposal for access / collection; (b) discussion/
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners	BMC will advise the SBB or NBA on any matter referred to it by them re. approv- als, maintenance of data of traditional practitioners
Year	2010	2010
State	Assam	Meghalaya

BMC's role in framing terms & fee for access to biological resources	& Garo Hills Autonomous District Council or Municipal- ity/Municipal Corporation level may decide the terms on which it would permit access to biodiversity resources and associated knowledge to different parties	District level BMC in consultation with BMCs may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties
Revocation of grant of access		BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources		Any order of restriction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC		SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by the BMCs
SBB-BMC		SBB will work in consultation with BMCs & local bodies & facilitate them.
Consultation for granting access to biological resources	dialogue with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods.	SBB will consult BMCs & village councils before granting any ap- proval to biological resources; benefit claimers to file their claims/ objections with the help of BMCs; consultation not defined.
BMC advising SBB, NBA		BMC will advise the SBB or NBA on any matter referred to it by them regarding approvals
Year		2010
State		Nagaland (draft)

BMC's role in framing terms & fee for access to biological resources	BMC at Mu- nicipality/Gram Panchayat level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties	1
Revocation of grant of access	BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damages	BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damage
Restriction on access to biological resources	1	:
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal protection & provide guide- lines for terms of access & fee collection by the BMCs	SBB will guide BMCs for pre- paring PBRs
SBB-BMC	SBB will coordinate the activities of the BMCs	SBB will give directions to and strengthen BMCs for effective implemen- tation of the Act
Consultation for granting access to biological resources	SBB will consult local bodies before granting any ap- proval to biological resources; consulta- tion not defined	Consultation has not been mentioned while laying down the procedure for granting access
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners	BMC will advise the SBB or NBA on any matter referred to it by them regard- ing approvals, maintenance of data of traditional practitioners
Year	2010	2010
State	Rajasthan	Uttar Pradesh

BMC's role in framing terms & fee for access to biological resources	
Revocation of grant of access	BMCs to be informed about any revocation of access to BR so that they can prohibit the access & as- sess & recover the damage done.
Restriction on access to biological resources	any order of retraction will be made only after consulting the BMCs, local bodies and hearing the person affected
SBB's techni- cal support to BMC	SBB will pro- vide techni- cal assistance mention of PBRs, terms of access & fee collec- tion)
SBB-BMC	SBB coordinate the functioning of BMCs; SBB will give directions to BMC for effective implementation of the Act
Consultation for granting access to biological resources	SBB will consult the local body & BMCsbefore granting any approval to BR. Consult includes steps (inter- alia):(a) issuing of public notice, in local languages, of the proposal for access/col- lection; (b) discussion/ dialogue with the general assembly of the local body; and (c) formal consent from the assembly after being provided adequate infor- mation about the proposal and its implications for conservation and livelihoods.
BMC advising SBB, NBA	
Year	2010
State	Gujarat

BMC's role in framing terms & fee for access to biological resources	BMC at Mu- nicipality/Gram Panchayat level may decide the terms on which it would permit access to bio- logical resources and associated knowledge to different parties
Revocation of grant of access	BMCs to be informed about any revoca- tion of access to biological resources so that they can prohibit the access, assess & recover for the damages
Restriction on access to biological resources	Any order of retraction will be made only after consulting the BMCs, local bodies and hear- ing the person affected
SBB's techni- cal support to BMC	SBB will guide BMCs for pre- paring PBRs, ensure its legal provide guide- lines for terms of access & fee collection by the BMCs
SBB-BMC	SBB will give direc- tions to BMCs for effective implemen- tation of the Act
Consultation for granting access to biological resources	SBB will consult the local body before granting any ap- proval to biological resources; consulta- tion includes steps (inter-alia):(a) issu- ing of public notice, in local languages, about the proposal for access/collec- tion; (b) discussion/ dialogue with the general assembly of the local body; and (c) formal consent from the assembly after providing them adequate information about the proposal and its implications for conservation and livelihoods.
BMC advising SBB, NBA	BMC will advise the SBB or NBA on any matter referred to it by them regard-ing approvals, maintenance of data of traditional practitioners
Year	2011
State	Arunachal Pradesh

Annexure-II

Form I-Type Access approvals granted by the NBA uptil January 2013 that resulted in ABS Agreements (15 out of the total 18 are based on applications either by foreigners or by Indians for export to foreign countries.)

No.	Accessor/User	Indian Biological Resource(s)	Purpose	Accessed From	Date of ABS Agree-
	M/s Jay Health Foods Pvt. Ltd., Colombo, Sri Lanka	200 Amla plants	Export to Sri Lanka	Not publicly known	ment October 30, 2006
5	Dr. Rikako Kimura, New Delhi, India & Visiting Researcher, Kanagawa, Japan	Hair and blood samples of Indian wild ass (Equus hemionus khur)	Research	Gujarat	November 20, 2006
m	Dr. Bruno M Moerschbacher, Mun- ster, Germany	Three leaves from each of the fifteen di- cot tree species for isolating Endophytic Fungi (micro organism) living inside leaf tissue	Research	Mudumalai Wildlife Sanctuary, Tamil Nadu	April 19, 2007
4	Dr. Janet Seely, Norwich, United Kingdom	nsect and Bee pollinators of Forest Eco- systems and selected agricultural crops. Melliferous plants – assessment of nectar and pollen sources. Honey Bees (Apis cerana, Apis florae, Apis dorsata, Trigona sp.)	Research	Nilgiri Biosphere, Western Ghats	May 8, 2007
5	Pepsi Co India Holdings Gurgaon, Haryana	Dried Echeuma cottonii (new name - Kappaphycus alverzii) 1000 MT	Export to Malaysia	Tamil Nadu	September 28, 2007
9	Dr. Bruno M Moerschbacher, Mun- ster, Germany	Soil samples from a Chitin/Chitosan producing plant (Mahtani chitosan) 10 samples - 1 Kg of soil per sample	Research	Veraval, Gujarat	May 27, 2008
7	M/s Bio India Biologicals (BIB) Corporation, Hyderabad, Andhra Pradesh	Azadirachta indica (Neem) 10 MT/year	Export to Japan	Andhra Pradesh	November 19, 2008

December 15, 2008	February 18, 2009	November 3, 2009	November 25, 2009	May 3, 2010	July 9, 2010	September 27, 2010	February 2, 2012	
CSMCRI, Bhavnagar, Gujarat and Odisha	Not publicly known	Not publicly known	Not publicly known	Hamlets of Thonni- thurai in T Nagar & Munai Kadu in Palk Strait of Ramana- thapuram, Tamil Nadu	Women SHGs in Palk Bay, Mandapam & Rameshwaram, Tamil Nadu	Hamlets of Thon- nithurai in T Nagar & Munai Kadu in Palk Strait of Ramana- thapuram, Tamil Nadu	Not publicly known	
Export of seeds to Oman for experi- mental trials	Export to China	Export to Korea	Research	Export to Malaysia	Export to Vietnam	Export to Korea	Research	
Jatropha curcas (4 Kg)	Nux vomica Seeds (80 MT)	Euchema Cottonii (Kappaphycus alvar- ezii) 20 MT	Leaves and Soil sample per tree belong- ing to genera: Cedrus, Abies, Pinus, Quercus, Picea, Taxus, Juniperus, Betula and Populus	Kappaphycus alvarezii Seaweed (40 MT)	Kappaphycus alvarezii (28 MT)	Euchema Cottonii – seaweed (40 MT)	Non-invasive sampling diet data and DNA from faces of Leopard (Panthera pardus)	
Dr. Salim Al-Rawahy, Muscat, Oman	M/s G. Das & Co. Pvt. Ltd., Chennai, Tamil Nadu	M/s P.S.S. Ganesan & Sons, Tuticorin, Tamil Nadu	Mr. Rakesh Minocha, USDA Forest Service, New Hampshire, USA	M/s P.S.S. Ganesan & Sons, Tuticorin, Tamil Nadu	M/s Britto Seafoods Exports Pvt. Ltd.,Chennai, Tamil Nadu	M/s P.S.S. Ganesan & Sons, Tuticorin, Tamil Nadu	Dr. John Linnell, Norwegian Institute for Nature Research, Trondheim, Norway	Metric Tonnes KG = Kilogramme
Ø	6	10	7	12	<u>5</u>	4	15	MT = I

Source: Compiled by authors from information on NBA's web site http://nbaindia.org/text/19/AgreementsignedbytheApplicantwithNBAMAT.html
A set of four briefing papers prepared by the authors on 'Sectoral issues and concerns on Access and Benefit Sharing under India's Biodiversity Regime', packed in a docket are also available:

(In English) FO(U)R FACTS ABOUT ABS (In Hindi) CHAAR BAATEIN ABS PAR

No. 1 on ABS and Agrobiodiversity No. 2 on ABS and Livestock & Poultry No. 3 on ABS and the Marine & Coastal Sector No. 4 on ABS and the Forestry Sector

The reader is encouraged to also read them along with this study.

The Balancing Act

Access and benefit sharing ?This publication is a study of how access to biological resources and peoples knowledge is being granted under India's Biological Diversity Act .It particularly takes a closer look at ,if and how ,any real benefits flow from the legal regime to communities and towards conservation .It asks the question whether the balance of the legislation and its implementation is tilted more towards access , rather than guaranteeing benefit ?

Campaign for Conservation and Community Control over Biodiversity

The Campaign began in 2004 as a pan India initiative together with other groups when the Biological Diversity Rules were issued by the Ministry of Environment & Forests, Government of India ,to implement the country's Biological Diversity Act of 2002 .Till December 2010 the Campaign was coordinated as part of the collaborative work between Kalpavriksh (KV)Environmental Action Group and GRAIN . From 2011 till date ,the Campaign's activities have been housed at KV in New Delhi



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