



# Access and Benefit Sharing under the Biodiversity Act: Towards a More Effective Regime

## Introduction

The Biological Diversity Act (BDA), 2002 was enacted by India so as to give effect to its commitments under the Convention on Biological Diversity (CBD), 1992 (the BDA became effective in 2004 after the Biological Diversity Rules (BDRs) were notified). The BDA has provisions for regulated access to biological resources (BRs) for various purposes including for scientific research, for commercial utilisation, for bio-survey or for bio-utilisation. These conditions of access are put in place to ensure conservation of biological diversity and fair and equitable sharing of the benefits arising out of the commercial use of BRs and associated traditional knowledge (TK).

## Institutional Framework

The BDA provides for the establishment of a three-tiered structure for the implementation of the Act. The National Biodiversity Authority (NBA) is the apex body, while the state governments and local bodies have set up the State Biodiversity Boards (SBBs) and the Biodiversity Management Committees (BMCs), respectively. All these institutions are statutory, autonomous bodies.

As of October 2013, 28 states of India have established SBBs, and 32,221 BMCs have been set up at the local level. There is significant unevenness in the number of BMCs across states. Almost three-fourths of these BMCs have been set up in Madhya Pradesh (MP) (23743). The number of BMCs in Karnataka and Kerala are 4374 and 1043, respectively.

Uttarakhand, Maharashtra Andhra Pradesh and Mizoram have 598, 340, 222 and 221 BMCs in that order. All other states, barring Haryana, Orissa and Sikkim, where BMCs are yet to be established, have less than 100 BMCs.

The NBA's primary function is to regulate access to BRs occurring in India and to ensure fair and equitable sharing of benefits from such access. Foreigners, non-resident Indians, (NRIs), foreign companies or institutions are required to seek prior approval of the NBA to obtain any BR and associated TK. Further, prior authorisation of the NBA is required to transfer the results of research using BR occurring in, or obtained from, India to any foreigner, and also for applying for intellectual property rights (IPRs) for any invention based on research or information on a BR obtained from India. The NBA may take any measure necessary to oppose the grant of IPRs in any country on any BR obtained from India or knowledge associated with such BR, on behalf of the Central Government. In addition to this, the NBA also issues the access and benefit sharing (ABS) guidelines which are to be followed by the SBBs while finalising any ABS agreement.

The main functions of the SBBs are two-fold. The first is to advise state governments on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilisation of the BR. Secondly, Indian citizens or firms registered in India can obtain any BR for commercial utilisation, or bio survey and bio

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utilisation for commercial utilisation only after giving prior intimation to the SBB of the state from which the resources are accessed.

The BMCs are responsible for promoting conservation, sustainable use and documentation of biodiversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and micro-organisms and chronicling of knowledge relating to bio-diversity. The BMCs also prepare People's Biodiversity Register (PBR) in consultation with local people and maintain data about the local *vaid*s and *hakim*s (traditional healers), who have been practicing indigenous medicine. The BMCs also advise the SBBs and the NBA on any matters referred to them in the process of grant of approval for accessing BR.

The approval for access is to be obtained through a written agreement between the NBA and the applicant. Though the BDA does not prescribe any specific term for the prior informed consent (PIC,) the NBA specifies it while entering into the ABS agreement.

The Act and the Rules mandate including appropriate benefit sharing (BS) provisions in the ABS agreement and mutually agreed terms (MATs). The NBA has not developed any specific template for MATs. A case-by-case approach has been adopted in this as well as in the ABS. However, the *Draft Guidelines on ABS* developed by the NBA in 2010 give some indications regarding the user and provider obligations. The *Draft Guidelines* include the non-monetary benefits identified in the *Bonn Guidelines* apart from a ready to apply monetary BS formula. The royalty payments in such cases are to be made to the NBA, for ploughing back to the benefit claimers/conservers/growers of BR.

The NBA while granting approvals has to ensure incorporation of the terms and conditions subject to which approval is granted to secure equitable sharing of benefits arising out of the use of accessed BRs, their by-products, innovations and practices associated with their use and applications and knowledge relating thereto in accordance with MATs.

The BS is to be determined on case-by-case basis. The Authority while granting approval for access or for transfer of results of research

or applying for IPR or for third party transfer of the accessed BRs and associated knowledge may impose terms and conditions for ensuring equitable sharing of the benefits arising out of the use of accessed BRs and associated knowledge.

The quantum of benefits are to be mutually agreed upon between the applicant and the Authority in consultation with the local bodies and benefit claimers and may be decided in due regard to the defined parameters of access, the extent of use, the sustainability aspect, impact and expected outcome levels, including measures ensuring conservation and sustainable use of the BRs. Also depending upon each case, the Authority stipulates the time frame for assessing benefit sharing on short, medium and long term benefits.

The BDA provides for the constitution of funds, namely, the National Biodiversity Fund (NBF), the State Biodiversity Fund (SBF) and the Local Biodiversity Fund (LBF) at the national, state and local level, respectively. The money received by these funds from grants, loans, charges and royalties are used for channelling benefits to the benefit claimers, conservation and promotion of BR and development of areas from where such BR or associated knowledge associated thereto has been accessed, and socio-economic development of such areas in consultation with the local bodies concerned

Where BRs or associated knowledge are accessed from a specific individual or a group of individuals or organisations, the Authority may take steps to ensure that the agreed amount is paid directly to them through the district administration. Where such individuals or group of individuals or organisations cannot be identified, the monetary benefits are to be deposited in the NBF. The Authority is to monitor the flow of benefits in the manner determined by it, and can be implemented in any of the following manner:

- (a) Grant of joint ownership of IPRs to the NBA, or where benefit claimers are identified, to such benefit claimers;
- (b) Transfer of technology;
- (c) Location of production, research and development units in such areas, which will facilitate better living standards to the benefit claimers;

- (d) Association of Indian scientists, benefit claimers and the local people with research and development in BR and bio-survey and bio-utilisation;
- (e) Setting up of venture capital fund for assisting the benefit claimers; and
- (f) Payment of appropriate monetary compensation and non-monetary benefits to the benefit claimers.

### Implementation Experience

According to the NBA, 117 ABS agreements were concluded till October 2013, out of a total of 844 applications that were received. All the applications seeking permission to apply for IPRs were from Indian entities, the single largest applicant being from the Council of Scientific and Industrial Research (CSIR).

The NBA has received more than Rs. 4.3 million as royalty from seven agreements of

which an amount of Rs. 20,000 was transferred to a BMC and the rest of the amount remains with the NBA. In two cases in the state of MP, monetary benefits have been transferred directly either to the SBB or the BMC concerned. Almost 90 per cent of the monetary benefits have come from a single case and source, namely, from PepsiCo India Holdings Pvt. Ltd. for export of seaweed. There are cases in which although the NBA had directed payment of monetary benefits, actual payments have not been made. For example, in the case of a patent for a process for preparation of a herbal formulation of *Tejan*, *Bhootkeshi* and *Nilnirgundi* as a Bronchodilator, the subject matter of a process (patent No. 212041 dated 11 November 2007), the patentee was directed by the NBA to pay 5 per cent of the net sales to the NBA, but actual payments have not been materialised.

### Implemented ABS Agreements

- PepsiCo exported 2000 MT seaweed (*kappaphycus alvarezii/ Euchemia cottonii*) to Malaysia, the Philippines and Indonesia. The seaweed is grown by fishermen community from districts of Ramanathapuram, Tuticorin, Pudukottai and Tanjore. It was collected, cleaned, baled and exported. The collection, cleaning and baling was done by women self help groups. They were given training by the company. The NBA was paid royalty @ 5 per cent of FoB amounting to Rs. 39 lakh. Efforts are being made by the SBB to form BMCs of the 754 benefit claimers spread across four districts. Due to claims that this seaweed is becoming an invasive species, the NBA has now stopped providing access permits.
- Bio India Biologicals Company exported 2000 kg of *Neem* Leaves to Japan. The leaves were collected from Amarchinta village BMC of Mahboobnagar district, Andhra Pradesh. The NBA was paid a royalty @5 per cent of FoB amounting to Rs. 55,035 which transferred Rs. 20,000 to the BMC for planting *Neem* saplings and creation of awareness about biodiversity conservation.
- Natural Remedies Pvt. Ltd., Bengaluru, purchased *kalmegh* (*Andrographis paniculata*), a medicinal herb, from BMC of Malajkhand in the Balaghat district of MP. They paid Rs. 21,000 directly to the BMC.
- Dr. Geeta Pandurang Pawar, an Ayurvedic doctor from Pune, had applied for 'No Objection Certificate' for obtaining a patent for an Ayurvedic anti snake venom comprising four medicinal plants. The NBA had fixed the BS at 2 per cent of the gross sales or gross revenue of the product. On commercialisation of the patented product, the applicant paid Rs. 3,940 as BS to the NBA.

**Table 1: Category wise Details of Actual BS with the NBA**

Category	Amount in Rupees
Access and transfer of BR and associated TK(Forms I and IV)	39,09,765
Access of BR and associated TK (Form I)	4,25,993
IPRs (Form III)	3,940
Total	43,39,698

As stated above, tangible benefits from the implementation of BDA have come in the form of financial payments accruing from the ABS agreements. These amounts have been small and have, therefore, made no significant contribution towards conservation and sustainable use of BRs in the country. At the same time, some of the institutions under the BDA have made progress in conservation efforts. The most notable of these is Kerala SBB's project on 'Conservation of tuber crop diversity in Wayanad and its popularisation among the villagers of the district' at Edavaka Gramapanchayat through BMCs. Under this project, a community germplasm centre has been established to conserve neglected and underutilised root and tuber crops and also to serve as a source of seed material. Fifty-two varieties of roots and tubers have been collected and raised, of which seven are wild-types procured from forest with the help of tribal communities. In order to create awareness about the nutritional value and production potential of tuber crops among children, two schools at Edavaka Gramapanchayat, and one each at Mananthavady and Vellamunda Grama Panchayats, have also established germplasm centres. Seed material is distributed to farmers depending on their varietal needs.

### Key Challenges Faced with Implementation

Collection of the benefits from the commercial entities accessing the BR is one of the most daunting problems. For example, the MP SBB has received 25 applications, of which in only two cases the actual benefits have accrued through ABS agreements. Apart from these two cases, the SBB has issued orders to six companies for the compliance of the ABS agreement provisions, of which three have challenged the orders before the National Green Tribunal (NGT) and remaining three have still not complied with the order.

Applicants who seek to use BRs and associated TK are required to provide the NBA with information on the quantities, timing and exact geographic location from where they would access such BR and associated knowledge. However, many of the applicants appear to have accessed the resources or associated

knowledge not directly from sites but through various intermediaries including local markets. Given the wide spread availability of BRs, it is a significant challenge for the NBA to identify the potential beneficiaries.

Almost all the applications received by the NBA so far deal with plant material and a few microbial organisms. Given the richness of animal and fish diversity existing in India there is a concern that these resources are being accessed without the prior approval of the NBA. There have been a couple of cases of transfer of animal DNA samples. In one case, the National Dairy Development Board sent DNA samples of buffaloes and cattle to the University of Missouri, USA to be used for DNA marker assisted selection in cattle and buffaloes. In another case, the National Chemical Laboratory sent the DNA of two Indian sheep breeds to Commonwealth Scientific and Industrial Research Organisation (CSIRO), Canberra, Australia. There is no evidence of BS in either of these cases.

Section 40 of the BDA exempts normally traded commodities from the purview of the Act. While a list of 190 such commodities has been notified thus far, there is no consensus yet on an agreed definition of what constitutes a 'commodity' for the purposes of the Act, and, therefore, stakeholder groups have varied interpretations of this term. Section 5 of the BDA exempts collaborative research from its purview. For research to qualify as "collaborative", it would have to conform to the Central Government guidelines for collaborative research and should be approved by the Central Government. However, clear guidelines for identifying collaborative research are lacking. There is a need to clarify as to what constitutes collaborative research and how it can be distinguished from exchange of specimens between institutions.

BR accessed under an ABS agreement may involve transfer of resources to third parties that are part of a value chain. In addition, transfer to third parties and countries by Indian institutions or the governments also takes place in emergencies or based on bilateral trade/research/technology transfer agreements including diplomatic channels. Tracking and monitoring such transfers have been posing a major challenge to the NBA.

A major problem is that even the paltry monetary benefits accruing from commercial use of BR have not reached the local communities who are the preservers and conservers of BR and associated TK.

The SBBs are also facing a number of major challenges in their performance. There are disputes over the issue whether SBBs have the power to grant approvals for commercial utilisation of BRs or for bio-survey by Indians or to issue notices to those who do so without prior approval. This issue was even taken up before the NGT by the MP SBB. The dispute occurred when the SBB issued notices to 260 industries that were accessing the BR directing them to share the benefits arising from the commercial utilisation of the BR. It is interesting to note that when the affected industries approached the State government, the department concerned took a view that BS was in the nature of a tax and only the government could tax. The government was informed that the amount of benefit to be shared by the industry was not a tax but according to the BDA it was the amount to be deposited with the NBF for the benefit of the local and indigenous people of the locality from where the industries were accessing the BR for commercial utilisation. It was further conveyed to them that the NBA was vested with the powers of determining the percentage of BS, and that the State Government can only make a request to NBA for reducing the percentage of BS.

Another problem faced by SBBs is the insufficiency of funds and human resource capacities at their disposal due to which SBBs are unable to organise awareness raising and training programme to the extent required for the effective implementation of the BDA.

There are differences between the NBA and some SBBs regarding the definition of several terms appearing in the BDA. In fact, there are differences of opinion on the definition of BR and commercial utilisation. There is a mistaken understanding about the BDA that it is applicable only to forest species and medicinal plants. One such difference in opinion arose on whether coal was a BR or whether extraction of coal was commercial utilisation as defined by the BDA. This case arose when the MP SBB opined that coal was a BR. Accordingly, on 11 January

2013, it served notices to the three subsidiaries of Coal India Limited, namely, South Eastern Coalfields, Western Coalfields and Northern Coalfields, stating that the extraction of coal for commercial utilisation without informing the SBB was a punishable offence under the BDA. The SBB also directed that the coal mining companies should share profits with stakeholders or BMCs. Since then, the NGT has also issued notices to the parties asking why there has been no sharing of royalties. Such problems could be sorted out through issuance of proper guidelines by the NBA after due consultation.

There are no clear guidelines for the SBBs from the NBA regarding the determination of the amount of BS, because of which there is variation in respect of the percentage of benefits that different SBBs are asking industries to share with them when the industries are accessing the BR. At present, the SBBs are following a general rule, based on which they have fixed the benefit to be shared between two and five per cent of the gross ex-factory sale of the product derived from the use of the BR accessed. Despite this, specific guidelines for monetary BS are required as the scope for manoeuvring still exists.

Documentation has also been a major challenge, though it has been envisaged as the main activity of BMCs. The PBRs are to be developed in consultation with the local people and the registers need to contain comprehensive information on availability and knowledge of local BR, their medicinal or any other use or any TK associated with them. The registers are expected to provide information on the economic benefits of the resources to the local communities and will help in equitable sharing of benefits arising out of commercial utilization of them. In the absence of PBR it has been difficult to trace BR accessed or used by outsiders. Preparation of the PBRs has been given special attention by some of the SBBs like those in MP and Kerala, which have the largest number of PBRs (741 and 670, respectively).

Emergent and concerted action will have to be taken in this regard, including technical training of the local communities for the preparation of such registers. The NBA has issued the Revised Guidelines for

preparation of the PBRs. These contain details of the methodology and process to be adopted, general details, list of traditional practitioners of the knowledge systems such as *vaids*, details of access to BR and TK granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing. They also provide different formats for obtaining information on various kinds of resources such as agro-biodiversity, domesticated biodiversity, wild biodiversity, urban biodiversity, etc. Within each category, different formats have been prescribed; for example, for crop plants, fruit plants, fodder crops, weeds, crop pests, markets for domesticated animals, peopescapes about community and its practices, landscape, waterscape, soil type, medicinal plants, ornamental plants, domesticated animals, fisheries, aquatic biodiversity, and others.

Another issue that affects BS and access approval is that of coordination between the NBA and SBBs and BMCs. Consultation between the three agencies is generally inadequate, which has hampered the implementation of the BDA. In most states, the number of BMCs remains vastly inadequate, because of which this important agency is not effectively involved while the Act is being implemented. At least two steps are needed to be taken in this regard. First, efforts must be made to establish the BMCs all across the country, particularly in the states that do not have adequate number of them. Secondly, there is a need to create a formal consultative mechanism among the three agencies that would help in overcoming the deficiencies in the implementation of the BDA.

### Concluding Remarks

The BDA is a well-crafted legislation that takes into consideration the imperatives of implementing a complex law given the realities facing India. The three-tiered organisational

structure adopted in the Act sits well with the overall decentralised governance system existing here. In keeping with the spirit of this system, the BDA brings the BMCs, comprising local communities, within the decision-making ambit, concerning the use of BRs and associated knowledge occurring within the territorial jurisdiction of each of the Committees.

Despite its well-crafted nature, the implementation of the BDA has many weaknesses. The ABS provisions have not been implemented effectively, which was mainly due to inadequate awareness about the law among various stakeholders and the weakness of institutional mechanisms. Moreover, well-articulated guidelines, without which no legislation can be effectively implemented, are not yet in place. Considering the importance of promoting conservation and sustainable use of BR, there is an urgent need to remove the shortcomings being faced for proper implementation of the Act so that benefits can accrue to the communities who protect and nurture BR and associated TK. Strengthening of institutional and human resources will have to be carried out to ensure any meaningful BS from access to BR and associated TK in the country.

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