

**ROLE OF PEOPLES' BIODIVERSITY REGISTER IN PROTECTION OF
TRADITIONAL KNOWLEDGE OF THE LOCAL PEOPLE AND ITS
PREPARATION IN KAMRUP DISTRICT, ASSAM: AN EMPIRICAL
STUDY**

Jayanta Boruah & Junu Das

North-Eastern Hill University

Abstract

Nature has nourished humanity across civilizations for which the entire humanity has been getting acquainted with the knowledge of Nature including the Biodiversity and its utilities as a continuous process that has been transmitted through generations to generations. Such knowledge has more or less been transmitted through verbal mediums and with a lot of lapses during transitions. However, such knowledge is a very valuable source of Intellectual Property which is valued in the true sense can contribute towards Sustainable Utilization of Biological Resources as well as towards the conservation of the same.

The indigenous people who are in touch with the natural ecosystem of the locality are expected to possess vital knowledge about the Natural Resources within their localities which if not protected can lead to a huge loss to potential commercial benefits. But since the passing of the Biological Diversity Act of 2002 in India, which is a legacy of several international developments in the legal dimension relating to Biodiversity conservation, measures were adopted for preparing the People's Biodiversity Register that would consist of information about the Biological Resources and the communities owing such resources at one hand and the Biological Resources and the associated traditional knowledge on the other hand. The task of preparing such People's Biodiversity Registers was handed over to Biodiversity Management Committees who were to consist of members from the local Panchayats as well as officials from the Forest Departments. In Kamrup District, Assam also, such BMCs were constituted to prepare the PBRs. This paper will therefore focus on the process of preparing such PBRs in Kamrup District, Assam with the help of both Doctrinal and Non-Doctrinal methods of Research.

Keywords: Biodiversity; Conservation; Intellectual Property; Local Communities; and People's Biodiversity Register

Introduction

The world community after witnessing a significant loss of biological resources realized that effective steps are to be taken to protect such biological resources.¹ It was therefore thought of arranging International corporations whereby efficient mechanism can be adopted to conserve the existing biological resources and for sustainable utilization of them for which the world fraternity under the leadership of United Nation adopted the Convention on Biological Diversity 1992 which provided the following three objectives via 1 conservation of biological resources; 2 sustainable utilization of such resources and 3 fair and equitable sharing of benefits arising out of such utilization of biological resources.² However, for conservation of biological resources, such resources needed to be documented along with their valuable utilities so that the commercial value of such biological resources can be estimated and thereby protected from getting exploited and at the same time it was also necessary that those who possesses knowledge over utilizing such biological resources for human welfare shall be protected from exploitation and be given the opportunity for building their capacity to make proper arrangement for conservation of such resources under their possession.

Thus, the concept of the People's Biodiversity Register (PBR) was established. PBR is a document that is meant for recording all valuable information relating to the biological resources along with the traditional knowledge of the communities who are processing such resources for better conservation, valuation as well as sustainable utilization of such resources.³ India being a signatory to the Convention on Biological Diversity (CBD) is also under obligation to implement such provisions by enacting legislation related to PBR. However, the implementation and the process of preparing the PBR have not been uniform across the country. This paper will therefore try to

¹ Theda M. Mutia, Biodiversity Conservation, (Presented at Short Course IV on Exploration for Geothermal Resources) UNU-GTP, KenGen & GDC (Nov 2009).

² Biodiversity and International Trade, CBD, *available at:* <https://www.cbd.int/incentives/int-trade.shtml> (Last seen on (April 30, 2019)).

³ Access and Benefit Sharing: A Mechanism for Empowering Local People, Assam State Biodiversity Board (2018).

understand the process of implementation of PBR and the role played by such register in protecting traditional knowledge which is a valuable asset of intellectual property rights of the indigenous community in India and at the same time, the paper will also try to understand to what extent such implementation mechanism has been carried out efficiently in the Kamrup district of Assam with empirical evidence, as the methodology followed for this research will be based on legal doctrinal as well as non doctrinal method of study. This research will aim to discover the implementation mechanism of preparing people's biodiversity register for protecting intellectual property related to traditional knowledge over biological resources of the local communities within the Kamrup district of Assam.

ROLE OF PEOPLE'S BIODIVERSITY REGISTER IN PROTECTING INTELLECTUAL PROPERTY RIGHTS OF THE LOCAL COMMUNITIES

The rationale behind the preparation of PBR was to recognize the value of biological resources under the possession of the concerned local communities and to record the information related to the Traditional Knowledge (TK) of such communities overutilization of such resources which they have been possessing for generations to generations without any formal text of documentation.⁴ Further, by such an attempt it was expected that the rights of the local communities will be protected and they will become entitled to adequate remuneration for making sustainable utilization of such Biological resources for ages and thereby playing a major role in the process of conservation of such resources.⁵ In other words, this mechanism is expected to enhance the capacity of the local communities by making proper valuation of the biological resources under their possession along with their associated TK, so that they can receive an equitable share in the benefits derived by third parties by making commercial utilization of such resources through the system of Access and Benefit Sharing Mechanism.⁶

⁴ Kanchi Kohli and Shalini Bhutani, *The Balancing Act: Exploring with Access and Benefit Sharing (ABS) under India's Legal Regime*, (Swissaid, India, 2015).

⁵Udisha Ghosh and Chandrakha Akkiraju, Biodiversity Act, 2002, An Analysis, ACADEMIKE, available at: <https://lawctopus.com/academike/biodiversity-act-2002-analysis> (Last seen on April 30, 2019).

⁶Kanchi Kohli , Introduction to CBD Framework, National Commitments and Achievements, LOAD.ORG, available at: http://load.org.gov.in/wp-content/uploads/2016-17/NTP*2006/KANCHI*20KOHLI.PDF, (Last seen on April 30, 2019).

International Legal Instruments on Rights of Local Communities and Traditional Knowledge

The Preamble of CBD itself highlights the importance of preserving the TK of the Local Communities for the conservation and preservation of biological resources. Article 8(j) of the Convention makes it a responsibility for the signatories to take efficient measures to protect and maintain the practices, TK as well as innovation of the Local Communities (LCs) over the biological resources within their respective territorial jurisdictions so that sustainable utilization of such resources and equitable sharing of benefits with the LCs can be ensured.⁷ In addition to this, the UN Convention to Combat Desertification also provides for the member states to protect the TK and the best practices of the LCs along with their proper integration and enhancement. Article 17(c) of the same Convention further ensures equitable benefits to such LCs for sharing their TK on mutually agreed terms and Article 18 deals with making sustainable utilization of such knowledge for enhancing technological growth.⁸

UN Permanent Forum on Indigenous Issues is a very pro-active document as regards the protection of the rights of Indigenous communities is concerned.⁹ The Convention on the Safeguarding of Cultural Heritage, 2003 was the first Convention to include the knowledge about Nature within the definition of the term Cultural Heritage and Article 1 of the Convention speaks for establishing International Co-operation for safeguarding such Cultural Heritage.¹⁰ Similarly, the Convention on the Protection and Promotion of the Diversity of Cultural Expression played a significant role in recognizing the Role that TK of the LCs can play for sustainable development.¹¹ Moreover, Article 31 of the Declaration on the Rights of Indigenous People and Traditional Knowledge provides the Indigenous People with the rights to protect, maintain and control their TK and also makes the States responsible for protecting such rights of the LCs.¹²

The Nagoya Protocol made the provisions of CBD binding on the Member States and also went one step ahead by concretizing the mechanism of Access and Benefit Sharing (ABS) through

⁷ United Nations Convention on Biological Diversity, 1992.

⁸ United Nations Convention to Combat Desertification, 1994.

⁹ United Nations Permanent Forum on Indigenous Issues, 2002.

¹⁰ Convention on the Safeguarding of the Intangible Cultural Heritage, 2003.

¹¹ Convention on the Protection and Promotion of the Diversity of Cultural Expression, 2005.

¹² United Nations Declaration on the Rights of Indigenous People and Traditional Knowledge, 2007.

which the preparation of PBRs was made practicable. It further introduced the concept of Prior Informed Consent (PIC) whereby any party who wants to access any biological resources or the associated TK will have to obtain prior informed consent from the LCs who have such resources and TK.¹³

Indian Laws and Intellectual Property Rights over Biological Resources

Indian Laws recognize Patents as a security of one's Intellectual Property Rights over Biological Resources. The Patentability of a particular product or process is based on the criteria of innovation having industrial value for which application for Patent has been made. Under Indian laws, an innovation is defined as an innovation that has never been published or used anywhere in the world before the making of the application along with full specification stating that it has not fallen in the public domain and is not a part of the state of art.¹⁴

Similarly, the PVGRF Act¹⁵ provided IP rights to the breeder and made the ABS a mechanism for arranging platforms for the breeder to secure their IP Rights. However, the most important legislation in this regard in India is the Biological Diversity Act of 2002 (BD Act). The BD Act established a three-tier institutional mechanism with the National Biodiversity Authority (NBA) at the Apex level; the State Biodiversity Boards (SBB) at the State Levels and the Biodiversity Management Committees (BMCs) at the local levels. All these Authorities were responsible to establish and maintain the ABS mechanism throughout the country which even included concerns relating to IP rights over Biological Resources as well as preparation of PBRs.¹⁶

Section 6 of the BD Act makes it mandatory for one to take permission from the NBA before carrying any invention based on the research or information about any biological resources obtained from India. Further, Section 3, 4, and 7 of the said Act also lays down more conditions

¹³ Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 2010.

¹⁴ Indian Patent Act, 1970, No. 39, Acts of Parliament, 1970, (India).

¹⁵ Protection of Plant Varieties and Farmers' Rights Act, 2001, No. 53, Acts of Parliament, 2001, (India).

¹⁶ Biological Diversity Act, 2002, No. 13, Acts of Parliament, 2003, (India).

for working with such information where permission from NBA has been made necessary.¹⁷ Further, even for getting approval for Patent application on any products or processes related to biological resources from Indian Patent Office (IPO), it is necessary to have a clarification certificate from NBA along with the First Examination Report. The IPO is under obligation to work with NBA under the provisions of BD Act as regards patenting of Biological Resources as well as associated TK is concerned for which two different Ministries are made to work together, via- Ministry of Environment & Forest regulating NBA and the Ministry of Commerce and Industry (Department of Industrial Policy and Promotion) regulating the Controller General of Patent, Design and Trademark functions.¹⁸

Section 6(2) connects the ABS mechanism with provisions relating to IPR whereby the NBA has been made responsible for levying fee or other suitable conditions while approving patenting of biological resources on an agreed basis between the LCs and the applicant so that the benefits to be derived from such patenting could be shared with the LCs on an equitable basis. However, such provisions have been made non-applicable on any person who possesses such Rights under the PVRF Act under Subsection 3 but still, such person will have to submit documents for proving the existence of such rights to NBA under subsection 4. Non- Compliance with all these provisions has been made punishable offenses under Section 55, 56, and 57 and such offenses are cognizable as well as non bailable.¹⁹

As per the Budapest Treaty Guidelines, it is necessary that the organisms should be registered in the National Repositories and shall be identifiable by NBA before the NBA could grant a patent over such biological resources. Plants and animal DNAs are made non-patentable under Section

¹⁷ Hrishikesh R. Chaudhury, Extnt of Compliance Required under Section 6 of BD Act 2002, Lexorbis, *available at:* www.mondaq.com/india/x477978/patent/xtent+of+compliance+required+under+sction+6+of+the+biological+diversity+act+2002 (Last seen on April 30, 2019).

¹⁸ Abhai Pandey, Indian Biodiversity Authority Directed to Consider Approvals with Retrospective Effect, LO available *ar:* www.mondaq.com/india/x/762168/Patent/indian-biodiversity+authority+directd+to_consider_approvals+with+retrospective+effect (Last seen on April 30, 2019).

¹⁹Khurana and Khurana, Biological Diversity Act, 2002 and Patenting of Biological Inventions in India (Part- 1 Section – 6), K&K, *available at:* <https://www.khuranaandkhurana.comk/2017/04/2/biological-diversity-act-2002-and-patenting-of-biological-inventions-in-india-part-1-section-6/?utm...source=Mondaq&utm...medium=syndication&utm..campaign=View-Original> (Last seen on May 23, 2019)..

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VOLUME 1 ISSUE 2

3(j) of the Indian Patents Act. The BMCs under BD Act are responsible for preparing PBRs that shall contain the TK of the LCs over their corresponding share of Biological Resources.²⁰

Some Cases featuring Disputes Relating to IP issues over Biological Resources

Neem (*Azadirachta Indica*) has been in utilization as a medicinal product in India by the LCs for ages and Patents over such products were granted to both Indian and Foreign Companies. However, a dispute arose when US Patent and Trademark Office issued a Patent to a US Company named, W. R. Grace, and a similar patent was issued subsequently in Europe.²¹ Similar controversies also arose when a Company named Rice Tec filed 20 Patents on a Rice Variety called Basmati which is mostly cultivated in India, Pakistan, and Nepal. Later, when challenged the company withdrew 15 out of 20 Patents and modified two patents while three still subsists. It has led to moral and economical injury to India, since morally the indigenous knowledge of the LCs over Basmati Rice, which they have been preserving for ages, has been threatened and economically Indian exports of such variety are now forced to face unfair competition.²² Again, US Patent Office granted a Patent to ConAgra for the Atta flour method but the claims of the company could not be justified to be legal because such methods of atta chakkis are followed in India for ages.²³ Many such controversies arose due to the lack of proper documentation of TK in India like- the *Piperine* case,²⁴ the *Guggul* case,²⁵ etc. However, all these examples highlight the fact that how important it is to document the TK of the LCs.

Importance of People's Biodiversity Registers

²⁰ IPR Meetings- IPRIssues on IPR and Biodiversity Act, NBA nbaindia.org/blog/399/24/IPR/IPRMeeting/IPRissu.html (Last seen on April 30, 2019).

²¹ US Patent No. 6124,349, Storage Stable Azairachtin Formulation (issued 23 June, 1992).

²² Christophe Bellman, Graham, Trading in knowledge: development perspectives on TRIPS, trade, and sustainability, SWC, available at: <https://searchworks.stanford.edu/view/5652645> (Last seen on April 23, 2019).

²³ Ashok B Sarma, Now A US Patent for Atta Chakkis, IE, available at: <http://www.indianexprss.com/storyOld.php?storyid=14493> (Last seen on April 23, 2019).

²⁴ R. Sreakumar, Piperine patent given Kerela exporters the jitters, IE, available at: <http://www.expressindia.com/fe/daily/19980323/08255404.html> (Last seen on April 23, 2019).

²⁵ Sanjay M. Jachak and Arvind Saklani, Challenges and opportunities in drug discovery from plants, 92, CS, 1253 (2007).

It is well recognized at present that conservation of Natural Resources including Biological Resources will be best possible by enhancing the capacities of the local communities who are in close association with Nature within their localities. Thus, efforts were made for making them entitled to the share in the benefits derived from utilizing the biological resources under their possession through various mechanisms including the ABS System.²⁶ Within this system itself, the preparation of PBR was made functional. This PBR is to include all information relating to the values of a particular biological resource along with the associated TK of the LCs so that the proper valuation of such biological resources could be estimated before making commercial utilization.²⁷ Further, it is also necessary to bridge the gap between TK and the ever-increasing technological avenues particularly in countries like India which is one of the world's largest biodiversity hotspot at one hand and a country with a massive population of poor and illiterate people who are devoid of technological know-how on the other hand.²⁸

At present, the younger generation is also getting disassociated from Nature for which the previously transmitted TK from generation to generation is now under threat of getting extinct. It is, therefore, necessary to preserve such TK through proper documentation. TK about nature has been held as a cultural heritage even by International Instruments for which such TK can represent a diverse source of cultural heritage in India.²⁹

As regards economic utilities are concerned, it has already been discussed in the previous section that how certain things that are common in our culture get so highly valued in Foreign countries, and due to lack of proper documentation, it becomes very difficult to assert our hold over such rights when disputes over IP arises.³⁰

²⁶Rashwet Shrinkhal, Problem in Defining 'Indigenous Peoples' Under International Law, 7(1), CLJ, available at: <https://paper.sem.com/sol3/paper.cfn?abstract...id=2425557> (Last seen on April 23, 2019).

²⁷ Shova Devi & Manchikanti Padmati, Biodiversity Monitoring: A Pre-Condition to Access and Benefit Sharing under the Indian Biological Diversity Act, 2002, JIPR, 288 (2016), available at: <http://docs.manupatra.in/newsline/articles/Upload/707A5F04-313A-4883-AB1B-DABEBBAF0433.pdf> (Last seen on April 24, 2019).

²⁸ Prof. Madhav Gadgil, Yogesh Gokhale, et al., People's Biodiversity Register, xv shayadri e-news, available at http://wgbis.ces.iisc.ernet.in/biodiversity/sahyadri_enews/newsletter/issue15/index.html (Last seen on June 23, 2019).

²⁹ Ibid.

³⁰ Ibid.

Thus, all these make PBR an important source for protecting the IP Rights of the LCs over their TK as regards the utilization of their biological resources are concerned. At the same time, such PBRs also become an important source for capacity building of the LCs as well as for better conservation and sustainable utilization of biological resources under their possession by making commercialization of such resources possible healthily rather than leading to exploitations.

STATUS OF PBR PREPARATION IN KAMRUP DISTRICT ASSAM

After the enactment of the BD Act, the Assam government also passed the Assam State Biodiversity Rules, 2010 which established the Assam State Biodiversity Board (ASBB) with its headquarter at Arannya Bhawan in Panjabari, Guwahati.³¹ The Rules provided for the appointment of the Chairman of the Board, other members along with their salaries and tenures, and all other such provisions that are required to make the Board functional for regulating the ABS mechanism in the State. It also provided for constituting BMCs at local levels with Officials from the Forest Departments, Panchayat members, and local people as members of the Committees. The Board besides monitoring the other requirements of the ABS is also required to assist the BMCs in the preparation of the PBRs within their respective jurisdictions.³² Kamrup District comes within the territorial limits of the State of Assam and therefore ASBB is responsible for monitoring the preparation process of PBRs by the BMCs constituted within the Kamrup District.

The major Kamrup District is divided into two sub-districts, via- Kamrup (Metro) and Kamrup (Rural).³³ So far till the date of collection of data for this research, there were 16 BMCs constituted within the Kamrup District of Assam out of which 3 were constituted in Kamrup (M), via- Chandrapur Block BMC, Demoria Block BMC, and Rani Block BMC while all the other BMCs were constituted in Kamrup (R). the list of the BMCs along with their Chairperson and Member Secretaries are provided below-

³¹A.K. Johari, *Access and Benefit Sharing: A Mechanism for Empowering Local People*, (Assam State Biodiversity Board, 2018).

³² Assam State Biodiversity Rules, 2010.

³³Kamrup District, ASSINFO, available at: www.assaminfo.com/districts/14/kamrup.html (Last seen on April 26, 2019).

DROIT PENALE: INDIAN LAW JOURNAL ON IPR

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VOLUME 1 ISSUE 2

Sl. no.	Name of BMCs	Chairperson	Member Secretary
1	Chandrapur Anchalik BMC	Sri Nagendra Chetri	Sushil Kumar Kalita
2	Rani Anchalik Panchayat BMC	Rabin Daimari	Gunindranath Das
3	Dimoria Anchalik Panchayat BMC	Smt. Santi Chetri	Sri Gadadhar Malakar
4	Boko Anchalik BMC	Sri Upen Gayari	Sri Satish Mali
5	ChayaniBorduar Anchalik BMC	Sri Citra Mali	Sri Nabin Das
6	Chaigaon Anchalik BMC	Sri Pradeep Kalita	Sri Parikhit Thakuria
7	Garoimari Anchalik BMC	Smt. Morium Khatun	Sri Taisuddin Ahmed
8	Rampur Anchalik BMC	Sri Phanindra Das	Sri Ananta Kalita
9	Chamoria Anchalik BMC	Sri Milan Dasi Das	Sri Hirakjyoti Das
10	Bangaon Anchalik BMC	Md Hasroot Ali	Sri Jainur Ali
11	Rongia Block BMC	Md Tariful Islam	Md Hafizuddin Ahmed
12	Bazera Block BMC	Smt. Bimala Boro	Md. Imal Haque
13	Jogi Kona Block BMC	Smt. Mousomi Boro Kalita	Md. Hafizuddin Ahmd
14	Sualkuchi Block BMC	Md. Makib Ali	Sri Ajit Das
15	Hajo Block BMC	Sri Pranita Malakar	Sri Ajit Das
16	Kamalpur Block BMC	Shri Harun Das	Shri Achinta Duri

Table 1: List of BMCs constituted in Kamrup District³⁴

³⁴Supra 31.

The above information is derived from literature published in 2016 by ASBB itself. However, there might be certain changes as regards the information are concerned, due to the passage of time.

Sources of Data Collection

For the empirical study data were collected from the officials of the Forest Departments, those who were also the Member-Secretaries of the BMCs concerned as well as also from the members of the ASBB. However, out of the 16 BMCs in the Kamrup district, only 8 BMCs were covered within the scope of the study since the other BMCs were not functional due to the expiration of the five years term of the Anchalik Panchayat Committees during the time of the study in 2019.

Findings of the Study

It was reported that out of the 16 BMCs only 8 BMCs have submitted their PBRs as of 2019. Those BMCs were Bazera Block BMC; Bongaigaon Block BMC; Chamaria Block BMC; Garoimari Block BMC; Hajo Block BMC; Kamalpur Block BMC; Rani Block BMC; and Sualkuchi Block BMC.³⁵ It was even asserted by the Scientific Officer from ASBB that the PBRs are expected to bring benefits to the LCs possessing the Biological Resources, however, she also admitted the fact that no such benefits have been achieved by any LCs in Assam so far since the ABS mechanism is yet not functional in the State even after a decade has passed from the enactment of the Assam State Biodiversity Rules. She further held that ASBB lacks proper documentation about the most demanded biological resources from the State of Assam.³⁶

Ajit Das, Rtd. Forester 1 and Member Secretary of Hajo Black BMC, as well as Sualkuchi Block BMC, held that both the Hajo Block BMC and the Sualkuchi Block BMC have submitted their PBRs to the ASBB successfully. He mentioned that PBRs consist of TK like that of Mr. Pramod Bez Baruah who successfully conducted deliveries of around 300 pregnant women with the help of his TK over medicinal plants and without resorting to any modern medicines. He further revealed that such documents are highly confidential and therefore cannot be exposed publicly

³⁵ Nayan Das, Technical Assistant, ASBB.

³⁶ Dr. Oinam Sunanda Devi, Scientific Officer, ASBB.

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VOLUME 1 ISSUE 2

since by doing so a larger portion of the TK might get pirated. A few snapshots from the PBR of Hajo Block BMC are however provided below with the permission of Ajit Das.

PBR-FORMATS											
Sl. No.	Crop	Scientific name	Local name	Variety	Landscape	Local status	Cropping season	Uses	Associated TK	Source of plant info	
											Part
1	Rice	<i>Oryza sativa</i>	Joha		Paddy field	Abundant	abundant	summer	Staple food/hay used as fodder	eaten in special occasions and is considered the most type of rice varieties	Local
2	Rice	<i>Oryza sativa</i>	Ajeng		Paddy field	Abundant	abundant	summer	Staple food/hay used as fodder	used for daily consumption	Local
3	Rice	<i>Oryza sativa</i>	Bora		Paddy field	Abundant	abundant	winter	Staple food/hay used as fodder	used in proportion of traditional rice dishes	Local
4	Rice	<i>Oryza sativa</i>	Prithib	Sali	Paddy field			winter	Staple food/hay used as fodder	used in traditional customs and rituals	Local
5	Rice	<i>Oryza sativa</i>	Morogni	Sali	Paddy field	Abundant	abundant	winter	Staple food/hay used as fodder	used in traditional	Local
6	Rice	<i>Oryza sativa</i>	Lewa	bao	Paddy field			winter	Staple food/hay used as fodder	used for making rice (baosheeni)	Local
7	Rice	<i>Oryza sativa</i>	Narmati	bao	Paddy field			winter	Staple food/hay used as fodder	used for making rice (baosheeni)	Local
8	Rice	<i>Oryza sativa</i>	Samoi	baa	Paddy field	Abundant	abundant	winter	Staple food/hay used as fodder	used for making rice (baosheeni)	Local

FORMAT 15: Urban Flora										
Sl No.	Local Name	Scientific Name	Type of Plants	Habitat	Flowering Season	Remarks (Rare/ Common etc)				
1	Dobdara	<i>Psophocarpus longistylis</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Common				
2	Somari	<i>Carrichtera alnifolia</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Common				
3	Radihana	<i>Garcia simplicifolia</i>	Small Tree	Terrestrial, Road side plantations and Gardens	Summer	Common				
4	Kamal	<i>Ipomoea carnea</i>	Shrub	Terrestrial, Road side plantations and Gardens	Summer	Not common				
5	Nari	<i>Sauvagesia corymbosa</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Not common				
6	Bilgoon	<i>Ficus benghalensis</i>	Trees	Terrestrial, Road side plantations and Gardens	Winter	Common				
7	Aher	<i>Ficus religiosa</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Common				
8	Falak	<i>Alpinia zerumbet</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Common				
9	Bakul	<i>Mimosa pudica</i>	Trees	Terrestrial, Road side plantations and Gardens	Summer	Common				
10	Tharu	<i>Phalaenopsis amabilis</i>	Shrub	Terrestrial, Road side plantations and Gardens	Summer	Common				
11	Kamal	<i>Messerschmidia laevigata</i>	Shrub	Terrestrial, Road side plantations and Gardens	Winter	Common				
12	Nagpani	<i>Citrus reticulata</i>	Shrub	Terrestrial, Road side plantations and Gardens	Summer	Common				
13	Khadli	<i>Phoenix reclinata</i>	Palms	Terrestrial, Road side plantations and Gardens	Summer	Common				
14	Khanda	<i>Phoenix dactylifera</i>	Palms	Terrestrial, Road side plantations and Gardens	All season	Common				
15	Gurda	<i>Ipomoea carnea</i>	Small Tree	Terrestrial, Road side plantations and Gardens	All season	Common				
16	Joha	<i>Hibiscus rosa-sinensis</i>	Small Tree	Tropical, Parks and Gardens	Summer to fall	Common				
17	Kurdi	<i>Catharanthus roseus</i>	Shrub	Tropical, Parks and Gardens	Spring and summer	Common				
18	Nari	<i>Rosa sp.</i>	Shrub	Tropical, Parks and Gardens	All season	Common				
19	Gidly	<i>Calotropis procera</i>	Shrub	Tropical, Parks and Gardens	Summer	Common				
20	Phutai Kona	<i>Dioscorea alata</i>	Herb	Terrestrial, Gardens and Commercial Building	Summer	Common				
21	Tora Kona	<i>Dioscorea alata</i>	Herb	Terrestrial, Parks and Gardens	Summer	Common				
22	Dupar Tenga Pan Goya	<i>Dioscorea alata</i>	Herb	Terrestrial, Parks and Gardens	Late winter	Common				
23	Dahan Ben	<i>Cyperus difformis</i>	Shrub	Tropical, Parks and Gardens	late spring	Common				
24	Naglambang	<i>Coccoloba uvifera</i>	Shrub	Tropical, Parks and Gardens						

Most importantly Ajit Das mentioned that one of the biggest difficulties in preparing the PBR is the lack of regularity in the constitution process of the BMCs since BMCs are not permanent bodies. BMCs consists of the members of Panchayats who use to get dissolved after every five years, forest officials who are transferred mostly after every six months and the local people who are mostly not aware of their rights and those who are aware are least bothered for contributing towards the implementation of the PBR preparation process. Due to the constant transfer of Forest officials, it becomes very difficult to prepare them for the process of preparing PBRs and if they get prepared then they are again transferred to other places and new officials are brought in and the training process needs to be continued again from the very beginning. Thus, in short, due to lack of continuity in the BMCs, it becomes difficult to properly administer the process of preparing the PBR. However, he is of the opinion that the ABS is expected to bring a lot of benefits to the LCs if properly implemented and the PBR is going to become a valuable asset not only for the conservation of biological resources but also for enhancing the economic value of such resources thereby encouraging sustainable utilization.³⁷

³⁷ Ajit Das, Fr. 1, Member Secretary Hajo Block BMC & Sualkuchi Block BMC.

Mr. Gunindranath Das, Deputy Ranger Rani Forest Department, and Member Secretary Rani Block BMC revealed that the Rani Block BMC was constituted with the members of the Panchayats who were then not available since the Panchayat election was recently conducted and the other Forest officials were also transferred. The members of the local bodies who are a part of the BMC are rarely aware of the initiatives to be organized by the BMCs. He stated that since the constitution of BMC, only one meeting was conducted by the ASBB in the year 2016 where pamphlets about the functioning of the ABS and the role of the BMCs and the local peoples were distributed amongst the school children in both English and Assamese languages. Hundreds of saplings were planted as an agenda of that meeting but unfortunately, since then no communication has been made by the ASBB to date (2019). The Rani BMC PBR was prepared with the help of M. Sc students who were given internships under ASBB.

He further revealed that there exists a lack of communication between the BMCs and the ASBB for which it becomes very difficult for getting clear instructions.³⁸

The Member Secretary of Rongia Block BMC and the Jogi Kona Block BMC revealed his lack of knowledge over the matters related to the functioning of BMCs since he has been newly appointed through a letter given to him by the DFO. He has received no communication from the ASBB since then and he has no idea about the PBR and any provisions of the BD Act.³⁹

The Member Secretary of the Boko Block BMC revealed that the ASBB itself is not that serious about the functioning of the BMCs. Once a meeting is held, the expenses of lunch and tea are made out of the fund and later no communications are made. Further, there is a lack of members in the forest kinds of staff, since only 6-8 staff members are working for a particular range where there should have been at least a minimum of 25 forest staff members. Moreover, those members are also engaged in other official tasks like preparation of NRC and all. In such situations, questions arise about the availability of time for the forest officers to dedicate to preparing of PBRs. He also gave an example of illegal Bio-trading by citing a case where pangolin smugglers were arrested

³⁸ Mr. Gunindranath Das, Deputy Ranger, Rani Forest Range, Member Secretary Rani Block BMC.

³⁹ Hafizudin Ahmed, Fr 1, Protection Squad Rongia Range (Forest Department), Member Secretary Rongia Block BMC & Jogi Kona Block BMC.

red-handed and sent to jail at the beginning of 2019 itself.⁴⁰ However, when asked to the members of ASBB, it was revealed that they did not receive any complaint about illegal bio-trading which proves the inefficiency of the ASBB to some extent.

The Member Secretary of Rampur Block BMC highlighted the fact that there is no need of doing anything for the conservation of biological resources since Nature itself has the potential to do so. Humanity will only exploit it therefore it is better to leave the Forests and the other biological resources untouched to the greatest possible extent. He further asserted that by making the people aware of the commercial utilities of a particular biological resource or the associated TK regarding its utilization through the PBR, chances of exploitation of such resources might increase since locally there is a lack of infrastructure for proper utilization of such resources and knowledge for which the local people might exploit it for personal benefits through illegal trading since satisfying hunger is the utmost priority of these people. Thus, according to him the objectives behind preparing PBR will become successful only if the local people are empowered and local infrastructures are built for sustainable utilization of Biological resources. He like the other forest officers also asserted the lack of forest kinds of stuff and technical support in the Forest Department and the offenses that used to take place within the vicinity of the forests about which the ASBB is hardly aware.

CONCLUSION

There is no doubt in the fact that PBR plays an important role in matters relating to IP issues over biological resources and their associated TK. However, we must also acknowledge the fact that even after knowing the importance of PBR and the consequences that can take place due to lack of such documentation, the legal, as well as the institutional framework, seemed to be slightly ignorant over the issue of such PBR, since there exist many inconsistencies in both the legal and the institutional frameworks as regards IPR matters over biological resources are concerned. Legally, it is provided under Section 6 that approval from NBA is mandatory for getting patents on biological resources obtained from India. But the criteria for determining such resources have

⁴⁰ Sri Ananta Kalita, Fr 1 Singra Range (West Kamrup Forest Division) Member Secretary Boko Block BMC.

not been provided. As such questions like whether resources that were originated in India but are now found outside India will come within its scope or whether resources that originated outside India but are now found within India will be covered, and what is the time for determining from when resources will be held to have originated from India are still unanswered. Similarly, the meaning of the term ‘persons’ in Section 6 goes beyond the meaning of the term as provided under Income Tax Act and attempts to cover even foreigners. But if such is the case then it seems to violate the scope of the same law which is defined in Section 1(2) to be limited within India itself.

Further, it is essential to have proper documentation of the existing biological resources as well as the associated TK of the LCs for which the drafting of PBR at local levels was initiated, but the study shows the institutional inconsistencies in preparing such documents. It is even observed that neither the institutions nor the local people are taking this issue seriously.

After having a clear observation of all the above facts, the following suggestions can be made-

The law shall be made clearer as regards the criteria for determining the nature of biological resources it tends to govern and the process of applying for patents over such resources;

The BMCs must be constituted permanently even if not wholly, at least partially where a minimum of one-third members shall be permanent members;

Infrastructures shall be built in a manner so that resources of a particular locality could be utilized within the vicinity of such local limits and employment opportunities can be generated to the local people;

The strength of the forest department shall be increased along with increasing the technological support and if possible the BD Authorities shall be suspended and their powers and functions shall be transferred to the forest department since the BD Authorities had not done anything significant even after 10 years of establishment of such Authorities while on the other hand, the forest departments are more efficient and better trained in handling matters related to conservation of Biological Diversity. By doing so the resources invested in the BD Authorities could be invested in the Forest Departments and thus making them more efficient.