

A misty landscape with a large tree, a herd of sheep, and a small monument in the foreground. The scene is set in a green field with a forested hill in the background. A white arc is visible on the right side of the image.

# Biodiversity

**CONSERVATION AND LIVELIHOODS  
ENHANCEMENT**

ecociate



# BIODIVERSITY

## CONSERVATION AND LIVELIHOODS ENHANCEMENT

Perspectives & Prospects

A report by

ecociate

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# Executive Summary

The context of biodiversity and the immense pressure on it, is not new and has been sufficiently ideated, debated and deliberated to reach a juncture where the statutory cover (Biological Diversity Act, 2002) legitimizes the gravity of the issue. However, from vision to execution there are value aberrations that defy and dilute the ultimate objectives of biodiversity conservation especially in the perspective of provisions of Biological Diversity Act integrating with livelihoods enhancement of local communities and sustainable sourcing by the users of biological resources.

One of the basic frameworks for any proposition is the 6 Ws and 1 H (What, Why, Where, When, Who, for Whom and How). In case of biodiversity conservation and livelihood enhancement the present organized repertoire of knowledge is reasonably profound to answer What, Where, When, Who and for Whom, but severely falls short of Why and How. This study has revealed that in the functional hierarchy (as mentioned in the provisions of BDA 2002) from State Biodiversity Board (SBB), through the Biodiversity Management Committees (BMCs) to the formation of Peoples Biodiversity Register (PBR) and establishing a robust mechanism for Access Benefit Sharing (ABS), the inability of BMCs

to establish itself as an important community institution and to form and utilize the PBR for developing conservation and livelihoods plan has emerged as the Achilles Heel, that in turn cascades to non-functionality of ABS. The data indicates a steep funnelling from number of BMCs formed in the country and the corresponding number of PBRs thus thinning the very spirit of the vision and mission of the BDA 2002.

This report, designed with an intention to fill the missing gaps, attempts to consolidate and re-establish what is present and furthers the proposition by proposing roadmap for fulfilling greater common good. It lays down the macro plan already available and suggests the micro working charter to serve the macros.

Through an extensive research on the secondary data and collating first-hand information from those at field, this report tables ideas and premises for potential of BDA as a legislative tool, for ensuring biodiversity conservation, sustainable livelihoods and fair and equitable sharing of benefits.



The study puts forth following 10 key takeaways that would ensure effective implementation of BDA, 2002 resulting in desired impacts.

**1. Making the BMCs visible among the local communities and creating partnership with local institutions**

Creating awareness among the local communities on the role of BMCs and its uniqueness is required to bring more visibility towards the institution. Moreover, clearly defining the roles and responsibilities of BMCs to eliminate any ambiguity with other local institutions and creating partnerships with important institutions such as Gram Panchayat, Joint Forest Management Committees, Van Panchayat etc to leverage each other's support is imperative for creating a vibrant and responsive network augmenting biodiversity conservations and livelihood enhancement.

**2. Empowering BMCs to perform its mandate judiciously**

Engaging Technical Support Groups (NGOs and Research Institutions) and community persons for providing technical and handholding support to the BMCs in performing their duties. Conducting regular training (generic and thematic) at the BMC level is necessary to build their capacity.

**3. Creating biodiversity cadre as last mile champions at BMC level**

Developing a capacitated local cadre to provide regular support to the BMCs and ensure sustainability of the institution and planned interventions is desired. This cadre base can also act as the bridge between the State Biodiversity Boards and District/Block/Panchayat level BMCs to ensure smooth flow of information.

**4. Promoting livelihood through sustainable use of biological resources at BMC level**

Orienting BMCs on livelihoods promotion through sustainable use of biological resources and building their capacities on not only developing and implementing local conservation and resource management plan by engaging local communities & CBOs but also developing livelihood opportunities for the local communities.

**5. Preparing Peoples' Biodiversity Register through a participatory and inclusive approach:**

Forming PBR through involvement of local communities and people with adequate traditional knowledge of the local ecosystem is desired that would result in formation of a comprehensive PBR



## **6. Utilizing PBR data in an effective manner to serve multiple objectives:**

PBR data to be utilised for (i) preparing conservation plans, (ii) preparing livelihoods promotion plan and (iii) gauging local community's dependence on biological resources for food security. BMCs to use the data and information for developing conservation strategies for the vulnerable or threatened resources to maintain the local ecological balance. Along with this, BMCs to prepare plans to promote existing and potential livelihood opportunities around tradeable resources by categorising on the basis of volume, household coverage and market price etc.

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## **7. Mapping the value chain of tradeable items**

Developing unique proposition of major tradeable items through mapping their value chain and leveraging the same to promote primary value addition activities through community engagement and ensuring fair sharing of access and benefits.

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## **8. Linking ABS fund utilization strategy rooted in maintaining ecological balance along with promoting livelihood of local communities**

Effective utilisation of ABS funds for conservation and/or sustainable collection (and / or cultivation) of traded biological resources to maintain healthy supply base. This would ensure both ecological balance and promote livelihood for the local communities.

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## **9. Creating Industry awareness and strengthening their engagement for ABS system**

BMCs need to create awareness among the private sector players including MSMEs, and their industry associations on the modalities of ABS and engaging with BMCs for ensuring sustainable supply base of biological resources, and fair and equitable profit sharing with local communities. Incentives and programmes supporting biodiversity centric start-ups may be designed and implemented by the State Biodiversity Boards to develop responsive ABS-payer ecosystem.

## 10. Strengthening SBB as a Management Support Unit to act for furthering ABS mechanism through an industry interface.

Augmenting SBB as a management support unit for developing systems for leveraging ABS and creating sustainable partnerships with industry.

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Each idea is analyzed threadbare for its present position, challenges and strategies to overcome challenges. The scope and span of analysis encapsulates, planning, organizing, coordinating, capacity building, networking, direction, technical support, staffing and interrelationships.

*'The most important things in life are shown the least importance'*. Perhaps this cliché cannot be truer for any other issue but biodiversity in human life and livelihoods. We take for granted what is easily available and then without conscientious thought overuse and abuse it till we reach a juncture where the damage is irrevocable, and attitude is incorrigible. This position paper is a suggestive roadmap, which may at places seem instructive even prescriptive, designed for bringing forth an actionable agenda built upon on-ground perspectives of Biodiversity Conservation and Livelihood Enhancement. At the same time, we are confident that the testable hypotheses offered here, if followed in spirit with local manoeuvring would offer scalable, replicable and sustainable models of biodiversity conservation and livelihood enhancement.



# Abbreviations

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<b>ABS</b>	Access and Benefit Sharing
<b>BDA</b>	Biodiversity Diversity Act
<b>BMC</b>	Biodiversity Management Committee
<b>BP</b>	Block Panchayat
<b>BR</b>	Biological Resources
<b>CBD</b>	Convention on Biological Diversity
<b>CBO</b>	Community Based Organizations
<b>CI</b>	Community Institutions
<b>CoE</b>	Centre of Excellence
<b>CRP</b>	Community Resource Person
<b>FD</b>	Forest Department
<b>GACP</b>	Good Agricultural and Collection Practices
<b>GP</b>	Gram Panchayat
<b>MAT</b>	Mutually Agreed Terms
<b>MFP</b>	Minor Forest Produce
<b>NBA</b>	National Biodiversity Authority
<b>NTFP</b>	Non-Timber Forest Produce
<b>PBR</b>	People's Biodiversity Register
<b>PIC</b>	Prior Informed Consent
<b>PRA</b>	Participatory Rural Appraisal
<b>PRI</b>	Panchayati Raj Institutions
<b>SBB</b>	State Biodiversity Board
<b>SRLM</b>	State Rural Livelihood Mission
<b>TK</b>	Traditional Knowledge
<b>TSG</b>	Technical Support Group
<b>VCA</b>	Value Chain Analysis
<b>ZP</b>	Zilla Panchayat
<b>RRA</b>	Rapid Rural Appraisal
<b>IUCN</b>	International Union for Conservation of Nature
<b>MAP</b>	Medicinal and Aromatic Plants
<b>UBB</b>	Uttarakhand Biodiversity Board





The background of the page is a light green topographic map with contour lines. The lines are more densely packed on the right side, indicating a steeper slope, and more widely spaced on the left. A dashed line, possibly representing a path or boundary, winds across the map.

# Importance of Biodiversity

# 1.

## Importance of biodiversity in the development context

The concept of biodiversity has always been associated with forests & wildlife and restricted to only the conservation domain. This has somehow resulted in its negligence and prevented it from being integrated into the process of social and economic development. Biodiversity<sup>1</sup> is defined as the variety and variability of life at the genetic, species and ecosystem level. These ecosystems due to their distinct geographical features and diverse lifeforms have the capacity to provide a range of services which are known as ecosystem services. The whole of human population depends on these ecosystem services for sustenance and income generation.

### Why it is important to integrate biodiversity conservation into the process of social and economic development?

#### Food and nutritional security

In addition to providing livelihoods security, biodiversity also plays a vital role in the lives of rural communities to address their food and nutritional needs. A rich biodiversity within and above soil ensures healthy soil which in turn results in better productivity which is crucial for feeding the ever-growing population of the world. Moreover, many of the rural households are dependent on the uncultivated food which are primarily procured from the forest areas. These forest areas have been a traditional source of food for the forest communities since ages. In

recent times, loss of biodiversity due to various factors, such as promotion of anthropogenic expansion, over-exploitation of resources and propagation of monoculture plantation, have resulted in disappearance of many species of flora and fauna from the forest ecosystems. This in turn, has impacted the food habits of the dependent communities. The food basket of these dependent households has shrunk reducing their dietary diversity and affecting their nutritional levels.

#### Reduced impact of climatic events

Natural ecosystems have the potential to deal with various externalities that may arise from natural or man-made causes. It not only minimalizes the impact of such externalities on the various life forms but also reduces the vulnerabilities of communities and wildlife towards food, water and other resources.

For example, maintaining a diverse forest cover in the hillslopes significantly decreases the cases of soil erosion during monsoons, and thus, protects the civilisations residing in the valleys. Moreover, reduced soil erosion means decline in siltation of the rivers and streams which otherwise causes large scale destruction in the downstream areas through floods.

#### Maintain ecological balance

There are many ecosystem services that a natural landscape disburses. Some of these services are tangible and visible to a common man's eyes in the form of food, water, wood, medicines, minerals

<sup>1</sup>(2020). Retrieved 13 April 2020, from [http://www.unesco.pl/fileadmin/user\\_upload/pdf/BIODIVERSITY\\_FACTSHEET.pdf](http://www.unesco.pl/fileadmin/user_upload/pdf/BIODIVERSITY_FACTSHEET.pdf)



etc. However, there are many other services that go unnoticed or rather unappreciated.

Critical functions such as carbon sequestration, maintaining hydrological balance and nutrient cycles are often neglected while assessing the value of an ecosystem. For example, destruction of broad leaf tree species such as Oak in the Himalayan landscapes resulted in drying up of the hill springs. These springs used to serve as the primary water source for villages in higher altitudes. However, the failure to recognise the contribution of the Oak trees and not integrating them into the development process pushed the communities into a severe water crisis.

## Improved livelihood opportunities

The common perception of biodiversity is limited to only the forest ecosystems. However, the contribution of a diverse biological landscape is as much important in the case of an agricultural ecosystem as in the former. Many farmers have reported increasing soil infertility due to rampant use of chemical inputs. Chemical inputs adversely affect the micro-organisms present in the soil which within themselves disburse various services such as nitrification, decomposition etc, that are essential for creating a conducive environment

for plants to grow. In addition, processes such as pollination, soil nutrient cycle, ground water development etc which are essential for agricultural development are directly related to the biodiversity of the area. Intercropping, crop rotation, agroforestry, organic agriculture are few such practices that are adopted by farmers in order to maintain the ecological balance in their agriculture fields. These practices not only enhance the land productivity but also ensure the long-term health of soil and water.

Additionally, the livelihood dependence of forest communities is also related to the biodiverse nature of their forest ecosystems. In India, it is estimated that 27.5 crores poor rural people i.e., 27% of the total population, depend on Non-Timber Forest Products (NTFPs) for at least part of their subsistence and cash livelihoods<sup>2</sup>. They provide 50% of the household income for approximately one third of India's rural population<sup>3</sup>. This dependency is particularly intense for half of India's 8.9 crores tribal people, the most disadvantaged section of society, who live in forest fringe areas<sup>4</sup>. A forest with high biodiversity offers the local communities with the opportunity to extract a variety of Minor Forest Produces (MFPs) for subsistence as well as cash income.

## Conservation of biodiversity ensures



FIGURE 1: What does biodiversity ensure?

<sup>2</sup>(2020). Retrieved 13 April 2020, from <http://docsdrive.com/pdfs/academicjournals/rjf/2016/1-7.pdf>

<sup>3</sup>ibid

<sup>4</sup>ibid

## India's focus on biodiversity conservation

During the Rio Earth Summit in 1992, the multilateral treaty known as CBD (Convention on Biological Diversity) was signed to develop national strategies on conservation of biodiversity and sustainable use of natural resources. As a supplementary agreement to the CBD, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization was signed by 105 parties in 2010.

According to the Nagoya Protocol, the users accessing genetic biological resources are responsible to promote fair and ethical trade by paying a benefit sharing fee to the indigenous communities who are seen as custodians of those resources. The aim is to use these benefits for conservation of the resources and promotion of sustainable livelihoods in the region to maintain ecological balance and ecosystem services associated with it by involving the local communities in decision making and implementation processes. India, who is a signatory to this protocol enacted an act known as BDA (Biological Diversity Act), 2002 to protect the rights of the indigenous

communities over the biological resources and the traditional knowledge associated with them. The Act states that any individual/company who wishes to use any biological resource for research or commercial purpose has to do so with prior approval from the authorities established under BDA, 2002. Also, it has been mandated that the profit generated from usage of the bio-resources or the associated knowledge shall be shared with the community as per the provisions under the Act.

With the focus of the global community shifting towards reducing their ecological footprints and promotion of fair and ethical trade practices, the paradigm is shifting towards developing a sense of responsible consumption of biological resources. Thus, domains such as impact sourcing, eco-labelling and access benefit sharing has become focal points while developing any product supply chain. This is where the BDA, 2002 comes into play with its provisions for conservation, sustainable use of resources and equitable benefit sharing. Under the act, three layers of institutions have to be formed that shall be responsible for overseeing the enactment of the act: The NBA (National Biodiversity Authority) at the central level, SBB (State Biodiversity Boards) in all the states and the third level of this institutional structure, the BMCs (Biodiversity Management Committee).







# About the Study

# 2.

## About the Study

**B**iodiversity and Livelihoods are related since the time life originated on earth is a truth that doesn't need any validation. Equally true and perhaps more compelling is the fact that this relatedness is so obvious and perennial that it is almost taken for granted and never deserved concerted priority or attention in the sustainability agenda. Even more gnawing is the reality that development organisations working in the interface of environment, communities and businesses have plethora of tacit knowledge, ideas and perspectives about biodiversity conservation and livelihood enhancement but the short term compulsions of serving immediate needs of targeted beneficiaries optimally, pushes behind the agenda of converting tacit knowledge into documented evidence that can drive long term sustainability as a lesser priority. Ecociate, by virtue of its rich experience of developing business solutions for Corporates and Rural Enterprises through its engagement with Farmer Producer Organisations, Bilateral Projects, Donor Agencies and other Development Organizations, has been able to appreciate the importance of biodiversity conservation in the process of holistic development of a region.

Numerous interactions with producers and market players have brought up the point of increasing vulnerabilities within the rural communities due to resource depletion, climate change and unfair trade practices. The impact of biodiversity loss (above and below soil) on the lives of many rural households has been immense.

This understanding helped us in developing a thought process that integrating biodiversity conservation into the business planning and operations of Corporates and Rural Enterprises is essential for their long-term sustainability.

The Government of India has already created legislative tools such as Biological Diversity Act (BDA) for promoting biodiversity conservation and equitable benefit sharing.

The overarching idea in creating this perspective document was to explore how the provisions under this Act can be integrated with livelihoods enhancement and sustainable sourcing. We feel that local communities and private players have important roles to play in biodiversity conservation. However, the mode of engagement is quite blurry at present and thus, through this report we try to analyse how key stakeholders can play vital roles in promoting biodiversity conservation through successful implementation of the BDA.

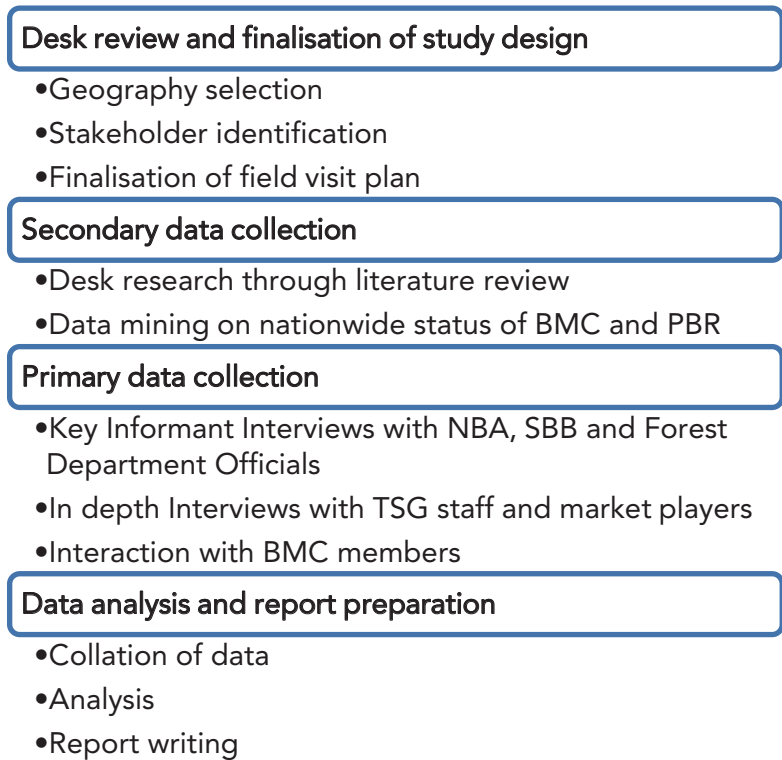
### 2.1. Study Approach

This study was conducted in two phases viz secondary study referring to the available literature and primary research through interaction with key stakeholders. The attempt was to cover stakeholders from all segments of the BDA spectrum ranging from Government Officials, Civil Society Organisations (CSOs), Market Players, Research Organisations and Local Communities. Figure-2 illustrates the approach



undertaken by the research team to conduct this study:

## FIGURE 2: Study Methodology



## 2.2. How to read the study report?

This report tries to emphasize the importance of biodiversity conservation in the long-term sustainability of the environment, communities and businesses. The report takes the BDA, 2002 as the plinth to further explore the possibility of engaging different stakeholders to promote the three objectives under the Convention on Biological Diversity (CBD). The major focus of the report is two-fold:

- The challenges faced by the Government/ CSOs/ local communities in implementing BDA.
- Possible interventions at the state and community level to enhance the reach of the BDA and create strong institutions for promoting conservation, sustainable use of Biological Resources (BR) and access-benefit sharing mechanisms.

After reading the report, the readers will be able to appreciate the importance of biodiversity conservation and how the BDA can be leveraged for ensuring sustainable livelihoods. The report has a total of six sections with three of them presenting the findings, analysis and suggested recommendations from the study. The essence of what to expect from the different sections of the report are given below:

1. The section 'Importance of Biodiversity in the development context' is dedicated towards establishing the context by discussing various development aspects in the light of biodiversity. It gives a glimpse of the importance of biodiversity in ensuring sustainable development. It also discusses why it is important to integrate biodiversity conservation while formulating any development intervention. The sub section

'India's focus on biodiversity conservation' reviews how the subject of 'biodiversity conservation' has evolved in India post the Rio Summit. It also focuses on the CBD which paved the way for the BDA in 2002 and highlights the objectives set under the BDA and adopted institutional structure.

2. The section 'About the study' shares the need of the study, genesis of the idea of conceiving the study, study approach and helps the reader to navigate through the report via the sub section 'How to read the report'. The reader will not only be able to get a peek into the thought process behind conducting this study but would also be able to get an understanding about the approach and methodology adopted to conduct the study. 'How to read the report' sub section provides the reader with the idea of what to expect from the report and gives a glimpse of all the sections.

3. The section on 'Biodiversity Management Committee (BMC)' presents the challenges faced by the facilitators/implementers and also, explores the possibility of promoting BMCs as an institution for conservation-based livelihoods.
4. The section on 'People's Biodiversity Register (PBR)' captures the nationwide status of PBR formation and the challenges faced by the stakeholders in doing so. This section also explores the possibility of promoting the PBR as a planning and management tool for the BMC.
5. The section on 'Access-Benefit Sharing (ABS)' depicts the status of ABS in the country and the challenges faced by State Biodiversity Boards (SBBs) in streamlining the ABS mechanism. It also outlines the scope of ABS in promoting conservation-based livelihoods.
6. The last section of the report 'Conclusion' synthesizes the learning drawn from our experience, discussions with stakeholders (community, authorities and private sector players) and review of BDA 2002 and suggests a pathway for effective implementation of biodiversity management related activities at the level of State Biodiversity Boards (SBB) and Biodiversity Management Committees (BMCs).

***The present study report will focus on the institution at the ground level i.e. BMC, its role in the three aspects of conservation, sustainable use of resources and equitable benefit sharing, and how it can be endorsed as an institution for promoting conservation-based livelihoods. It will also explore the potential of BDA as a legislative tool, for ensuring biodiversity conservation, sustainable livelihoods and fair and equitable sharing of benefits.***







**Biodiversity  
Management  
Committee (BMC)**

# 3.

## Biodiversity Management Committee (BMC)

**B**iodiversity Management Committee is a people's institution having statutory powers to restrict the access to biological resources of that area, promote sustainable use of the biological resources and ensure that the benefits arising from commercial utilisation of the resources are shared in an equitable manner with their real custodians. The initial thrust of constituting a BMC may come from two ways: the SBB may feel that there is need to conserve the biological resources in a certain place and thus a BMC may be proposed to be formed in that area. Alternatively, it may come from a bottom-up approach as the local communities of the area may submit a proposal through the Gram Panchayat for support of the SBB to constitute a BMC.

This chapter focuses on the current status of BMC formation in India, the challenges in forming a strong BMC network and the potential of BMCs to work as an institution for conservation-based livelihoods.

### 3.1. Current status of BMCs in India

In India, more than 2.49 lakh<sup>5</sup> BMCs have been formed. With this vast network of BMCs, there should have been more visible effects of the BDA, 2002 throughout the different states. However, the data of total number of BMCs formed, falls short in reflecting the current scenario of the state of implementation of the Act. As shared by the Member Secretary of the Assam State Biodiversity Board, the state has managed to fulfil a large part of their target to form BMCs, but this cannot be considered as successful

**TABLE 1:** Top 5 states with highest number of BMCs

State	Number of BMCs formed
Uttar Pradesh	59407
Maharashtra	28654
Madhya Pradesh	19352
Tamilnadu	13604
Rajasthan	13456

implementation of the Act as the key objectives of the Act are yet to be achieved. The top 5 states with the largest number of BMCs as reported by National Biodiversity Authority (NBA) are shown in the adjacent table. For state wise number of BMCs please refer Annexure-1.

Till now, and as will be discussed in the next chapter, only 96593 BMCs (39%) in the country have managed to prepare People's Biodiversity Register, the immediate task of a BMC after its constitution. This indicates that few have successfully moved onto the next step towards implementation of the BDA. As per the experts of Central Himalayan Environment Association CHEA, an NGO based out of Uttarakhand and also a recognized Technical Support Group (TSG) by the SBB, even after 17 years of formulating the Act, the most that has been achieved by the combined strength of the state machinery of Government and NGO partners is taking 124 BMCs (13%) in Uttarakhand onto the PBR formation stage till March 2019. Formation of BMCs and preparation of PBR are only the initial phases of tasks in the implementation process of the Act but to achieve what the Act envisions

<sup>5</sup>ahamed, s. (2020). NATIONAL BIODIVERSITY AUTHORITY - Biodiversity Management Committees. Retrieved 13 April 2020, from <http://nbaindia.org/content/20/35/1/bmc.html>



i.e. to form empowered BMCs which are capable enough to sustain on its own and disburse their duties without any external help, subsequent phases of capacity building, financial assistance, conservation-based livelihoods promotion and benefit sharing needs to be executed to make the BMCs capable of performing their expected roles.

### 3.2. Relevance of BMCs

In order to get to the stage where it can successfully disburse the above-mentioned roles and responsibilities, a BMC must pass through different stages of a strengthening process. Since a BMC can be formed within forested area, outside the forest area as well as over an area overlapped by forest and non-forest land, the sole purpose of the BMC cannot be limited to only conservation of biological resources. In addition to this, the BMC has to consider the livelihoods perspective of those communities. As accepted in the National Forest Policy, 1988 and the subsequent Joint Forest Management (JFM) guidelines of 1990 and 2000, the local communities have a significant role to play in conservation of the forest and the biological resources. Through the BDA, 2002, this role of the local communities has been legally identified and they have been provided with certain statutory powers in order to exercise their rights over the biological resources.

The involvement of the local communities in biodiversity conservation can be ensured only if the locals can see a significant value being added to their lives through their conservation efforts. In order to leverage the efforts of the local communities, their relationship with their local biodiversity and their dependence over those biological resources must be understood and accepted. As validated by the BDA, the locals are the custodians of the local biological resources and they should receive a part of the benefit that is being generated through utilisation of the biological resources. As the Act envisages for the biodiversity conservation mechanism to be more people-participatory, the socio-economic

conditions of the people become vital in their active participation. The real custodians should have the first access to those resources to fulfil their basic needs, but without harming the carrying capacity of the local ecosystem. Therefore, the important problems related to their livelihoods need to be reflected along with the conservation needs in the plan of the BMC. The Member Secretary of the Uttarakhand Biodiversity Board (UBB) believes that the BMC should be projected as an institution for promoting conservation-based livelihoods among the local communities and ensuring that the local biological resources and the associated knowledge are protected and effectively utilised for the overall betterment of the community.

Thus, BMC should be promoted in a way that it doesn't confine its image to only a conservation promoting institution and rather should place itself as a local body with larger objectives that ensure better livelihoods to the local communities through conserving the biological resources, and ensuring that local people get a fair share of the benefits generated from the usage of the resources or the associated knowledge. The institution should be able to underscore the fact that there are certain biological resources that have huge economic value in the domestic and international markets and utilising them in a sustainable manner could be the key for development of the local communities. Utilising these resources in way that it doesn't hamper its future regeneration potential and ensures equitable sharing of benefits among the real custodians i.e. the local communities should be the guiding principles for the BMC. In this journey of a BMC to achieve the status where it can function as an institution that promotes conservation-based livelihoods among the local communities, it must pass through different stages in the life cycle which are depicted below:



### 3.3. Life cycle stages of a BMC

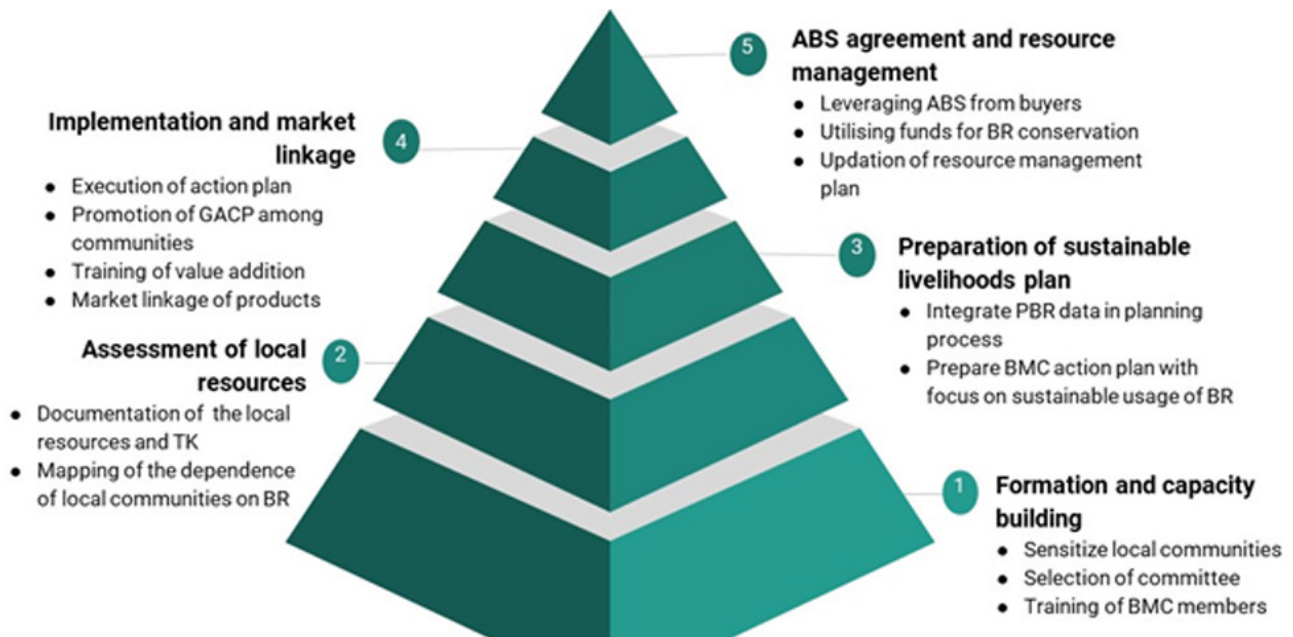


FIGURE 3: Life cycle stages of a BMC

As per the observations from the field, in almost entirety, BMCs have not been able to reach the final stages of leveraging Access and Benefit Sharing (ABS) from private players for conserving the local biological resources. Most of the BMCs are struggling to reach the stage where they can be involved in planning and implementation, with the largest proportion of BMCs still wedged at the first and second stages of evolvement. This stagnancy in implementation of the Act can be attributed to the challenges existing at different stages that are discussed in the section below.

### 3.4. Challenges in forming empowered BMCs

#### Formation and capacity building

- The staff of the implementing/ nodal agencies lack awareness about the functioning of the Act and therefore, they are unable to properly sensitize the local communities on implications of the BDA, 2002 which leads to many people failing to see the need of this Act and in turn, losing their interest in this intervention.
- Lack of regular training of the BMC members adds to their inefficiency in performing their roles and responsibilities.

- Lack of regular communication between the state machinery, BMC members and local communities.

#### Assessment of local resources

- The existing approach of documenting the BR by most of the SBBs is more scientific rather than participatory. Due to this, the data related to marketable resources are not generated in the PBR process.
- Very few PBRs have been able to capture important data that is useful in preparing livelihoods and resource management plans.
- Most PBRs lack any quantum data to reflect the status of ecologically/ economically important species and in turn, assist in preparing conservation plans.

#### Preparation of sustainable livelihoods plan

- BMCs lack capacity to interpret the PBR into formulating livelihoods and resource management plans.
- Due to absence of handholding support, the BMCs are unable to prepare valid action plans to leverage government support for promoting livelihoods and conservation.



- Without continuous engagement, the BMCs pass through long periods of dormancy that leads to demotivation of the members and loss of trust in the institution.

### Implementation and market linkage

- Failure of the BMCs to recognize the economically viable livelihoods opportunities.
- Due to absence of handholding and technical support in the previous stages, very few BMCs have been able to reach up to this stage.
- In case of the BMCs whose action plan has been accepted by the SBB, lack of training on the thematic areas and timely access to funds have halted their progress.

### ABS agreement and resource management

- Many of the SBBs have been able to collect ABS amount from the private players, but lack of a concrete mechanism to identify the real custodian of BMCs, the Board has been unable to disburse the funds for ground level implementation.
- BMCs lack the capacity to use the ABS funds for the mandated work on conservation and livelihoods generation. This has resulted in very low utilisation of ABS funds.

## 3.5. BMC – an institution to promote sustainable livelihoods

The BDA, 2002 allows for the BMC to be promoted in a manner that it symbolises conservation-based livelihoods at the grassroots level. This can be a trailblazer in the field of sustainable development and play a significant role in the fight against global climate change. A strong BMC would create the platform to identify the local issues in natural resource depletion and its effects on the livelihoods of the dependent communities thus, providing with the scope to prepare and execute micro-level vulnerability mitigation and adaptation plans. But with the current challenges in the implementation process, extensive measures must be taken in order to reach to the level where the BMC network is strengthened enough to be a part of the implementation

wing in promoting conservation and sustainable livelihoods.

In the current scenario, as per discussions with the SBBs and BMCs, continuous engagement with the local communities is seen as the pivotal part in successful implementation of the Act. Involvement of partners through a comprehensive BMC engagement plan that provides a framework of implementation with defined supporting roles is required to address the current gaps. The framework should concentrate on the important thematic areas that shall be focused on to empower the BMCs through timely disbursement of the required support. The below illustration shows one such framework that depicts how a BMC can be promoted as an institution for conservation-based livelihoods.

#### ■ Formation of BMC and capacity building

- Sensitize the local communities on BDA
- Committee selection
- Bank linkage of BMC
- Training of committee members on BDA
- Village workshops to create awareness on biodiversity conservation

#### ■ Assessment of local biological resources

- Training workshop on documenting BR.
- Qualitative Assessment of local BR through Participatory Rural Appraisal (PRA).
- Preparation of PBR and establish an updating mechanism.
- Prioritization of tradable commodities through Value Chain Analysis

#### ■ Sustainable livelihoods promotion plan

- Village level meetings to assess conservation-based livelihoods potential.
- Training to communities on preparing BMC action plan.
- Preparation and submission of BMC action plans to SBB.
- Financial assistance to BMCs to implement the action plan.

- **Implementation and market linkage**
  - Capacity building of identified members on Good Agriculture and Collection Practices.
  - Promotion of value addition through primary processing.
  - Establish BMC as an apex body of the local farmer groups.
  - Setting-up of primary processing and aggregation units.
  - Market linkage with institutional buyers.
- **ABS agreement and conservation strategy**
  - Tripartite agreement between BMC, SBB and private parties for ABS.
  - Preparation of conservation plan for identified BR.
  - Implementing conservation plans through ABS funds.
  - Leveraging technical support from the private players in cultivation and processing.
  - Annual assessment of local biological resources.

Each of the thematic areas shown in the above framework are discussed in detail in the subsequent sections.

### 3.5.1. Formation and capacity building

#### Formation of BMCs

The engagement plan should focus on five key areas as detailed above. As per the Act, BMCs can be constituted at different levels in terms of local governance and geographical area i.e. Gram Panchayat, Block level, Zilla Panchayat etc in a village setting and at municipality level in urban area. This scenario was prevalent in all the states visited during the research. The decision of constituting a BMC at a particular level is made after analysing different factors such as geographical area, population, area under forests, topography, connectivity etc. SBB, being an independent statutory institution may take such strategic decision for better implementation of BDA depending on the local situation. Like in the case of Uttarakhand, the SBB has constituted 948 BMCs at different levels till March 2019. Now, the SBB is focusing on constituting BMCs at the block level in all the 95 blocks of the state. According to the USBB officials, the motive behind this move is to create a more robust monitoring mechanism for the BMCs, as it becomes difficult to directly monitor almost 1000 BMCs from the state level with the limited human resources. But this move must be considered on merits as it may create ambiguity in the roles between the existing village level BMCs and the newly formed block level BMCs.



As mentioned above, there are different factors to be considered while deciding for the level at which the BMC is to be formed. Table-2 conducts a comparative analysis of the pros and cons of having a BMC at the village or block level:

**TABLE 2: Comparative analysis between BMCs at block and village level**

Sl.	Parameters	Village BMC	Block BMC	Rationale
1	Proportionate representation of the members from different areas within the BMC	More	Less	BMC at block level would mean a large number of villages can be represented by the committee but many of the villages won't be able to send representatives into the BMC because of limited seats within it. A BMC at village level can have better representation of the people from different areas within the committee. However, the number of members in the block level BMC can be increased through including invitee members from different parts of the jurisdiction area.
2	Ease of the local communities to approach the BMC	More	Less	It would be easier for the local communities to approach a village level institution rather than an institution at the block level for addressing their concerns.
3	Adoption of a more holistic conservation plan by the BMC	Less	More	A block level BMC can have a much more holistic plan for conservation of the BR of the area by taking a larger landscape approach. This would help in addressing key challenges of the region which otherwise would have transcended the capacity of a village level BMC.
4	Potential of the BMC to leverage ABS from private companies	Less	More	In order to leverage ABS by a BMC, it is necessary to identify the source of the resource. But it becomes quite difficult to trace the source of a resource up to a particular village level, and thus the real custodians may not receive the benefits of BDA. However, a block level BMC would be better equipped to leverage ABS from end users.
5	Ease of monitoring the BMCs and provide timely support by the SBB	Less	More	As forming BMCs at the village level would result in a large number of BMCs in a state, it becomes quite difficult for the SBB to monitor, and thus many of the BMCs may get lesser support. Block level BMCs can ensure better governance and timely support from the SBB.
6	Requirement of time and resources in preparing a PBR.	More	Less	While preparing a PBR at the village won't require much time and resources due to the smaller geography, a block level PBR would require large human support over a much longer time in order to document all the important resources and BR over an area similar to a block.

## Capacity building of BMCs

The input support to BMCs in terms of awareness generation, training, financial assistance etc. are essential in creating a solid base for the intervention. Large scale involvement of local communities must be ensured in order to promote BMC as a democratic institution where the decision-making powers lie with the local people. Awareness generation campaigns by involving school children and local biodiversity experts like vaidyas, hakims and traditional healers can help in creating larger community participation.

**TABLE 3: Key training areas for BMC members**

Key training areas
Importance of biodiversity conservation
Functioning of BMC
Role and responsibilities of the BMC
Book-keeping and documentation
Financial management and audit process
PBR formation process
Preparation of BMC Action plan
Thematic-area wise training (as per BMC action plan)
Conservation techniques
Access-benefit sharing mechanism
Resource management

After the formation of the BMC, it is essential that the committee members are trained on the functioning of the BMC and different aspects of the BDA, 2002. The SBB with the support of the implementation agency and TSGs, can conduct training workshops at various levels to sensitize the local people as well as capacitate the members of the BMC. The training programs can include classroom teaching on different themes, field-based training and exposure visits to Centres of Excellence or successful models. It is of critical significance that the BMC members are continuously provided training as per a comprehensive training plan with dedicated modules for different training areas.

The capacity building process should be a continuous engagement and with the nodal agencies like Forest Department, Panchayati Raj Institutions (PRI) etc already overburdened with respective departmental responsibilities, the role of the TSG becomes vital in training and handholding the BMC members. The most critical figment of a community institution is the will and motivation of its members to perform their responsibilities, and their constant engagement can only be ensured if they see their time and efforts being utilized in a productive way. Thus, the BMC training plan should be such that it maintains a continuum between the different training modules and adhering to this plan becomes crucial in order to create an active BMC that can function on its own in the long run.

### 3.5.2. Assessment of local biological resources

Assessing the biological resources and the associated knowledge of an area is the first step to analyse the need for conservation and the livelihoods potential for the local communities. Thus, mapping the available resources, their seasonality, trend and their commercial importance is necessary before preparing any conservation or livelihoods strategy. According to the BDA 2002, these specifics must be documented into the PBR which would then be used as an instrument for formulating ABS mechanisms, conservation plans and livelihoods promotion strategies. This section is being dedicatedly dealt with in the next section of PBR.

### 3.5.3. Plan to promote sustainable livelihoods

As discussed in the earlier sections, addressing the livelihoods dependence of local communities on the biological resources is an important figment in promoting community-based conservation measures. Thus, the BMC as an institution can be part of the local support system working towards economic and social development of the local area in addition to being a promoter of conservation. The idea is for the BMCs to assess the livelihoods potential around biological resources and prepare



a conservation and livelihoods promotion plan termed as BMC Action Plan. This plan can be submitted to the SBB who after evaluating its feasibility will provide the financial assistance to undertake the proposed activities or the BMC as an independent institution can leverage funds from other government machinery or other third parties. However, due to lack of capacity within the BMC, they are unable to produce viable action plans to the respective SBBs resulting in non-utilisation of the dedicated funds and long dormancy period for the BMCs without any engagements.

In order to tackle this gap, BMCs should be able to sense the opportunities around the economically important biological resources. All the BMCs should be mandated to prepare resource management plans at their level with key focus around two aspects: conservation need and livelihoods opportunities.

### **3.5.4. Implementation and market linkage**

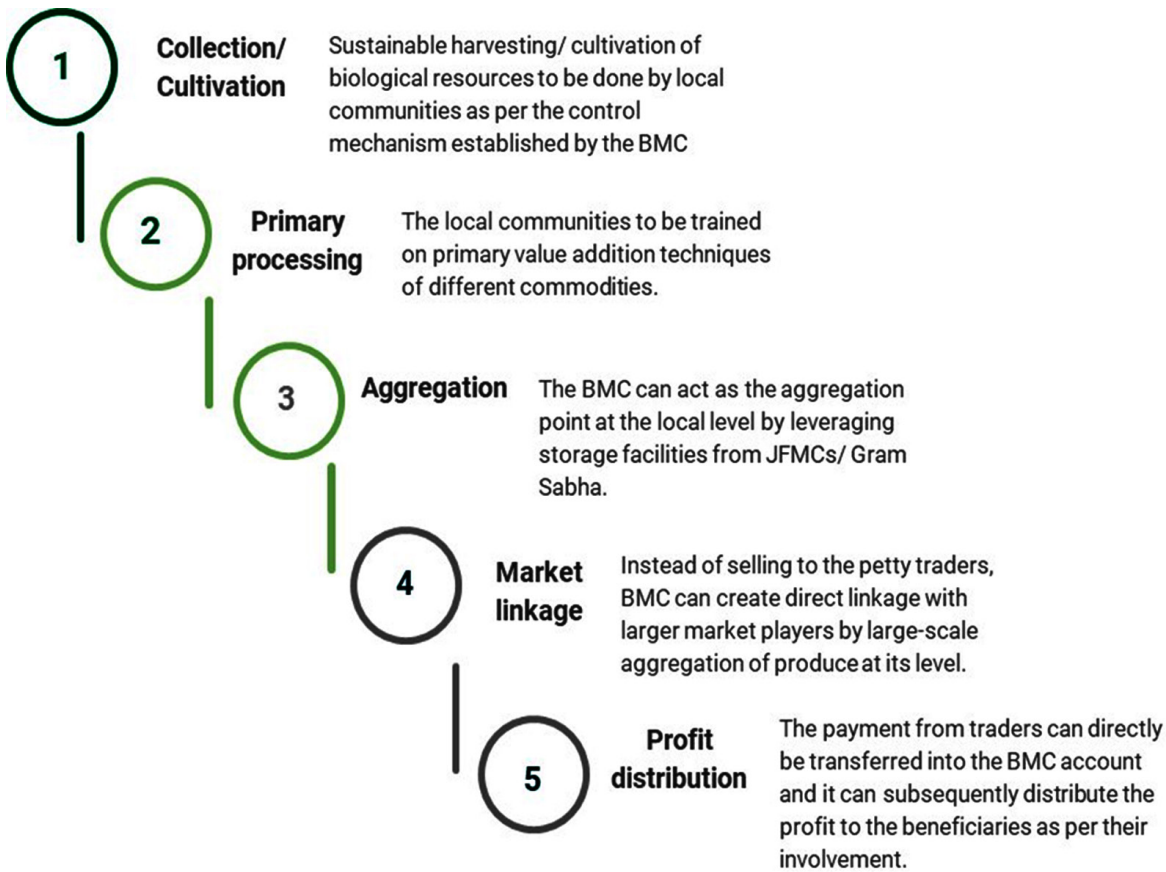
As BMCs are mostly formed in the biodiversity rich zones or areas having potential for restoring biodiversity, its primary objectives are to conserve the biological resources and promote sustainable resource management for livelihoods promotion of the local communities. As observed from tribal belts in Andhra Pradesh, Assam and Odisha, the local communities collect/ cultivate the biological resources and sell them at the local markets at

minimal prices. In the current scenario, the value chains of these biological resources are largely controlled by the middlemen and most of the profits are being consumed at the trading and processing levels. There exists a huge scope in capacitating these local communities in conservation as well as livelihoods generation aspects. BMCs can come into this picture placing it as the institution that protects the biological and local communities from exploitation by promoting Good Agricultural and Collection Practices (GACP) and economic activities such as primary level value addition and collective marketing of the resources.

BMCs should be able to facilitate the establishment of pro-poor value chains around farm and forest commodities to help the primary collectors/ cultivators realise better market prices. BMCs can leverage the government schemes and ABS funds to provide training to the farmers on GAP/GACP, establish primary level value addition and aggregation centres at the local level and create market linkages with larger buyers through ABS agreements to improve the income generating capacities of the collectors/ cultivators. Additionally, BMCs can also provide employment opportunities to people at local level by involving them at various stages of the development process such as business operations and capacity building. Figure-4 illustrates the approach that the BMCs can take to accrue income among the local communities by promoting sustainable practices.



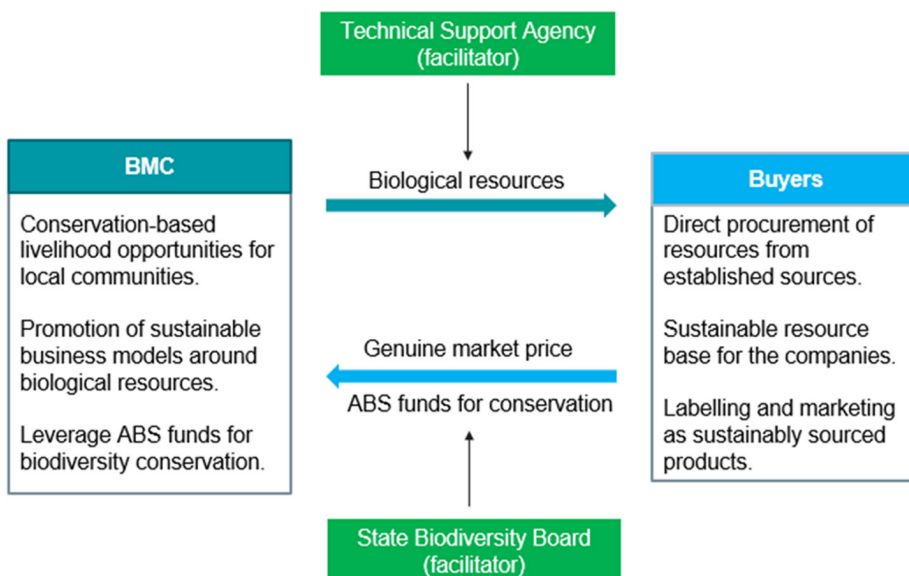
**FIGURE 4:** Proposed value chain approach by the BMC



### 3.5.5. ABS agreement and conservation strategy

Along with conservation of biological resources and their sustainable use, sharing of benefits arising from commercial utilisation of the biological resources with the local communities, is another contour of the BDA, 2002. This provision under the Act has huge potential in ensuring fair and equitable distribution of benefits as well as in promoting 'responsible consumerism' by the business entities. This issue has been dedicatedly dealt in the subsequent section.

**FIGURE 5:** ABS Agreement and conservation strategy



### 3.5.6. How an ideal BMC should function?

An ideal BMC need to take cognizance of the functions mandated to it under the BDA 2002 and work towards performing those. Figure 6 captures the major functions of BMCs:

**FIGURE 6:** Key Functions of a BMC



#### **Awareness generation**

- Conduct workshops on promoting biodiversity conservation among local communities
- Capacity building of communities on conservation techniques and sustainable usage
- Empower the local communities to defend their rights over resources in their area



#### **Financial Management**

- Book-keeping and record maintenance
- Understand the role of BMC in the fund flow mechanism
- Maintain transparency in financial dealings
- Efficiently use the funds for promoting conservation-based livelihoods



#### **Planning**

- Integrate the PBR in conservation and livelihoods promotion
- Prepare BMC action plan in close consultation with the local communities
- Identify the potential areas for sustainable livelihoods promotion
- Recognize the need for conservation within the local ecosystem



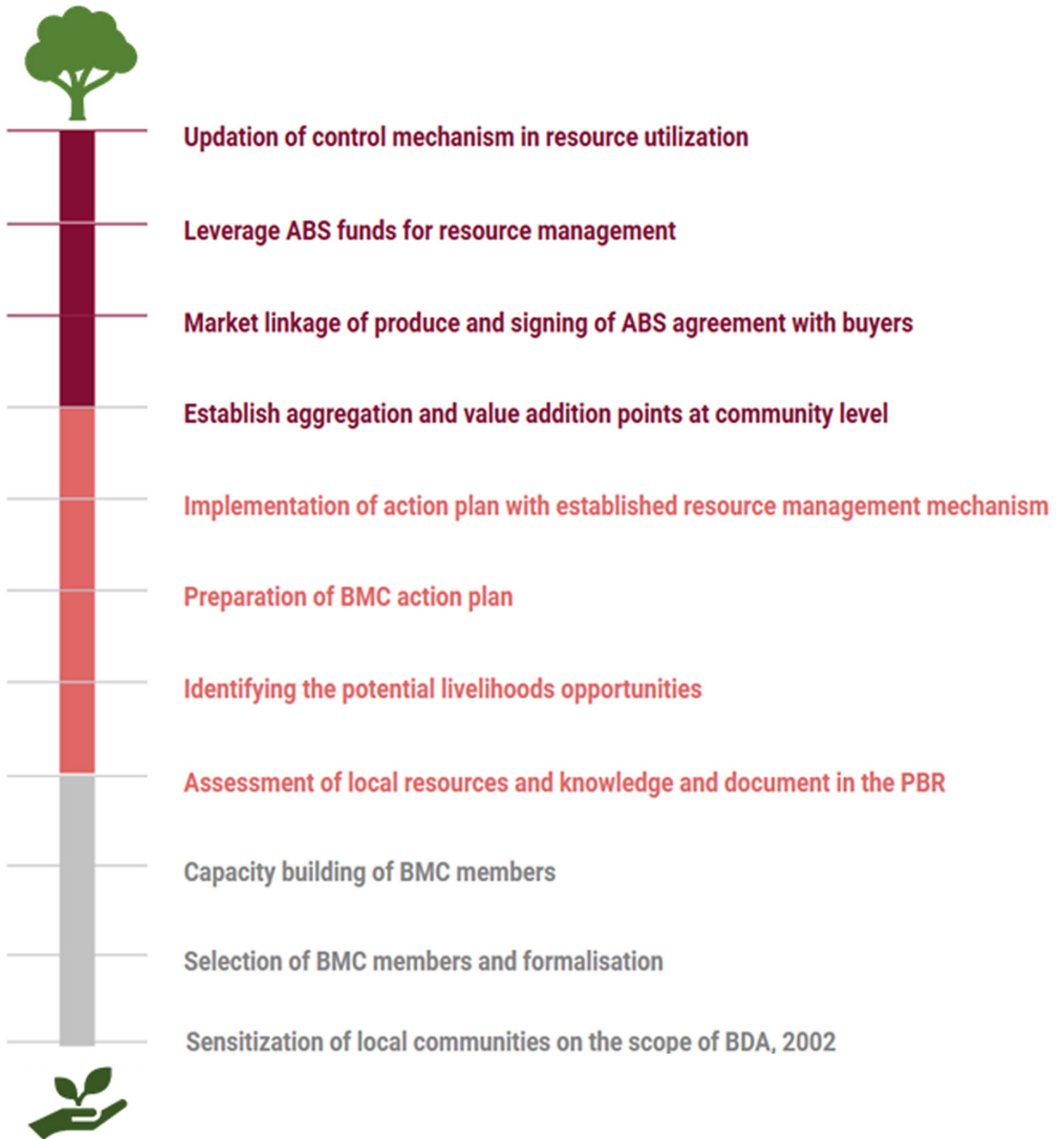
#### **Implementation**

- Leverage ABS funds from local level users of biological resources
- Execute the conservation plans through community engage
- Promote sustainable harvesting/cultivation of resources and primary level value addition among the local communities
- Act as a business enterprise in promoting different livelihood opportunities

### 3.5.7. Roadmap to form a matured BMC

It would take time for BMCs to mature in their conduct. It is obvious that BMCs by performing mandated functions, learning from its actions and correcting its processes and systems overtime become mature. It is however important to envisage a roadmap for BMC to achieve maturity. Figure 7 captures such a roadmap:

FIGURE 7: Roadmap to form a matured BMC



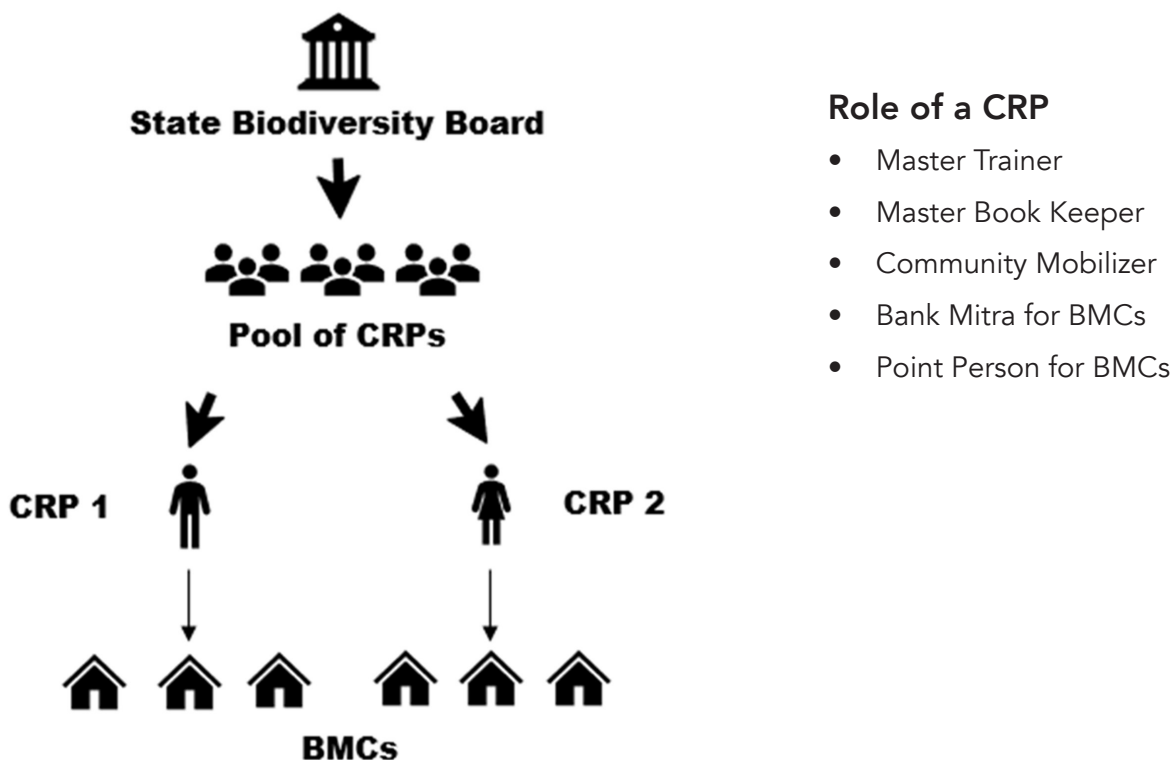
### 3.6. Supporting ecosystem

#### At the level of BMC

In order to establish itself as an institution for promoting sustainable livelihoods and conservation of biological resources, the BMCs would need external support at various stages of its evolvement process. Continuous handholding support must be provided to the BMCs at every step of this implementation process for achieving successful results. However, engaging TSGs at this level to provide support to the BMCs regularly is also a costly affair having large financial implications. SBBs can thus, refer to working models around supporting Community- Based Organisation (CBOs) as done by the State Rural Livelihoods Missions (SRLMs) and Department of Agriculture. In these models, the State creates a pool of Community Resource Persons (CRPs) and places them at the panchayat or village level to provide regular technical guidance to the community institutions and handhold its members through different processes of implementation.

The SBB can create a similar pool of CRPs by engaging local persons with basic education levels and good knowledge on biodiversity. The CRPs can bridge the existing gap between the state level board and the block/village level BMCs by becoming the monitoring link for the BMCs. This way, the SBBs can have direct contact with the BMCs without depending on other government line departments who themselves are short staffed and overburdened with responsibilities.

**FIGURE 8:** Structure for engaging community support

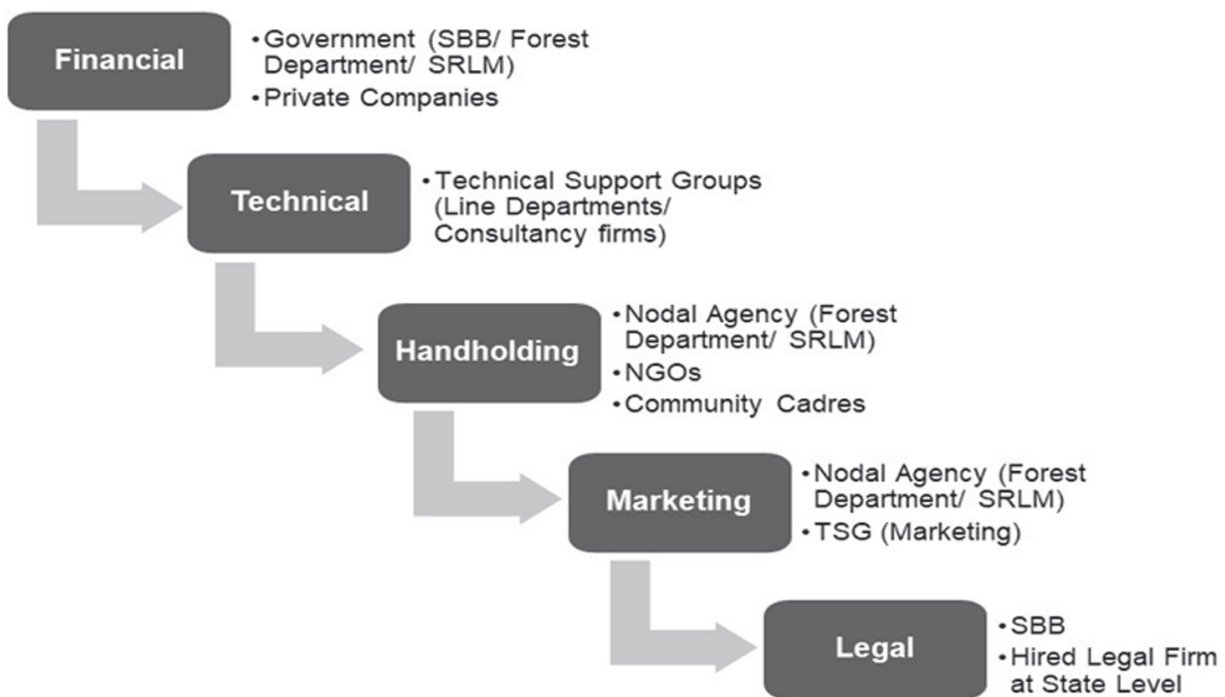


As can be seen, the challenges exist at different levels of the implementation structure and therefore, in order to tackle these, a holistic approach is required by involving all the key stakeholders. In order to establish a strong BMC structure, it is necessary for various stakeholder to provide supports to the local communities at different time intervals. These may be required from even before the formation of the BMC (e.g. awareness generation) and this doesn't necessarily have to come from the government machinery only. Different stakeholders willing to contribute in this domain can be involved in this

process at varied levels so that the local communities can benefit from their expertise on diverse subjects.

The BMCs at their level lack the technical know-how to undertake expected duties on their own. The evolution of BMCs is a continuous process that requires timely inflow of resources and efforts. The proposed community cadre base can initiate the process of BMC formation through awareness generation. Civil Society Organisations having a significant grassroots level presence can be given the task of mobilisation and formation of BMCs through well thought-out awareness generation plans. Training agencies having experience of conducting skill development programmes can be engaged in the capacity building process of the community level resource persons and local communities. Similarly, research organisations with their technical expertise shall be able to provide support in mapping the biological resources and associated knowledge in preparing the PBR and also develop conservation and livelihoods strategies. Figure-9 showcases the different sets of support that the BMCs require and the sort of organisations/ agencies that can provide these kinds of supports:

**FIGURE 9:** Different types of support required by the BMC



### At the level of SBB

The SBB with its limited manpower can take the activities only to a certain level on their own. As per the discussions with officials of the SBBs, it was understood that there is requirement of technical support at the state level for proper implementation of the Act along with legal support for dealing with the ABS implications on resource and knowledge use with the private companies. There is also the issue of monitoring the BMCs from the state level without any grassroots level presence from the SBB. Although, a nodal agency is brought on board by every SBB to support in implementation, the process becomes uncoordinated due to direct dependence on the nodal agency that is outside the organogram of the SBB. Thus, there is a need for a dedicated pivot that connects the SBB directly with the BMCs and it comes under the supervision of the SBB. This gap has been recognized by some SBBs and in order to address this, they have placed an official at the district level as District Coordinator to act as a link between the SBB and the BMCs of the respective districts. Developing a community cadre or hiring of agencies to provide supportive supervision at the grassroots level are also possibilities that the SBBs can explore.



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# People's Biodiversity Register (PBR)

# 4.

## People's Biodiversity Register (PBR)

**P**eople's Biodiversity Register is a legal document containing comprehensive information on the locally available bio-resources which must be prepared at every BMC according to the Biological Diversity Act, 2002. As per the guidelines of NBA, the PBR is not restricted to only documenting the bio-resources but it has to also collect information on the local landscapes, demography, cultural ethos and associated traditional knowledge. The information is collected as per the prescribed format of the NBA.

PBR is important to achieve the objectives of the CBD as it is the base on which further strategies for conservation and livelihoods are designed. PBR also recognises the contribution of local communities as the custodians of biological resources and the associated knowledge. A well-documented PBR has immense potential to be used as a tool in the planning process for promoting sustainable livelihoods.

PBR can provide the data of the source of a range of biological resources and thus, help in identifying the BMC from where the biological resource was sourced so that ABS funds can be shared with the real custodians. In addition, a comprehensive PBR can provide the BMC with the data on the depleted resources and that are under threat of depletion. Therefore, the BMC can devise their resource management plans as per the need for conservation. The third contour which can be addressed by the data from the PBR is to identify the potential livelihoods opportunities among the local communities through sustainable usage of the BRs.

After going through this section, one will understand the rationale behind forming PBR, challenges faced while forming a PBR and how

it can be used as a tool to devise roadmaps for conservation and livelihoods generation.

### 4.1. Rationale of PBR formation

In order to develop a plan to conserve and sustainably use the biological resources, there is need to know what all the biological resources and the associated knowledge are found in a region and how they are being affected by the various human activities. The PBR documents such information and creates a database of the available biological resources, their status of availability and their usage pattern for sustenance and commercial purposes.

These sets of information in turn can help in identifying the biological resources that are in critical state, extent of their use in a commercial manner, potential for BRs to be used for generating sustainable livelihoods for the local communities and recognise the custodianship of the local communities over the resources.

### 4.2. Current Status, Scope and Utility of PBR formation in India

The progress of number of PBR documented varies across different states of India ranging from 0% in the states of Bihar and Rajasthan to as high as 100% in the states of Uttar Pradesh, Uttarakhand and Goa. Please refer the Annexure-1 for state-wise data on PBR formation. Following section captures the scope and utility of the PBR:

#### **Identify the livelihoods potential around available bio-resources and landscape**

PBR can help in identifying the potential livelihood opportunities around the local resources. Sustainable usage of economically



viable resources can be promoted for livelihoods promotion among local communities.

### **Map the dependence of the local communities on local resources**

The socio-economic status of the local communities along with their dependence on local resources can be identified for planning livelihood interventions and resource management plans.

### **Documentation of traditional knowledge**

Due to lack of documentation, many of the traditional knowledge that has been passed down through generations verbally have gone extinct. Through the PBR, this knowledge can be documented and conserved.

### **Trace the source of the bio-resources**

With the resources documented in the PBR, the real custodians of the specific resources can be traced down from the end processes in commercial utilisation.

### **Trend of availability of the resources**

The PBR can bring out the trend of availability of the local resources through a timeline analysis. This can help in identifying the species that are being over-exploited and a control mechanism can be devised accordingly.

### **Strategize conservation measures for species that are under threat**

Along with the trend, PBR can also help identifying the resources and ecosystem services that have been affected. This would help the BMCs in prioritising the conservation measures.

## **4.3. Challenges in PBR formation**

Documenting PBR in a way that it captures the required information as per the prescribed format of NBA is quite a challenging process. From our field interactions, we found that BMCs and TSGs face various challenges in forming PBR. Following section captures these challenges

across the three phases viz. (i) preparatory, (ii) documentation and (iii) interpretation and usage.

### **Preparatory Phase**

- Participation of local communities in the PBR formation process is quite low with only the BMC members being involved. Due to this, the ownership of the PBR within the local communities is not created.
- The data for the PBR is mandated to be collected in a participatory manner. TSGs lack the expertise in using tools such as Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), resource mapping etc. which compromises the sanctity of the data.
- The current approach to prepare the PBR somehow limits its potential to be used as a management and planning tool. The TSG and BMC members fail to understand its true potential and thus, consider it just as a register for the available resources.
- The major focus is given to list all the biological resources in the area, identify and document their scientific nomenclature. Important sections such as economic potential, threats and dependence of local communities on the biological resources are not given much priority.

### **Documentation Phase**

- The documentation process majorly focuses on listing all the biological resources in the area, identify and document their scientific nomenclature. Important sections such as economic potential, threats and dependence of local communities on the biological resources are not given much priority.
- The documentation process followed by the TSG and BMC is exclusively qualitative in nature. Without the quantitative data of the resources, the economic and ecological status is not known. Thus, it is not feasible to develop the conservation strategies and livelihood plans with the limited data.
- With limited manpower at state level and in the absence of a strong system of monitoring, the SBB faces huge challenge to continuously

supervise the different TSGs working at the BMC level for PBR preparation.

leverage the power of this administrative tool.

### Interpretation and usage phase

- Without a centralised database of the PBR, determining the custodian BMC of the bio-resources and associated traditional knowledge is a difficult task for the SBB.
- Due to absence of important data points in the PBR and BMCs lacking the required expertise, the BMCs are not able to interpret the PBR in a way appropriate to leverage the information for developing conservation and livelihoods plan.
- Lack of awareness and expertise within the BMCs lead to non-utilisation of the PBR. Without the necessary clarity on its importance and functioning, the BMC members fail to

## 4.4. Recommendations for PBR preparation

Having discussed the challenges existing in preparing and utilising the PBR for its desired purpose under the Act, we shall now attempt in the next section strategies to tackle these issues by illustrating the findings from our study. These insights were developed through interactions with NBA and SBB officials, BMC members and TSGs supporting BMCs in PBR formation. An attempt has been made to structure these findings in tune with the challenges occurring at different phases of the PBR formation and usage process.

## Phase I - Preparatory Phase

### Creating awareness among local communities on implications of PBR and its preparation process.

Local communities must have complete understanding about why PBR is being prepared and how it is going to benefit them. For awareness generation, workshops can be conducted by TSGs in the community halls to highlight the importance of biodiversity to local people. Children can be made aware by having biodiversity quizzes, drawing competitions in the school curriculum, paintings on the walls of school, conducting biodiversity related games. It is very important to engage youth in such activities. Local folk media groups can be engaged in generating awareness regarding the biodiversity. Screening documentaries around biodiversity or conducting local theatre play in villages will also help in spreading awareness.

### Capacity building of the TSG on capturing data using participatory and scientific tools.

A TSG must be technically sound to document biological resources accurately. The members of TSG can be oriented and trained by the SBB on effective data collection methods. SBB can also hire experts to impart the necessary training to the TSGs. It should also be mandated by the SBB for the TSGs to have a Social Researcher in its team so that PBR documentation process can be made more participatory using PRA tools.

## Promoting PBR as a management tool to be used for conservation and livelihoods promotion.

Aligning the local communities' understanding with the whole PBR exercise is important to create ownership among them and for its proper utilisation. Building the capacities of the BMC members on using the PBR data for developing conservation and livelihoods plans is one important element to be looked at.

### Phase II - Documentation of the data and information

During the documentation phase of the PBR, different aspects of the local biodiversity needs to be identified and documented. The information collected should be able to provide a holistic picture of the region and thus, it is important that it covers the following three segments:

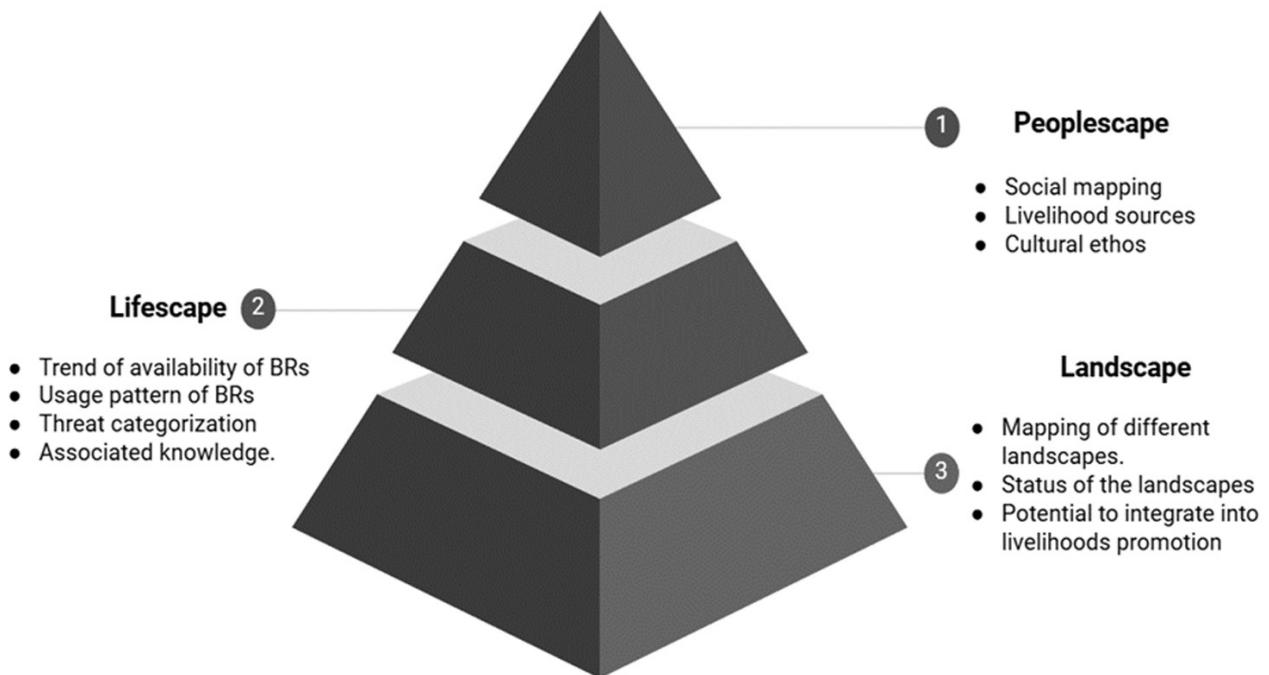
**Landscape:** It comprises of the different land and water habitats from which the community acquires its natural resources.

**Lifescape:** It refers to the levels of abundance, harvests and uses of different elements of biodiversity known to people and their distribution in different land and water elements.

**Peoplescape:** It comprises of the different occupational sections of the society such as farmer, trader, fisherman, labourer, etc.

The key elements required to be captured within these three segments are depicted in Figure-10:

**FIGURE 10:** Key sections in the PBR





The insights developed for the documentation phase of the PBR formation process is dealt separately for each of the above mentioned segments:

## Landscape

### Mapping of the landscape and analysing their potential for livelihood generation

Mapping of the natural landscapes is important in identifying the critical ecosystem services and their potential to be leveraged for improving the livelihoods of the local communities. Assam State Biodiversity Board has been focusing on leveraging these natural landscape sites to develop them as ecotourism sites which in turn may support conservation-based livelihood in the area.

### Assessing the current status of the natural landscapes

While capturing the status of these landscapes, emphasis should be given on the temporal changes that have occurred in recent past. This will help the BMC to know whether the condition of these landscapes have deteriorated or improved over the period and identify the drivers of change.

## Lifescape

### Map the biological resources along with their trend

As discussed in the above sections, the documentation process of the PBR should have a clear focus on identifying the trend of availability of biological resources in a region. This is necessary to determine the resources which are in need for conservation and which can be promoted for economic use by the local communities.

### Identify commercially important biological resources

The importance of biological resources in a household's sustenance and income generation cannot be neglected. Identifying the resources that have the potential, both ecologically and commercially, to be promoted as a livelihood opportunity through the PBR will help in developing the BMC action plans. The criteria that can be used to determine the ecological and commercial feasibility of the resources for livelihoods generation are:

- **Conservation**- Trend of availability – if depleted, International Union for Conservation of Nature (IUCN) status, major threats to resources.
- **Livelihoods**- Number of households' dependent on that resource, dependence for cash needs, abundance of the resources, local market potential.

## Quantitative estimation of commercially important biological resources

The next step after identification of the commercially important biological resources is to know how much quantity of these resources are available locally and what is current quantum of usage for those resources. Quantification of the bio-resources is very important aspect as it lays foundation for the robust livelihood plan and helps in determining the quantity of sustainable yield. The process of quantification can be done by conducting local market surveys as well as household surveys of the local users.

## Documentation of the traditional knowledge

Many important traditional knowledge that have been passed on through generations have got lost due to lack of proper documentation. PBR provides the opportunity to document this tacit knowledge which would not only ensure their conservation in the long run but also provide legal security from knowledge theft. The PBR format can have a defined structure to collect this traditional knowledge and the TSGs and BMCs can also be oriented on the same.

## Peoplescape

## Socio-economic status mapping of the region

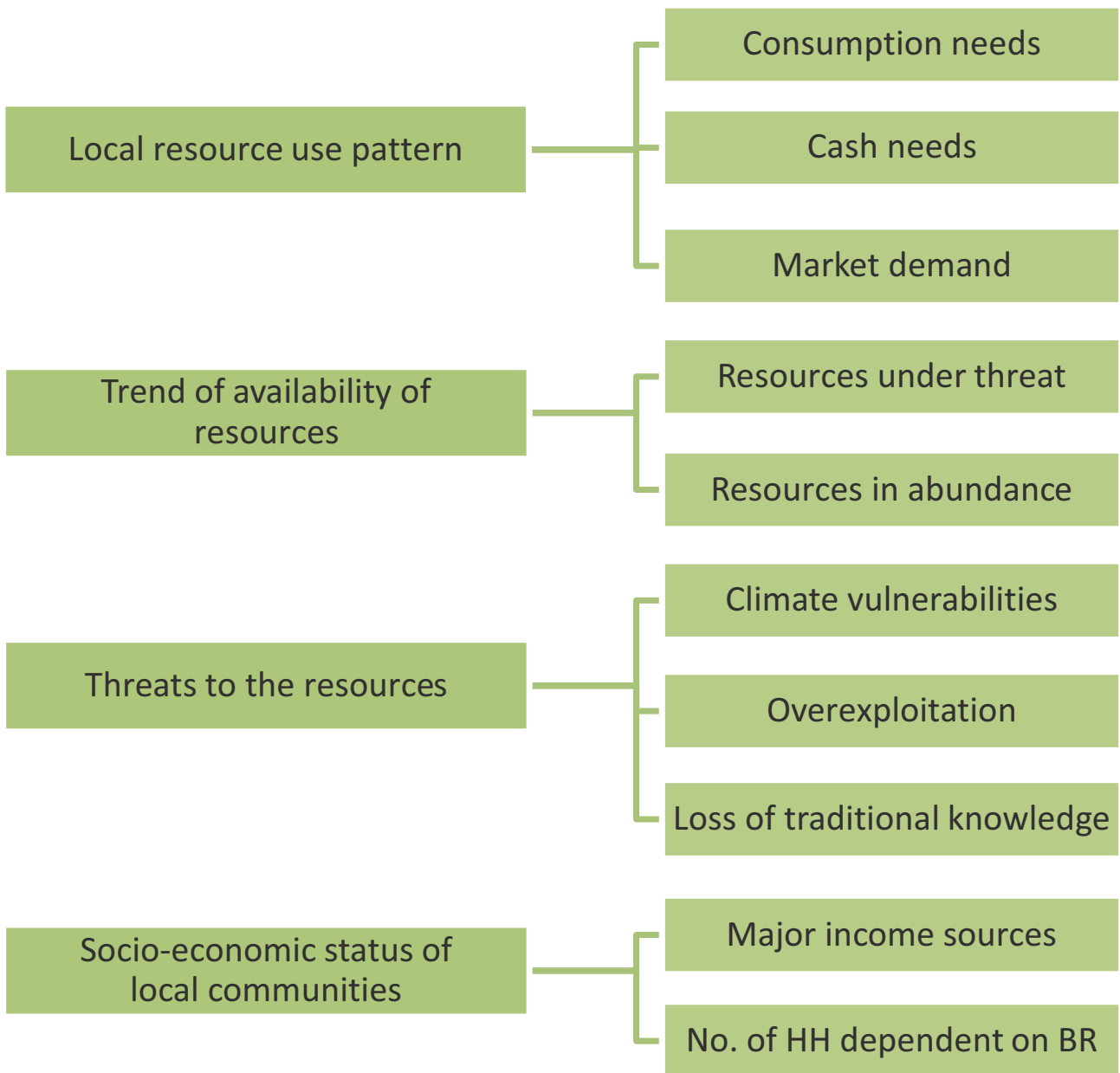
The PBR should be able to capture the land use pattern, livelihoods portfolios and demographic details of the local communities. This would allow the BMC to map the dependence of local people on different biological resources as well as plan for mitigating vulnerability through BMC Action Plans.



## Outputs from the PBR exercise

The envisaged outputs from the preparatory and documentation phase of the PBR formation exercise can be summarized as following:

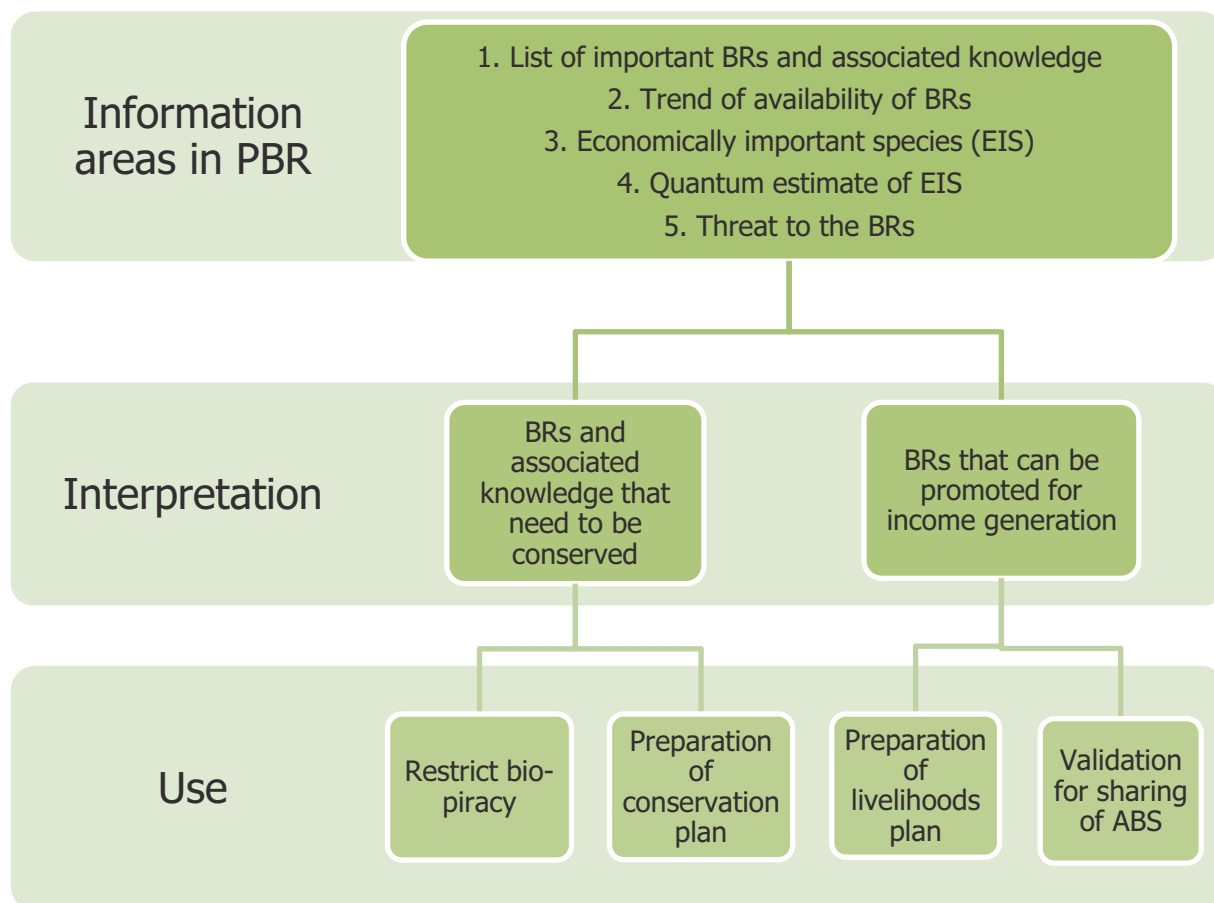
**FIGURE 11:** Expected outputs from the PBR exercise



Source: Ecociate Analysis

## Phase III- Interpretation and usage phase

- Digitization of PBR is one aspect which the SBB and the NBA needs to explore. Conversion of the data into a digital format can help create a centralised database of all the biological resources and associated knowledge at the state and national level.
- BMCs need to be capacitated on how to integrate the PBR into the planning process for conservation and livelihoods enhancement. Also, orientation on the legal aspects on the PBR is also required for the BMCs to leverage its administrative provisions. SBB with the help of the TSGs should conduct regular capacity building exercise to empower the BMCs.




### Summary of recommendations









# Access-Benefit Sharing (ABS)

# 5.

## Access-Benefit Sharing (ABS)

Access and Benefit Sharing (ABS) is a mechanism (through an agreement) by which persons or entities are allowed access to biological resources for commercial or research purposes. In return for this access, those persons or entities must share a small part of the benefits gained by them using the accessed biological resources with the local people who have provided the biological resource, or the knowledge associated therewith.

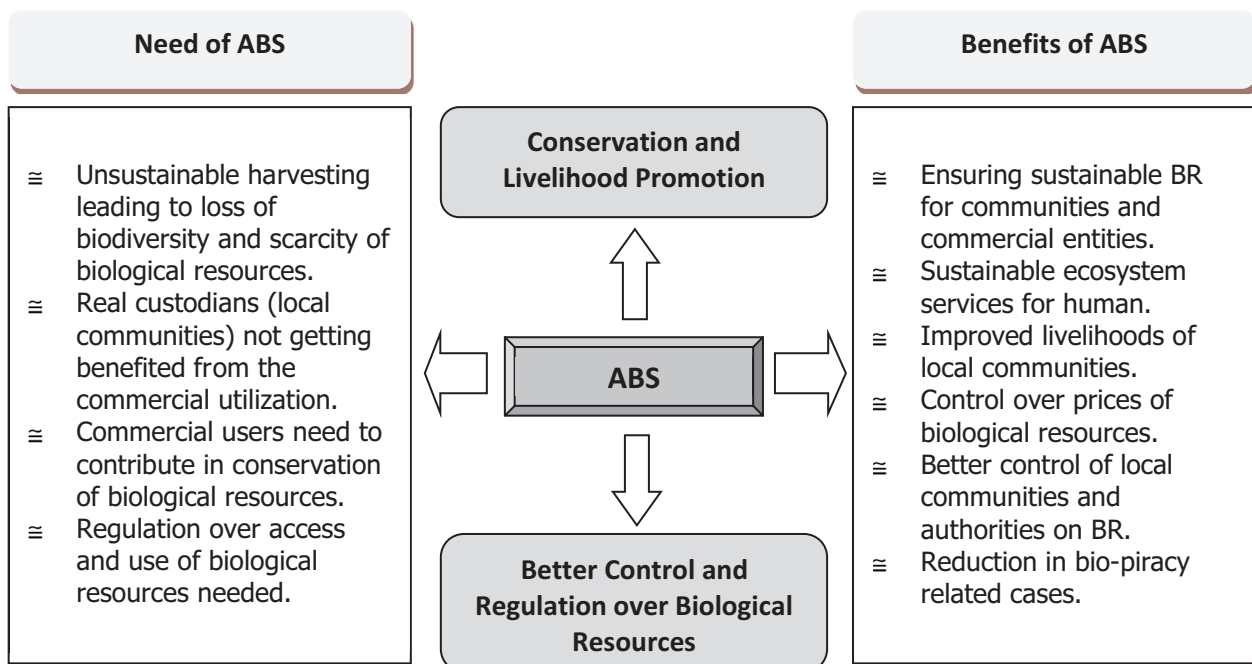
### Use of ABS

Financial and technical support received as ABS may play a significant role in promoting the

conservation-based livelihood opportunities for the communities living in and around biological-resource-rich areas. The funds received as ABS can be used for conservation of bio resources, capacity building of local communities, establishing primary and secondary processing units and developing systems for sustainable supply of biological resources.

Figure 12 captures the importance of ABS in conservation and livelihoods promotion. It also summarizes the emerging needs of ABS along with its benefits.

FIGURE 12: Need and benefits of ABS

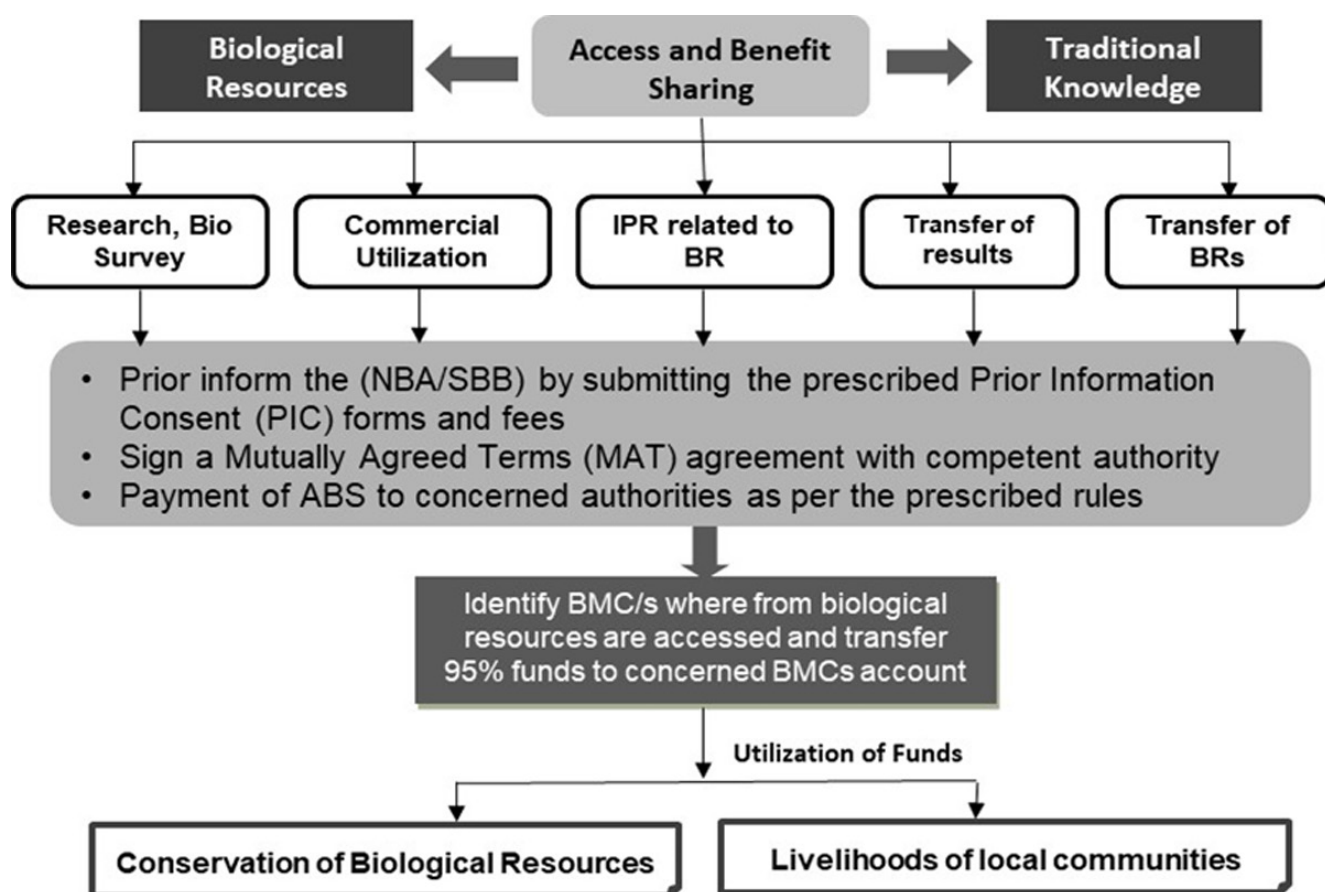


## 5.1. India's Position on ABS

India was among the first few countries that enacted legislation on ABS to fulfil its national obligations under CBD. In order to ensure fair and equitable sharing of benefits from the commercial utilization of biological resources and traditional knowledge, National Biodiversity Authority notified 'Guidelines on Access to Biological Resources and Associated Knowledge and Benefits Sharing Regulations, 2014' in November 2014. These regulations govern the implementation of ABS regime in India. From

an administrative point of view, the national ABS system rests on the National Biodiversity Authority (NBA) at the national level, the State Biodiversity Board (SBB) of each state, and the Biodiversity Management Committee (BMC) at the local level. India is among the leading countries in terms of implementation of ABS regime and signing of the contract with private sector players and research agencies/individuals. So far India has signed more than 1300 ABS related agreements<sup>6</sup>. Figure-13 illustrates the current structure of ABS mechanism

FIGURE 13: Current structure of ABS mechanism



<sup>6</sup>ahamed, s. (2020). NATIONAL BIODIVERSITY AUTHORITY - Approval granted to the Applicants. Retrieved 13 April 2020, from <http://nbaindia.org/content/683/61/1/approvals.html>

## 5.2. Existing Status of ABS implementation in India

In India there are precedents of sharing benefits (for accessing BR) with indigenous communities' way before the Nagoya protocol and implementation of ABS regime came into effect. The case of sharing benefits for commercialization of 'Jeevani'; a biological resource with Kani community in Kerala is a classic example.<sup>7</sup> In fact India was also among the first few countries to implement the ABS regime and formulate the guidelines. Subsequently guidelines and notifications were also issued in November 2014.

Since the inception of NBA, it has received a total of **4079 applications** from various stakeholders for getting permission under the ABS regime. Out of these, **1347 (20%)** applications have been granted the access to use BRs and TK. Interestingly out of these **958 (71%) applications were for getting no objection certificates to obtain IPR while only 229 (17%) application were for getting permission to access BR or TK** for research or commercial purpose. This shows that commercial organizations are still not coming forward to take permissions for accessing biological resources for commercial purposes.

(Source: - NBA's website)

While guidelines and notifications for sharing of ABS are in place since 2014, the progress on this front has been sluggish over the years. The entire ABS system both at the end of NBA and respective SBBs seems to be at nascent stages. Interactions with some of the SBBs and review of secondary literature brought out the fact that there have been some agreements under the ABS regime with NBA and SBBs however, majority of these were for seeking the permissions for research and development purposes. There are some cases where industries or private organizations have shared benefits with NBA for commercial utilization of biological resources, however,

looking at the market size of BR in India these are very minimal numbers.

The condition at SBBs is no different, majority of the SBBs are not able to leverage the full potential of ABS. While the data about collection of ABS amount and status of agreement signed is not made public by all the SBBs at their respective websites, an analysis of available data and discussions with some SBBs have revealed that not much progress has been made on this front.

Constitution of a BMC and preparation of the PBR for respective BMCs is among the basic requisite for leveraging the ABS. But as discussed in the previous chapters, BMCs are not strengthened enough to be able to leverage ABS. Thus, still there is a long way to go for fully leveraging the ABS. During the study we observed that all the SBBs are not at same position in terms of their readiness to leverage the ABS.

There are some SBBs which have not yet developed their operational mechanism fully and have not signed any agreement with commercial organizations for leveraging the ABS.

However, there are some SBBs which have initiated the ABS collection process by reaching out to the commercial organizations and signing the Prior Information Consent (PIC) and Mutually Agreed Terms (MAT agreement) with the companies. Some SBBs such as Uttarakhand State Biodiversity Board (USBB), West Bengal Biodiversity Board (WBBB), Gujrat State Biodiversity Board (GSBB), Tripura Biodiversity Board (TBB), Goa Biodiversity Board (GBB) and Kerala State Biodiversity Board (KSBB) took a proactive step to initiate this process. These SBBs first identified the companies using the biological resources and later informed them about the ABS legislation and requisite follow ups. In case of USBB, WBBB, GSBB, TBB this process has been quite fruitful to leverage the ABS. The details of Uttarakhand State Biodiversity Board's Case for ABS Collection is available in Annexure-2.

<sup>7</sup>(2020). Retrieved 13 April 2020, from [https://www.uclan.ac.uk/research/explore/projects/assets/cpe\\_genbenefit\\_kani\\_case.pdf](https://www.uclan.ac.uk/research/explore/projects/assets/cpe_genbenefit_kani_case.pdf)



### 5.3. Major issues and challenges in the current ABS mechanism

There exist numerous challenges at different stakeholders' level while creating a streamlined ABS mechanism. Some of these problems are

co-linked with BMC and PBR formation and thus, have been already discussed in the previous sections. This section tries to highlight the challenges that predominantly exist at the SBB and NBA level, and also from the point of view of the commercial users of BR.

#### Listing of biological resources

The State Biodiversity Boards don't have any scientific proof of the inventory of the biological resources listed under the ABS guidelines. While formation of PBRs is being envisaged at the level of BMCs for creating list of BRs at the BMC level, these are not getting consolidated at the level of SBBs to collectivise the available quantum of the resources for the whole state.

#### Identification of companies using biological resources or TK

There is no readymade list of the companies using biological resources, that comes under the ABS guidelines, either with the Registrar of Companies or with any other authority. Thus, it is difficult for the SBBs and NBAs to identify such companies and ensure they are complying with the ABS guidelines. Due to this, many such companies have managed to stay out of the ABS regulations and the real custodians of the resources are bereft of the profits made from the resources.

#### Identifying the source of procurement of resources

In many cases, ABS is paid in the state where company or manufacturing unit is established and not from where the raw materials have been sourced from. The transfer of ABS between the states is also a tedious job in the cases where source of origin of the products is not well defined. This leads to unfair distribution of profits as ABS funds don't reach the real custodians of the resources.

#### Calculation of ABS amount

While the guidelines have defined certain procedures to calculate the ABS amount, practically it is found to be the most difficult challenge at the level of authorities. As majority of the manufacturers or users of biological resources have multiple product lines and they use multiple ingredients to make the final products, it becomes difficult to ascertain the amount on which ABS will be applicable.

#### Technical capabilities and resources available with SBBs:

Implementation of ABS requires enough manpower with technical capabilities to identify the biological resources and the commercial users. It was noticed during the field visits that SBBs do not have such resources available with them to leverage ABS from the private companies. Also, the funds available with SBBs are very limited and in most cases, these are earmarked for specific purposes like BMC formation, PBR preparation etc, therefore SBBs find it difficult to hire technical staff or organize awareness campaigns around ABS.



## Utilization of ABS amount

A large chunk of the funds collected as ABS are left unspent due to absence of a mechanism to identify the concerned BMC that owes the amount. With such disbursement mechanism, possibility of offering value to members and creating impact and in the BMC area suffers.

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## Lack of awareness about ABS mechanism among users of BR

There is a lack of awareness and appreciation among the private sector players about the overall ABS mechanism, payment structure and its potential implications. The private BR using companies interacted during the field study considered ABS as another tax levied by the government and they were just complying it to avoid any legal hassles.

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## No clarity on which actor should pay the ABS

As majority of the private sector actors are sourcing biological resources from intermediaries or middlemen, there is a dilemma over who should be paying the ABS amount. The greater dilemma is in the cases where biological resources are processed by one entity and supplied to another entity for making the finished product. This lack of clarity among the BR users has added to the inefficient payment of ABS in all the states.

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## Engaging with communities for obtaining BR & related knowledge

Private sector players find it difficult to directly engage with BMCs to sign PIC and MAT agreement. As reported by the officials of private companies paying ABS amount, some of the challenges faced by the them in engaging directly with the BMCs are as follows:

- The biggest challenge is to find a BMC having requisite biological resources and capacity to engage with private sector players.
- Sustainable supply of biological resources as per the need of the company.
- Some of the companies require number of biological resources; it may be difficult for one BMC to supply all the resources while on the other hand it is difficult for companies to engage with number of BMCs for sharing the ABS.

As per the BDA 2002 and ABS guidelines, benefits received from sharing of ABS by the users of biological resources is required to be transferred to the concerned BMCs so that it can be utilized for the purpose of conservation of the biological resources by the local custodians. However, during the discussion with BMCs and other relevant stakeholders, various challenges were observed at the level of BMCs to leverage ABS that are already discussed in the previous sections.

## 5.4. Recommendations

- Current ABS payment mechanism does not differentiate the biological resources based on their availability or IUCN status, efforts in collection and regeneration capacity. An innovative ABS payment mechanism is desired to incentivise the conservation of biological resources which are not available in abundance and takes time to regenerate.
- Conduct regular awareness programs and consultation workshop at national and regional levels with all the relevant stakeholders to create sensitization and address concerns. Engage frequently with association of industries (CII, ASSOCHAM), MSME clusters, trade bodies etc. for more effective communication.
- Develop policies and systems for convergence with line departments (Forest, Tribal Welfare, Agriculture etc.) and forest and livelihood based bilateral projects and flagship programmes of Gol (NRLM implemented through SRLMs etc.) for effective implementation of the BDA. Various line departments and multiple projects are promoting conservation-based livelihoods initiatives, e.g. indigenous seed-based agriculture, seed banks for indigenous seeds, natural and ecological farming, promoting sustainable harvesting, and cultivation of medicinal and aromatic plants (MAPs) etc. A better coordination and convergence with them will bring synergies for overall implementation of BDA.

- Develop and promote a standard or certification (around sustainable sourcing) which endorses the products or services as 'ABS complied'. The ABS payers can use this label on the packaging of their finished products. Such certifications should be promoted in both domestic and exports markets to incentivize the users and promote responsible consumerism among the consumers.
- Identify biological resources in the state from ABS perspective and undertake an ABS centric value chain analysis for the commercially important commodities.
- Develop capacities of BMCs for collection of ABS and implementation of conservation-based livelihood plans.
- Develop a comprehensive database of stakeholders associated with biological resources who are important from ABS point of view. These stakeholders may be local traders, intermediaries, agents, suppliers, processors and companies.
- Platforms such as India Business Biodiversity Initiative (IBBI), Industry associations like CII, ASSOCHAM, MSME development forum, specific trade associations like; Associations of Ayurvedic Drug Manufacturers etc. should engage with their members on regular basis to disseminate the information about ABS and build awareness & capacity to comply with ABS mechanism.

In India there are multiple product-based clusters such as Jute, Spice or Ayurveda cluster. While such clusters have numerous small and medium industries having turnover between Rs. 5-100 crores, ABS amount paid by such companies is very low. Thus, a cluster-based approach can be adopted, wherein ABS amount of all industries is invested for conservation of the biological resources important to these industries in the clusters.

## 5.5. Suggested mechanism to leverage ABS

A strategy encompassing 4 phases has been suggested below.

**TABLE 4:** Establishing and implementation of ABS system

<b>Phase-1 Pre-ABS Implementation</b>
Step-1: Identification of biological resources in the State
Step-2: Economic assessment of biological resources
<b>Phase-2 Setting the system for ABS implementation</b>
Step-3: Institutional set up at SBB for leveraging ABS
Step-4: Prepare an exhaustive database of ABS users in the state
<b>Phase 3 Implementing the ABS Mechanism</b>
Step-5: Organize the awareness programs and consultation workshops with relevant stakeholders
Step-6: Identify the users of biological resources and intimate them for ABS payment
Step-7: Mechanism for resolving the ABS related queries
<b>Phase-4 Realization of ABS</b>
Step-8: Signing the Prior Informed Consent (PIC) agreement
Step-9: Negotiation for ABS payment and signing of the MAT and ABS agreement
Step-10: Realization of ABS amount
Step-11: Further actions





# Conclusion

# 6.

## Conclusion

This section synthesizes the learning drawn from our experience, discussions with stakeholders (community, authorities and private sector players) and review of BDA 2002 and suggests a pathway for effective implementation of biodiversity management related activities at the level of State Biodiversity Boards (SBB) and Biodiversity Management Committees (BMCs).

State Biodiversity Boards (SBBs) at the state level are nodal organizations to facilitate and implement the BDA in their respective states. Role of the SBB is vital in forming the guidelines and developing the mechanism for BMC formation, PBR preparation and realization of ABS.

Presence of strong BMCs is the first and foremost requisite towards effective implementation of BDA and strengthen the efforts towards the conservation and management of biological resources. BMCs are also empowered to realize the ABS for the biological resources and traditional knowledge obtained from their respective areas for commercial utilization.

Peoples Biodiversity Register (PBR) is an important document to capture the details of biological resources and traditional knowledge available in BMCs. This is also an important document for implementing the ABS mechanism. ABS mechanization is a very important component to ensure sustainable usage of biological resources along with strengthening the efforts towards conservation of biological resources and improving livelihood of local communities. However, developing an effective ABS mechanism requires presence of local community institutions along with a comprehensive data base of biological resources both at the level of community institutions and SBBs.

Based on the present status and the expected level of performance a suggested pathway has

been structured and detailed in a manner wherein execution of all the key aspects may take 3-5 years. However, actual timeline would depend upon the existing status of SBBs and BMCs.

### 6.1. Pathway for SBBs and BMCs

#### 1. Strengthen ground level bodies and / or institutions to act in unison

- Capacitate the BMCs to implement the Action Plans by organizing regular training to BMC members on various thematic areas as discussed earlier in the BMC section
- Create relationships between the BMCs and their respective local CBOs (PRI, FPO, JFMC etc.) through monthly meetings among all the important institutions at the local level.
- Leverage the Government schemes to promote BMCs as a nodal point for conservation-based livelihoods

#### 2. Peoples Biodiversity Register (PBR) formation

##### 2.1. Identification of biological resources and mapping their vulnerability

- Identify all the biological resources available in a region by assessing of population data of biological resources through Peoples Biodiversity Register (PBR)
- Map the geographical distribution of biological resources and categorize these resources based on their availability and regeneration capacity
- Classify the resources based on the IUCN classification viz. Endangered, Threatened, Rare, Available etc.
- Map the BMCs based on the biological resources available in their jurisdiction





- Creating a digital library of the PBRs centrally at the SBB level with a focus to have consolidated data of all the functional BMCs in the state
- Identify biological resources that are in threat of extinction by conducting vulnerability assessment
- Map the factors and practices that are contributing to the threat and list the biological resources based on the level of threat to their existence.
- Prioritize the need for conservation of different biological resources based on their availability, regeneration capacity and the anthropogenic pressure on them

## 2.2. **Economic assessment of commercial biological resources**

- Identify (commercial) biological resources that are traded in discussion with local communities
- Map the demand of local people (for their sustenance and livelihoods) on these commercial biological resources.
- Undertake value chain mapping and analysis of the tradeable biological resources including market assessment (local and national markets) for gauging market demand and identifying market players dealing with biological resources. Survey of companies dealing in biological resources may also be conducted to gather the information.
- Estimate the approximate economical value of each of the commercial biological resource traded in the market based on the annual trade volumes, arrival data or in discussion with leading traders.

## 3. **Setting up an Access Benefit Sharing Mechanism at SBB/BMC**

### 3.1. **Institutional set up at SBB/BMC for leveraging ABS**

- SBB/BMCs to dedicate a team of experts under supervision of a nodal

person to set up and implement ABS mechanism

- Legal expert to investigate the compliances and legal issue.
- Biotechnologist for looking into the technical side of biological resources and their usage in a product.
- Accountancy expert for calculation of ABS.
- Timely resolution of queries and grievances related to ABS.
- Design and develop an online portal for addressing (i) grievance issues of the companies who assess and pay ABS and (ii) making ABS payments to BMC/SBB/NBA.

### 3.2. **Prepare an exhaustive database of potential market players of biological resources in the state and / or district**

- Prepare a list of local traders, intermediaries, small, micro and large processing units engaged either in the trading of biological resources or manufacturing of biological resources-based products. The above data and information can be gathered from traders in major markets, village level collectors, trade associations, chamber of commerce, Registrar of Companies (RoC) and scanning offline and online trader directories.
- Develop a pre-designed electronic template for collection of data, including name, address, major commodities, major buying destinations, annual quantum etc.

### 3.3. **Implementation of ABS mechanism**

- Develop database of relevant stakeholders along with their contact details.
- Continuous awareness programs and workshops are to be planned (with higher intensity in the beginning) with all the listed relevant stakeholders

like traders, companies, processors, member of BMCs, trade associations and corporate bodies.

- The workshops should cover important areas like what is ABS, its benefit to users and communities, what comes under ABS, payment modalities and legal implications in case of no payment. For better reach, workshops may be organized in association with industry associations or trade bodies at multiple locations e.g. State Capital, major markets of biological resources and MFPs (aka NTFPs), clusters or production centers having higher concentration of biological resources etc.
- Inform the users of biological resources about ABS through public communication modes including newspapers, banners and posters in MFP markets and other appropriate media.
- Identify individuals and organizations who are obtaining biological resources and traditional knowledge for commercial utilization along with companies that come under the purview of SBB/BMC as per the ABS guidelines of BDA, 2002 and initiate communication with them for payment of ABS. Timeline for clarifications and further process for signing the ABS agreement needs to be spelt out clearly. Moreover, mechanism for time bound follow up along with sending reminders needs to be set up.
- Based on the recommended approach, SBBs will have complete list of BMCs along with biological resources available with them in digital form.
- Based on the request from ABS-payer, the team at SBB will decide

whether Prior Informed Consent (PIC) agreement will be signed with BMC or SSB<sup>8</sup>.

### 3.4. **Formalizing ABS**

- ABS amount is to be calculated based on the provisions of BDA either through online software or through negotiations with the ABS payers. SBBs/BMCs need to have a transparent system for calculating ABS amount.
- Based on the negotiations, Mutually Agreed Terms (MAT) is to be signed mentioning the terms of payment.
- Purchaser of biological resources to transfer funds into the account of SBB or BMC as per the MAT agreement within the timelines, else provision for penalties can be invoked. The payments can be made either through cheque, NEFT or online payments.
- As a confidence building measure with the companies, it would be good to recognize the highest ABS payers every year.






























### 4. **Post-ABS planning at BMC level**

- Post ABS payments, BMC to prepare conservation plans around depleted resources and implement the same with the participation of local communities. This would result in additional employment for local communities.
- BMC to conduct meetings with local communities to understand their aspirations and identify opportunities for developing local enterprises.
- BMC can use ABS funds to determine feasibility of the potential livelihoods opportunities by commissioning need based market studies.
- Develop best practices and case studies about utilization of funds from ABS and share the same with ABS-payers to establish confidence among them.

<sup>8</sup>In the cases where BMCs are in position to supply the requisite quantity of biological resources, PIC agreement should be signed with the BMCs. However, in are cases where the source of purchased of biological is not known (i.e. from which BMC area the resources were sourced), PIC agreement may be signed with concerned SBB. In the latter case, SBB is to transfer 95% (as mandated by BDA, 2002 guidelines) funds to respective BMCs from where biological resources were sourced.



# ANNEXURE 1: State wise status of BMCs<sup>9</sup> & PBR formed<sup>10</sup>

S.N.	State	No. of BMCs <sup>#</sup>	No. of PBR Formed <sup>#</sup>	% of BMCs forming PBR
1	Andhra Pradesh	7231	310	 4%
2	Arunachal Pradesh	1793	80	 5%
3	Assam	2549	2489	 98%
4	Bihar	5837	0	 0%
5	Chhattisgarh	11301	72	 1%
6	Goa	205	205	 100%
7	Gujarat	9383	1382	 15%
8	Haryana	6437	126	 2%
9	Himachal Pradesh	3370	110	 3%
10	Jharkhand	4644	809	 14%
11	Karnataka	6500	2093	 32%
12	Kerala	1200	1034	 86%
13	Madhya Pradesh	19352	890	 5%
14	Maharashtra	28654	14833	 52%
15	Manipur	1415	37	 3%
16	Meghalaya	3274	78	 2%
17	Mizoram	855	5	 1%
18	Nagaland	987	18	 2%
19	Odisha	6706	111	 2%
20	Rajasthan	13456	0	 0%
21	Punjab	10283	1961	 19%
22	Sikkim	196	30	 15%
23	Tamil Nadu	13604	1049	 8%
24	Telangana	13319	213	 2%
25	Tripura	1264	547	 43%
26	Uttarakhand	7991	7991	 100%
27	Uttar Pradesh	59407	59407	 100%
28	West Bengal	3514	713	 20%
29	Jammu & Kashmir	4361	NA	NA
30	Lakshadweep	10	NA	NA
29	<b>Total</b>	<b>249098</b>	<b>96593</b>	 39%

<sup>#</sup> BMC constituted at District, Block/Mandal and Gram Panchayat Level and PBR formed or aggregated by them

- Red coloured circle denotes that less than 33% of the BMCs have formed PBR.
- Yellow coloured circle denotes that between 34-66% of the BMCs have formed PBR.
- Green coloured circle denotes that more than 66% of the BMCs have formed PBR.

<sup>9</sup>ahamed, s. (2020). NATIONAL BIODIVERSITY AUTHORITY - Biodiversity Management Committees. Retrieved 13 April 2020, from <http://nbaindia.org/content/20/35/1/bmc.html>

<sup>10</sup>ahamed, s. (2020). NATIONAL BIODIVERSITY AUTHORITY - Home. Retrieved 13 April 2020, from <http://nbaindia.org/link/304/1/1/home.html>

# ANNEXURE 2: Uttarakhand State Biodiversity Board's Case for ABS Collection

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**B**ased on the discussion with member secretary, USBB has signed ABS agreement with more than 100 companies with an annual ABS collection ranging from INR 20 million to 30 million per year. The process followed by USBB for leveraging the ABS is described below.

## Procedures followed by USBB to leverage ABS

1. As the first step USBB designated a dedicated person of the Board to look after the ABS mechanism with the support of other functionaries. This has led to better coordination among different stakeholders.
2. **Identification of companies using biological resources as raw material:** - USBB with the help of Industries Development Commission, Registrar of Companies (RoC) and other authorities develops a master list of all the companies which may be using biological resources for commercial utilization. Factors such as products of the company, information available in public domain, name of the company, leads from traders etc. were used to develop a master list of potential companies for intimating about the ABS legislation.  
*"The precise identification of companies using the Biological resources was really a tedious work, in process we ended up sending notices to some companies which were making the ceramics products", Member Secretary, USBB*
3. **Intimation to the companies:** - All the shortlisted companies were sent a letter to inform them about the ABS legislation, its provisions, procedures for payment of ABS and its purpose. Companies were asked to visit the office of USBB in Dehradun to get more information.
4. **Consultation with companies to make them understand the ABS mechanism and its potential benefits:** - This has been the key step adopted by USBB. Board organized consultation meetings with companies to make them understand the value of ABS and benefits to companies and communities. Officers at the board put great efforts in convincing the companies for ABS payments. Companies were given ample time to clear all their doubts before agreeing for the payments.  
During these discussions, companies were asked to voluntarily declare the source, volume and amount of BR obtained by them for the commercial utilization.
5. **Signing the PIC agreement:** - PIC agreements were signed with all the interested companies after taking the prescribed fee. So far USBB has signed PIC agreements with more than 150 companies.
6. **Signing Mutually Agrees Terms (MAT) agreement with companies:** - The companies which agreed to pay the ABS, entered into MAT agreement with USBB. For ease of the calculations, USBB followed simple calculation to ascertain the ABS payment. A flat 0.5% ABS on the total sales volume after subtracting the government taxes was levied. Habib Cosmetics Pvt. Ltd. was the first company which entered into the ABS agreement with board. The company paid ABS of Rs. 3,99,921 on the annual sale turnover of Rs 6,45,98,179 (after deducting

the taxes). So far about 80 companies have signed Mutually Agreed Terms (MAT) agreement with the USBB.

- 7. **Transfer of payment to BMCs:** - USBB finds it difficult to identify BMCs from where the biological resources were sourced thus it could not transfer the funds to BMCs.
- 8. **Legal follow-up:** - USBB is following up on legal cases with many companies in courts to ensure that all the eligible companies pay the ABS. The case of USBB v/s Divya Pharmacy is a classic example of this.

Inviting private companies, establishing regular communication with them, communicating the importance of ABS for conservation of bio resources and long-term benefits to industries are some of the major attributes that contributed significantly in establishing a successful ABS regime in Uttarakhand. Although UKSBB has seen some success in leveraging ABS, officials at the Board and other stakeholders, during our interactions, indicated that concerted efforts are further needed to come close to setting up a robust plan of action for continuous improvement of the ABS system.







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