

Analysis of India's ABS Regime in Context of Indigenous People and Local Communities

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Abstract:

The drastic change in intellectual property system and laws has raised an alarm, particularly in developing countries that have not traditionally practiced plant or animal patenting. Unabated biopiracy stimulated hot debates between technologically advanced countries and countries that are rich in biodiversity. With the advancement of science especially biotechnology and genetic engineering, it has become very difficult for countries to identify the possible instances of biopiracy. By promoting the use of genetic resources and associated traditional knowledge, and by strengthening the opportunities for fair and equitable sharing of benefits from their use, it is believed that the Nagoya Protocol binds the Parties to evolve their respective ABS legislation or administrative measures to regulate access to genetic resources and benefit sharing arising out of its commercial utilization. In accordance of Nagoya Protocol on ABS, India developed legislation and established statutory mechanisms. Present research paper is aimed at understanding primarily the recognition and space of indigenous people and local communities in domestic ABS regimes of India, and their participation/involvement in processes of international negotiations and domestic law making.

Keywords: Nagoya Protocol; ABS legislation; indigenous people and local communities; traditional knowledge; prior informed consent; mutually agreed terms; genetic resources; benefit sharing; biopiracy

Abbreviations:

Access to Genetic Resources and Fair & Equitable Sharing of Benefits arising out of the Utilization of Genetic Resources and Associated Traditional Knowledge

CBD	United Nations Convention on Biological Diversity
ITK/TK	(Indigenous) Traditional Knowledge
NBA	National Biodiversity Authority
BMCs	Biodiversity Management Committees
ICNP	Ad-Hoc Inter-Governmental Committee on Nagoya Protocol
ILCs	Indigenous People and Local Communities
PIC	Prior Informed Consent
MAT	Mutually Agreed Terms

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I. INTRODUCTION

Context of ABS—General

Historically, the genetic resources were accessed for free based on the worldview that the resources were common heritage of humankind. But, with the increased emphasis on intellectual property rights and private ownerships of products of genetic resources, this view changed over time and the UN CBD introduced a new legal framework where the sovereign rights of states over these resources were established (Jospeh, 2010). Nevertheless, the practice of illegal access (piracy) continued unabated. Piracy has also been rampant on the derivatives of genetic resources. Biopiracy also involves indigenous traditional knowledge (ITK) associated with genetic resources.

For the first time in the history of illegal access of genetic resources by the user corporations and countries, the Convention on Biological Diversity (CBD) made provisions for fair and equitable sharing of Benefitsⁱⁱ. After negotiations and deliberations lasting over 16 years, the access and benefit sharing Protocol with regard to genetic resources laid the foundation for the international regime. On the occasion of the Conference of the Parties (COP.10) to the Conventionⁱ on Biological Diversity (CBD) held on 29 October 2010 in Nagoya, Japan, the CBD adopted *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising out of their Utilization* (the Nagoya Protocol) (CBD, 2010). The Protocol opened for signature from 2 February 2011 to 1 February 2012. Currently, there are 192 signatories to Nagoya Protocol and, it came into force on 12 October 2014 once 53rd instrument of ratification was signed.

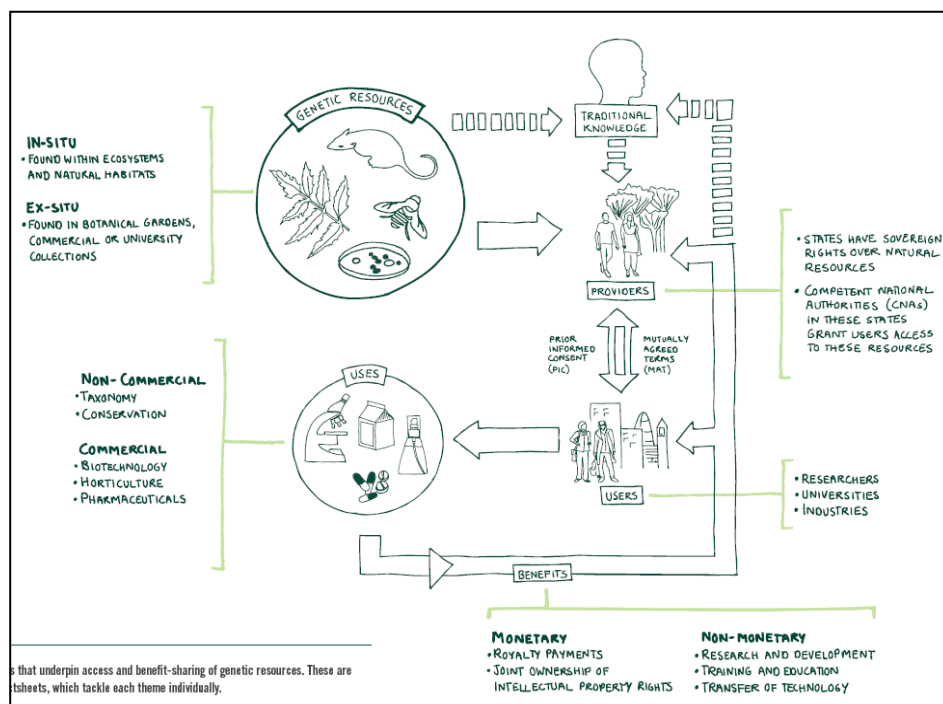


Fig.1: Diagrammatic representation of ABS system (Courtesy: CBD, 2012)

¹ Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, 31 *Int'l Leg. Mat.* 818 (1992), Article 1.

² Convention has been adopted by almost all states, with a total 193 Parties including the European Union. A noticeable exception is the United States, which as a non-Party to the CBD cannot become a Party to the Nagoya Protocol, cf. Article 33(1) of the Protocol.

Context of ABS—Specific Context of India

In order to achieve the objectives of Convention on Biological Diversity (CBD), the Government of India enacted the Biological Diversity Act 2002 and notified Biological Diversity Rules 2004. Three-tier structure – National Biodiversity Authority (NBA) at federal level, State Biodiversity Boards (SBBs) at provincial level and Biodiversity Management Committees (BMCs) at community level – is in place to implement the ABS mechanisms. Implementation of the Act and Rules in India with a focus on ABS issues receives much attention now. During past several years the NBA has put a robust and responsive ABS system in place which is being refined and made user friendly on a regular basis. According to NBA, India’s engagement with ABS issues has been progressive and noteworthy. By end of 2012, the NBA signed 100 agreements of ABS. Brazil which comes next has concluded just 10 agreements (NBA, 2012). In the words of erstwhile Chairman of NBA, “Conservation and sustainable use actions have been pursued by a range of local, national, regional and global initiatives, institutions and programmes, whereas ABS is a relatively new concept. There is a need to tease out the operational elements of a system that responds to the ethics and equity questions on the ground. In the absence of specific and policy oriented focus on ABS, it is but natural that more efforts are being focused on understanding and implementing the ABS provisions both under CBD and Biological Diversity Act 2002” (DTE, 2012). However, the progress on putting in place the 3-tier system of biodiversity management has been patchy. The performance of BMCs is highly uneven.

II. METHODOLOGY

Sampling

Purposive sampling was adopted both for conducting the contents analysis of the domestic ABS measures of India and Russia, for conducting the opinion survey. Before conducting the opinion survey, the list of possible respondent groups was identified as under:

- A. Associations & Forums of Indigenous Peoples, Tribal Movements
 - B. National Biodiversity Authority and CBD/ABS National Focal Point in Ministry of Environment & Forests
- Said respondent groups were contacted physically or electronically to express their opinion in 2 different types of questionnaires (Q.A and Q.B). The list of respondents is given in Table.1 below.

Table I

<i>Respondent Group</i>	<i>Q Type</i>	<i>India Respondents</i>
A: Indigenous Peoples	Q.A	Mizoram Chakma Development Forum (MCDF)
A: Indigenous Peoples	Q.A	NESAM TRUST
A: Indigenous Peoples	Q.A	Citizens Foundation
A: Indigenous Peoples	Q.A	Centre for Policy Solution
A: Indigenous Peoples	Q.A	M. Sudhakar (Individual)
B: Party to CBD/ NP	Q.B	National Biodiversity Authority, Ministry of Environment & Forests

Q.A NAT-ABS = Format for Associations & Forums of Indigenous Peoples, Tribal Movements, CSOs & Individuals

Q.B IND-ABS = Format for Parties to CBD & Nagoya Protocol: Represented by CBD Primary/Secondary NFP and ABS/ICNP Focal Point or National Competent Authority

* About 25 different organizations of A group each were contacted in India for getting their opinion in Q.A questionnaire formats.

Research Techniques and Tools

This case study employed both *non-reactive*² (e.g. content analysis and analysis of existing documents and secondary information) and *reactive* research (e.g. questionnaire survey) techniques. Depending on the nature, depth and importance of the variables³ and the purpose of research, the tools to gather/collate the data were chosen. The aspects of respondent categories were also taken into account when choosing the tools. All 2 types (as mentioned in Table.1) of opinion survey questionnaires are appended as Annex. Q.A and Annex.Q.B.

Timeframe

Opinion survey was done in late 2012 and early 2013. Content analysis of ABS legislation or policies of India was performed between March and July 2013.

III. RESULTS

A. Participation of ILCs in National ABS Policy/Law Making and Negotiation Processes

On asking about the involvement of indigenous people and local communities (ILCs) in developing national ABS law/policy/guideline in their respective countries, only 40% of the surveyed indigenous organizations/individuals (Annex.Q.A: q.1) responded that India involved/involves ILCs in developing national ABS instrument to little extent. 20% respondents opined that India did/does not involve ILCs in developing national ABS instrument. Thus, responses of sizeable respondents confirm that *India has no good record of involving respective ILCs in making national ABS policy or law*.

Contrary to the responses of indigenous organizations/individuals, the competent government authorities of India (Annex.Q.B: q.1&2) confirmed the participation of ILCs in national ABS law/policy making to a great extent and active. Likewise, concerns, voices or viewpoints of ILCs were/are, to a great extent, respected, integrated or incorporated in the national ABS policy/law, according to Indian government authorities (Annex.Q.B: q.3).

Surveyed indigenous organizations/individuals were questioned whether their country would ‘involve the ILCs in developing the prior informed consent (PIC) and mutually agreed terms (MAT) before allowing the user countries to access & utilize genetic resources or associated ITK held by ILCs’ (Annex.Q.A: q.2). Only 20% of Indian respondents opined ‘affirmatively’. Same 20% of Indian respondents *declined* any such possible involvement of ILCs. Lastly, the majority of respondents (60%) gave no opinion on the question (Annex.Q.A: q.2). The analysis of the responses of indigenous organizations/ individuals, thus, indicates that *there is remote possibility on part of India of involving the ILCs in developing the PIC and MAT*.

Indigenous organizations/individuals surveyed expressed their views in majority (80%) that India will ensure participation of ILCs in establishing the mechanisms to inform the potential users about their obligations before accessing any genetic resources and associated ITK, but that participation would not be *effective* (Annex.Q.A: q.3). Therefore, *respondents have largely expressed their opinions in favour of the participation of ILCs in establishing the mechanisms to inform the potential users about their obligati*

² Non-reactive research is a class of measures in which people being studied are unaware that they are part of a study. In non-reactive or unobtrusive measures the people being studied are not aware of it but leave evidence of their social behaviour or actions ‘naturally’. Creating non-reactive measures follows the logic of quantitative measurement, although qualitative researchers also use non-reactive observation. Because non-reactive measures indicate a construct indirectly, the researcher needs to rule out reasons for the observation other than the construct of interest.

³ Operational definition of the variable includes how the researcher systematically notes and records observations.

B. National Recognition of Customary Laws/Institutions of ILCs

Majority of surveyed indigenous organizations/individuals (60%) responded ‘affirmatively’ that India respects, recognizes and enforces the rights and ITK of own indigenous people, but not truly (Annex.Q.A: q.4). However, 40% of respondents *declined* that India respects, recognizes and enforces the rights and ITK of own indigenous people. Thus, *the trend of responses exhibits that India only partially respects, recognizes and enforces the rights and ITK of own indigenous people.*

Recognition of customary law/institutions of indigenous people by country’s ABS legislation/policy has been confirmed by only 20% of the surveyed indigenous organizations/individuals (Annex.Q.A: q.5). On the other hand, 20% respondents responded ‘negatively’ on issues of recognition of customary law/institutions. However, majority of respondents (60%) were unaware of such issues (Annex.Q.A: q.5). Therefore, it is hereby summed up that *the indigenous organizations/ individuals have the opinion that India’s ABS legislation/policy recognizes least the customary law/institutions of indigenous people.*

Contrary to the above, the national competent authorities of India have responded ‘affirmatively’ that existing/evolving ABS legislation/policy recognizes the customary law/institutions of indigenous people, according to Article.12.1 of Nagoya Protocol (Annex.Q.B: q.4). However, the analysis as given in section-5.1 above does not reveal any provision in the existing/evolving ABS laws or policies of India.

C. National Recognition of ILCs in Issuing PIC and MAT

‘India’s ABS legislation/policy make the prior informed consent (PIC) mandatory before access/utilization of genetic resources or associated ITK’ has been confirmed by 40% of surveyed indigenous organizations/individuals; while 20% of respondents indicate that the PIC is mentioned in India’s existing ABS legislation/policy, but it is not mandatory (Annex.Q.A: q.6). India’s 40% respondents showed lack of awareness on the same. The analysis of the responses reveals that India has scope of PIC of indigenous people in country’s ABS law, but PIC is not made mandatory in Indian law/policy. Thus *India’s ABS law/policy has been casual on the issue of PIC of indigenous people and has not considered the PIC mandatory before access/utilization of genetic resources or associated ITK.* India’s national competent authorities opined ‘to some extent’ on the question whether national ABS policy/law should respect the ILCs’ right to grant PIC and right to sign MATs (Annex.Q.B: q.5). It indicates India’s lack of seriousness on necessity of PIC of indigenous people.

Identical to above response, India’s competent authority conveyed “the PIC is mentioned in existing/evolving ABS legislation/policy, but it is not mandatory”, when they were asked “does your country’s ABS legislation/policy make the PIC mandatory before access/utilization of genetic resources or associated ITK, in accordance of Article.6.1 and Article.6.2 of Nagoya Protocol?” (Annex.Q.B: q.6). Indian authorities responded that India’s existing/evolving ABS legislation/policy has a provision that country’s ABS legislation/policy provides to ensure participation and involvement of ILCs in creating procedures/format of PIC (Annex.Q.B: q.7). But the analysis of existing legislation in India does not witness the same. *After all, it is known from the responses of government authorities that PIC is neither conceived nor incorporated in national ABS legislation/policy of India in the same spirit as it is envisaged in Article.6.1 and Article.6.2 of Nagoya Protocol.* However, India has shown their commitment to consult, involve or engage the ILCs in issuing the PIC to user Parties before accessing/ utilizing any genetic resources and associated ITK (Annex.Q.B: q.8).

India's competent authorities confirm that country's ABS legislation/policy includes provisions of drafting the mutually agreed terms (MAT) on equity principles, opposing the dominating positions of user countries (usually developed nations), as envisaged in Article.5.1 of Nagoya Protocol (Annex.Q.B: q.9). Besides, Indian authorities have confirmed that India's ABS legislation/policy provides for engaging ILCs in developing the MAT, in accordance of Article.12.3(b) of Nagoya Protocol (Annex.Q.B: q.10). *It is reflection in the opinions of India's competent authorities that the official position is quite strong in relation to executing MAT principles and involvement of ILCs therein. Yet, the opinion of indigenous organizations on this matter is missing.*

D. Importance to Community Protocols of ILCs

Surveyed indigenous organizations/individuals were asked to respond whether India's ABS legislation/policy provides for supporting the concerned ILCs to develop community protocols. Only 20% of respondents were 'affirmative' that India's ABS legislation/policy has provision in support of community protocols (Annex.Q.A: q.7). Rest majority of the respondents showed ignorance about such provisions in India's ABS legislation/policy (Annex.Q.A: q.7). Thus *the responses of indigenous organizations/individuals indicate that existing national ABS legislation/policy has no real importance given to community protocol, if any such provision exists.* Same questions were not attended by national competent authority of India (Annex.Q.B: q.11 & 12).

E. Access of ILCs to Bioresources in their Territories

On one had the entire world is talking about access of users of any country to the biological resources existing in any country of the world; but on other side majority of countries restrict their own ILCs to access the same bioresources. So, the question "does your country restrict the ILCs' access to bioresources in forests and protected areas" was floated to the respondents. 20% of surveyed indigenous organizations/individuals confirmed the full restriction of ILCs' access to bioresources in forests and protected areas. Besides, 80% of respondents confirmed selective restriction of ILCs' access to bioresources in forests and protected areas (Annex.Q.A: q.8). Therefore, *it is revealed from the analysis that India put restrictions on own ILCs' access to bioresources in forests and protected areas.*

On the contrary to above, India's competent authorities opined reverse saying that they do not restrict the ILCs' access to bioresources in forests and protected areas (Annex.Q.B: q.13). Yet, the ground observations and Indian laws like Indian Forest Act 1927 and Wildlife (Protection) Act 1972 confirm full/partial restrictions on ILCs' access to bioresources in forests and protected areas.

On the question of country ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves or not, majority of indigenous organizations/individuals (60%) were not aware of the issue (Annex.Q.A: q.9). Only 40% respondents responded, from whom 20% said that India partially ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves, and 20% responded that India restricts ILCs exchanging genetic resources and ITK within and amongst themselves (Annex.Q.A: q.9). So, *it is pertinent to draw a conclusion that India does not support much the ILCs to exchange genetic resources and ITK within and amongst themselves. But, national competent authorities of India responded differently saying that India fully ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves* (Annex.Q.B: q.14).

F. Fair and Equitable Sharing of Benefits

Only 20% of surveyed indigenous organizations/individuals confirmed that Nagoya Protocol would ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources and indigenous traditional knowledge (ITK) associated with genetic resources (Annex.Q.A: q.10). 60% respondents were clueless about it; while 20% of respondents negated the same (Annex.Q.A: q.10). *It is thus understood that the indigenous organizations have least confidence that the government would share received benefits with ILCs holding the accessed/utilized genetic resource or associated ITK.*

National competent authorities have responded 'affirmatively' on the recognition of ILCs in national ABS policy/law over users' access to genetic resources and traditional knowledge, and over sharing of benefits arising out of utilization of genetic resources (Annex.Q.B: q.15). On the question "does country's ABS legislation/policy provide for sharing benefits with concerned ILCs in a fair and equitable way, as envisaged in Article.5.2 & Article.5.5 of Nagoya Protocol", Indian authorities responded 'positively' (Annex.Q.B: q.16). *Although government authorities have confirmed very confidently that India's ABS legislation/policy provides for sharing benefits with concerned ILCs in a fair and equitable way, yet the observations do not confirm a fully evolved mechanisms to share the benefits with ILCs in fair and equitable manner.*

G. Access to Genetic Resources and Space for ILCs

Competent authorities responded that the country's ABS legislation/policy ensures *effective* participation of ILCs in establishing the mechanisms to inform the potential users of ITK about their obligations, in accordance of Article.12.2 of Nagoya Protocol (Annex.Q.B: q.18). India confirmed that country's existing ABS legislation/policy provides for disclosing the information in a language understandable to our ILCs (Annex.Q.B: q.19). *It thus indicates that India leads in the participation of ILCs in matters pertaining to information obligations of potential users of ITK and their obligations of disclosing the information in a language understandable to our ILCs.*

H. Associated Traditional Knowledge and ILCs Rights

Indian authorities responded 'affirmatively' on question of truly respecting, recognizing and enforcing the rights and ITK of own indigenous people (Annex.Q.B: q.20). Unfortunately, the opinions of indigenous organizations could not be gathered, so it is hard to make a comparison.

I. Involvement of ILCs in Monitoring of Access to Genetic Resources

Responding to the question whether country's ABS legislation/policy (or administrative measure) provide to involve ILCs in monitoring of the access and utilization of genetic resources or associated ITK by the users, 60% of surveyed indigenous organizations/individuals said that 'there is no such provision in existing ABS legislation/policy or administrative measure' (Annex.Q.A: q.11); while 40% of the respondents were unaware of the issue. So, *currently India has scope of involving the ILCs in monitoring of the access and utilization of genetic resources or associated ITK by the users, but according to the majority of indigenous organizations the existing ABS legislation/policy does not have such a provision.*

Majority of surveyed indigenous organizations/individuals (60%) responded that India will involve the ILCs (but for namesake) in monitoring the access and utilization of genetic resources or associated ITK by the user countries (usually developed countries) (Annex.Q.A: q.12); while 40% of the respondents were unaware of the issue. *It shows that India might involve the ILCs in monitoring the access and utilization of genetic resources or associated ITK by the user countries, but for namesake.*

Above same question has been replied by India's competent authorities 'affirmatively', saying that India's existing ABS legislation/policy or administrative measure provides to involve ILCs in monitoring of the access/utilization of genetic resources by the users (Annex.Q.B: q.21).

J. Check of Biopiracy

The surveyed indigenous organizations/individuals were lastly asked "And if your country's government agencies/institutes or corporations are involved in illegal transfer/ transportation of genetic resource to user country/corporation, will the ILCs be able to check the illegal transfer (misappropriation)?" 60% respondents claimed that the ILCs are NOT able to check successfully the illegal transfer (misappropriation) (Annex.Q.A: q.13). *The data of the responses exhibits that India's indigenous organizations showed no confidence on their ILCs that they might check the biopiracy.*

20% each of surveyed indigenous organizations/individuals gave their opinion that ABS regime at international level and national ABS regime be able to stop to large extent the biopiracy (if any) of their country's genetic resources and associated ITK (Annex.Q.A: q.14). Simultaneously, 40% of respondents indicated that international and national ABS regime would be able to stop to some extent the biopiracy (if any) of their country's genetic resources and associated ITK (Annex.Q.A: q.14). Similarly, 40% respondents opined that international and national ABS regime would not at all be able to stop the biopiracy (if any) of their country's genetic resources and associated ITK (Annex.Q.A: q.14). Therefore, *India's surveyed indigenous organizations/individuals were not very much pessimistic that the biopiracy of India's genetic resources and associated ITK would be checked by international or national ABS regime.*

IV. DISCUSSION

Present research paper encompassed on to understand the recognition, involvement, space, benefit sharing and acknowledgement being extended by Indian government to indigenous people and local communities. The study conducted was based on opinion surveys of indigenous organizations/individuals and national competent authorities. Analysis of existing laws or policies dealing with ABS also became part of the study. Majority of surveyed indigenous organizations/individuals showed that India has advanced in terms of evolving the national ABS law/policy.

The issue of participation in ABS policy/law making and negotiation process in national contexts is worth understanding. Responses of the surveyed indigenous organizations reveal a grim picture about the participation of ILCs in national ABS policy/law making process. According to them, India has no good record of involving respective ILCs in making national ABS policy or law. Respondents have largely expressed their opinions in favour of the participation of ILCs in establishing the mechanisms to inform the potential users about their obligations. Conclusively, it is well understood that the responses of indigenous people and the States are mixed about the participation and involvement of ILCs in national policy/law or administrative measures processes.

Customary laws and institutions of indigenous people have paramount importance in conserving and managing the biological resources and associated ITK. Simultaneously, it is also a fact that the customary laws and rules of indigenous people or local communities are seldom documented and taken into account in national laws or administrative mechanisms. The trend of responses in also exhibits that the government only partially respects, recognizes and enforces the rights and ITK of own indigenous people. The indigenous

organizations/individuals have the opinion that country's ABS legislation/policy recognizes least the customary law/institutions of indigenous people. It provides a basis of popular perceptions that the ILCs are given no or least importance in national regimes and even in their own territories.

The Article.6.1 and Article.6.2 of Nagoya Protocol equip the States with the prior informed consent (PIC), which is most powerful tool to empower the ILCs if used realistically. The Parties to Nagoya Protocol have obligations of getting PIC before allowing any access to or utilization of biological resource and associated ITK. Despite these obligations, India's ABS law/policy has been casual on the issue of PIC of indigenous people and has not considered the PIC mandatory before access/utilization of genetic resources or associated ITK. It is known from the responses of government authorities that PIC is neither conceived nor incorporated in national ABS legislation/policy of India in the same spirit, as it is envisaged in Article.6.1 and Article.6.2 of Nagoya Protocol. The PIC process is more or less manipulated in the sense that the State itself gives PIC and then signs the mutually agreed terms (MAT) in order to allow the access to and utilization of the genetic resources or associated ITK. Said clauses of Nagoya Protocol also provide for obligation of Parties to involve the ILCs in signing MAT agreements with the users of genetic resources or associated ITK. It is reflected in the opinions of national competent authorities that the position of government is quite strong in relation to executing MAT principles and involvement of ILCs therein. As the opinion of indigenous organizations on this matter was not recorded, the people's version on the participation of ILCs in MAT agreements is thus unavailable. Similarly, Article 12(3)a of Nagoya Protocol has obligation on State to support the ILCs prepare their 'community protocols', but efforts for such community protocols have been undertaken sporadically and with scanty support of State. To substantiate this observation, the responses of indigenous organizations/individuals indicate that existing national ABS legislation/policy has no real importance given to community protocol, if any such provision exists.

In general, the biodiversity conservation programs have excluded the local and indigenous people from ecosystems. When the Nagoya Protocol talks about free and unlimited access to and utilization of biological resources of one country by other countries and corporations of same country, the access to and utilization of same bioresources by ILCs who are custodians of those resources are denied by national laws. The same is revealed from the opinion survey that India put restrictions on their own ILCs' access to bioresources in forests and protected areas. It is pertinent to draw a conclusion that India does not support much the ILCs to exchange genetic resources and ITK within and amongst themselves.

Article 5 of Nagoya Protocol, which is core segment of the Protocol, stresses on fair and equitable sharing of the benefits arising out of the utilization of genetic resources and associated ITK. Parties are obliged to comply with the given clauses and to ensure the creation and enforcement of domestic legislation in that regard. Since India has already evolved such legislation (Biological Diversity Act 2002) and trying to place the mechanisms of fair and equitable sharing of benefits with the ILCs, Indian authorities have confirmed very confidently that India's ABS legislation/policy provides for sharing benefits with concerned ILCs in a fair and equitable way. However, the field observations do not confirm a fully evolved mechanism to share the benefits with ILCs in fair and equitable manner. Few examples were quoted as demonstrating the benefit sharing in equitable manner. Example of Kani tribe of Kerala province whose TK was used to develop an Ayurvedic medicine and some benefits were shared with the community; but this model also failed in due course of time. Opinions of indigenous organizations led to understand that the ILCs have least confidence that the governments of India would share received benefits with ILCs holding the accessed/utilized genetic resource or associated ITK. Overall, it gives a sense that the

mechanisms of sharing the benefits fairly and equitably would take quite long time to be established in the country provided the efforts are made seriously by the governments.

Article.12.2 of Nagoya Protocol calls for the establishment of mechanisms to inform potential users of traditional knowledge associated with genetic resources about their obligations with the effective participation of ILCs concerned. The Parties have to comply with the obligations. Responses of national competent authorities have revealed that India leads in the participation of ILCs in matters pertaining to information obligations of potential users of ITK and their obligations of disclosing the information in a language understandable to our ILCs. However, evidences are missing that the same is linked with the Clearing-House mechanism at CBD Secretariat.

Nagoya Protocol contains the provisions of involving the ILCs in monitoring of access to genetic resources, and thus Parties are obliged to comply with the given provisions. Otherwise too, it would be ideal if the ILCs are given space and regulate the monitoring of users' access to genetic resources. Currently, India has scope of involving the ILCs in monitoring of the access and utilization of genetic resources or associated ITK by the users; but according to the majority of respondent indigenous organizations the existing ABS legislation/policy of India does not have such a provision. Analysis further shows that India might involve the ILCs in monitoring the access and utilization of genetic resources or associated ITK by the user countries, but for namesake. As a matter of fact the bureaucracies actually having control over all mechanisms and processes lack willingness to devolve and thus involve the ILCs in critical functions such as monitoring of access.

Underlying the genesis of ABS was the thinking of checking the biopiracy and illegal utilization of genetic resources followed by patenting on it. Under the obligations of Nagoya Protocol the Parties are to take measures to regulate the illegitimate access and utilization of genetic resources and associated ITK. India's surveyed indigenous organizations/individuals were not very much pessimistic that the biopiracy of India's genetic resources and associated ITK would be checked by international or national ABS regime. Additionally, the ILCs might check the biopiracy once they are educated and empowered to do so; however, the current capacities of ILCs in India do vary, according to the opinions of indigenous organizations. The data of the responses exhibits that government showed no confidence on ILCs that they might check the biopiracy. In either situation, without checking the biopiracy the objectives of ABS cannot be realized adequately.

V. CONCLUSION

India's progressive legislation on ABS, i.e. Biological Diversity Act 2002, has certain provisions recognizing the role and participation needs of indigenous people and local communities (ILCs) in conserving the biological resources and associated ITK. Beyond the recognition, the legal framework provides for the involvement of ILCs through biodiversity management committee (BMCs) in preparation of people's biodiversity registers (PBRs) and issuing of mutually agreed terms (MAT). The legislation lacks any mention that the prior informed consent (PIC) is prerequisite of allowing users' access to and utilization of genetic resources and associated ITK. Although the ILCs are given due recognition and appreciation in the ABS law, yet the legislation does not enable the empowerment of ILCs in whole process. The existing mechanisms in place of ABS also do not conform to ILCs as primary stakeholders and the owners of biological resources.

Despite the emphasis given in Nagoya Protocol on the need to recognize and incorporate the customary laws and institutions, the country seldom has given attention to customary laws and institutions of indigenous people; hence, it provides a basis of popular perceptions that the ILCs are given no or least importance in

national regimes and even in their own territories. Moreover, despite the obligations of Nagoya Protocol of getting prior informed consent (PIC) before allowing any access to or utilization of biological resource and associated ITK, India has been casual on the issue of PIC of indigenous people and has not considered the PIC mandatory before access/utilization of genetic resources or associated ITK. Almost similar is the status of involving the ILCs in signing MAT agreements. Equally poor is the record of government supporting the preparation of community protocol by indigenous people. In general, the biodiversity conservation programs have excluded the local and indigenous people from ecosystems. Reportedly, India does not support much the ILCs to exchange genetic resources and ITK within and amongst themselves.

Fair and equitable sharing of benefits arising out of the utilization of genetic resources and associated ITK is the key of ABS framework. India, being the leading country in ABS legislation and mechanisms in place, could not yet developed in true sense the system of fair and equitable sharing of benefits. Overall, the mechanisms of sharing the benefits fairly and equitably would take long time to be established in the country, provided the efforts are made seriously by the government. Next crucial aspect of biodiversity governance is the involvement of ILCs in monitoring of access to genetic resources. As the leading country in ABS system in place, India's existing ABS legislation/policy does not have a provision of involving the ILCs in monitoring of users' access to genetic resources. This study reveals that India might involve the ILCs in monitoring the access and utilization of genetic resources or associated ITK by the user countries, but for namesake

Under the obligations of Nagoya Protocol the Parties are to take measures to regulate the illegitimate access and utilization of genetic resources and associated ITK. India's biopiracy would likely be checked by international or national ABS regime. After all, without checking biopiracy the objectives of ABS cannot be realized adequately.

VI. RECOMMENDATIONS

India's existing legislation and ABS mechanisms require some fundamental changes, such as:

- Provisions are included to make the PIC of ILCs mandatory before any access to and utilization of biological (genetic) resources and associated ITK;
- Domestic companies and research establishments accessing/utilizing the genetic resources should also be brought in the ambit of prior approval of National Biodiversity Authority (NBA);
- ILCs need to be necessarily involved in monitoring the users' access to biological resources and associated ITK;
- Checkpoints should be created with the active involvement of ILCs; and
- The competent authorities (e.g. NBA and State Biodiversity Boards) should devise mechanisms to check the biopiracy.

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Annex.Q.A: National ABS Regime: Opinions of Indigenous Organizations & Individuals

QUESTIONS OF OPINION SURVEY	INDIA RESPONDENTS	
	Response (In parenthesis: No. of Respondents = Total 5)	Response Percentage
A. PARTICIPATION OF ILCs IN ABS POLICY/LAW MAKING AND NEGOTIATION PROCESSES		
1. Has your country involved the indigenous people and local communities (ILCs) in developing national ABS law/policy/guideline?	1. Yes, our country involved/involves ILCs in developing national ABS instrument <u>to big extent</u> 2. Yes, our country involved/involves ILCs in developing national ABS instrument <u>to little extent</u> (2) 3. No, our country did/does not involve ILCs in developing national ABS instrument (1) 4. No ABS instrument is evolved or evolving in my country 5. I am not aware (2)	1. 0% 2. 40% 3. 20% 4. 0% 5. 40%
2. Will your country involve the ILCs in developing the prior informed consent (PIC) and mutually agreed terms (MAT) before allowing the user countries to access & utilize genetic resources or associated ITK held by ILCs?	1. Yes, our country would involve ILCs effectively in developing the PIC and MAT. 2. Yes, our country would involve ILCs in developing the PIC and MAT, but for namesake only. (1) 3. No, our country would not involve the ILCs at all in developing the PIC and MAT. (1) 4. No ABS instrument is evolved or evolving in my country 5. I cannot say. (3)	1. 0% 2. 20% 3. 20% 4. 0% 5. 60%
3. Do you think that your country will ensure <i>effective</i> participation of your ILCs in establishing the mechanisms to inform the potential users about their obligations before accessing any genetic resources and associated ITK?	1. Yes, our country will ensure <i>effective</i> participation of our ILCs. 2. Yes, our country will ensure participation of our ILCs, but that would <u>not</u> be <i>effective</i> . (4) 3. No ABS instrument is evolved or evolving in my country. 4. I am not aware. (1)	1. 0% 2. 80% 3. 0% 4. 20%
B. NATIONAL RECOGNITION OF CUSTOMARY LAWS/INSTITUTIONS OF ILCs		
4. Does your country truly respect, recognize and enforce the rights and ITK of your own indigenous people?	1. Yes, our country does. 2. Yes, but not truly. (3) 3. No. (2) 4. I don't know.	1. 0% 2. 60% 3. 40% 4. 0%
5. Does your country's ABS legislation/policy recognize the customary law/institutions of your indigenous people?	1. Yes, our existing/evolving ABS legislation/policy has such a provision. (1) 2. No, there is no such provision in our existing/evolving ABS legislation/policy. (1) 3. No ABS instrument is evolved or evolving in my country 4. I am not aware. (3)	1. 20% 2. 20% 3. 0% 4. 60%
C. NATIONAL RECOGNITION OF ILCs IN ISSUING PIC AND MAT		
6. Does your country's ABS legislation/policy make the PIC mandatory before access/utilization of genetic resources or associated ITK?	1. Yes, the PIC is mandatory in our existing/evolving ABS legislation/policy. (2) 2. Yes, the PIC is mentioned in our existing/evolving ABS legislation/policy, but it is <u>not</u> mandatory. (1) 3. No, there is no mention of PIC in our existing/evolving ABS legislation/policy. 4. No ABS instrument is evolved or evolving in my country 5. I don't know. (2)	1. 40% 2. 20% 3. 0% 4. 0% 5. 40%
D. IMPORTANCE TO COMMUNITY PROTOCOLS OF ILCs		
7. Does your country's ABS	1. Yes, our existing/evolving ABS legislation/policy has such	1. 20%

QUESTIONS OF OPINION SURVEY	INDIA RESPONDENTS	
	Response (In parenthesis: No. of Respondents = Total 5)	Response Percentage
legislation/policy provide for supporting the concerned ILCs to develop community protocols of your indigenous people?	1. a provision. (1) 2. No, there is no such provision in our existing/evolving ABS legislation/policy. 3. No ABS instrument is evolved or evolving in my country 4. I am not aware. (4)	2. 0% 3. 0% 4. 80%
E. ACCESS OF ILCs TO BIORESOURCES IN THEIR TERRITORIES		
8. Does your country restrict the ILCs' access to bioresources in forests and protected areas?	1. Yes, our country fully restricts our ILCs' access to bioresources in forests and protected areas (1) 2. Yes, our country selectively restricts our ILCs' access to bioresources in forests and protected areas. (4) 3. No, our country does not restrict our ILCs' access to bioresources in forests and protected areas. 4. I cannot say.	1. 20% 2. 80% 3. 0% 4. 0%
9. Does your country ensure the rights of ILCs to exchange genetic resources and ITK within and amongst themselves?	1. Yes, our country fully ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves. 2. Yes, our country partially ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves. (1) 3. No, our country restricts our ILCs exchanging genetic resources and ITK within and amongst themselves. (1) 4. I cannot say. (3)	1. 0% 2. 20% 3. 20% 4. 60%
F. FAIR AND EQUITABLE SHARING OF BENEFITS		
10. Will your country further share the benefits [received from user countries (usually developed countries)] with your ILCs holding the accessed/utilized genetic resource or associated ITK?	1. Yes, our country would share the received benefits with ILCs <u>judiciously</u> . 2. Yes, our country would share the received benefits with ILCs, <u>but only a fraction</u> . (1) 3. It is likely that our country would share the received benefits with ILCs. 4. No, our country would not share the benefits with ILCs. (1) 5. I don't know. (3)	1. 0% 2. 20% 3. 0% 4. 20% 5. 60%
I. INVOLVEMENT OF ILCs IN MONITORING OF ACCESS TO GENETIC RESOURCES		
11. Does your country's ABS legislation/policy (or administrative measure) provide to involve your ILCs in monitoring of the access and utilization of genetic resources or associated ITK by the users?	1. Yes, our existing/evolving ABS legislation/ policy or administrative measure provides to involve our ILCs in monitoring of the access/ utilization of genetic resources by the users? 2. No, there is no such provision in our existing/evolving ABS legislation/policy or administrative measure. (3) 3. No ABS instrument is evolved or evolving in my country 4. I do not know. (2)	1. 0% 2. 60% 3. 0% 4. 40%
12. Will your country involve the ILCs in monitoring the access and utilization of genetic resources or associated ITK by the user countries (usually developed countries)?	1. Yes, our country would effectively involve the ILCs in monitoring. 2. Yes, our country would involve the ILCs in monitoring, but for namesake. (3) 3. No ABS instrument is evolved or evolving in my country 4. I do not know. (2)	1. 0% 2. 60% 3. 0% 4. 40%
J. CHECK OF BIOPIRACY		
13. And if your country's government	1. Yes, our ILCs are able to check successfully the illegal	1. 0%

QUESTIONS OF OPINION SURVEY	INDIA RESPONDENTS	
	Response (In parenthesis: No. of Respondents = Total 5)	Response Percentage
agencies/institutes or corporations are involved in illegal transfer/ transportation of genetic resource to user country/corporation, will your ILCs be able to check the illegal transfer (misappropriation)?	transfer (misappropriation). 2. Yes, our ILCs are able to check the illegal transfer (misappropriation), but with mixed results. 3. No, our ILCs are NOT able to check successfully the illegal transfer (misappropriation). (3) 4. I cannot say. (2)	2. 0% 3. 60% 4. 40%
14. Do you think that the ABS regime at international level and national ABS regime be able to stop the biopiracy (if any) of your country's genetic resources and associated ITK?	1. Yes, to large extent. (1) 2. Yes, to some extent. (2) 3. No, not at all. (2) 4. I cannot say.	1. 20% 2. 40% 3. 40% 4. 0%

Annex.Q.B: National ABS Regime: Opinions of Competent Authority

Q.No.	QUESTIONS OF OPINION SURVEY	RESPONSE OPTIONS	REPLY
A. PARTICIPATION OF ILCs IN ABS POLICY/LAW MAKING AND NEGOTIATION PROCESSES			
1.	Whether or not the indigenous and local communities (ILCs) were/are allowed taking part in national ABS law/policy making?	1. Yes, to large extent. 2. Yes, to some extent. 3. No, not at all. 4. I do not know.	1
2.	Was/is ILCs' participation active or passive?	1. Active participation 2. Passive participation 3. No participation 4. I do not know	1
3.	Were/are the concerns, voices or viewpoints of ILCs respected, integrated or incorporated in the national ABS policy/law?	1. Yes, to large extent. 2. Yes, to some extent. 3. No, not at all. 4. I do not know.	1
B. NATIONAL RECOGNITION OF CUSTOMARY LAWS/INSTITUTIONS OF ILCs			
4.	In accordance of Article.12.1 of Nagoya Protocol, does your country's ABS legislation/ policy recognize the customary law/institutions of your indigenous people?	1. Yes, our existing/evolving ABS legislation/policy has such a provision. 2. No, there is no such provision in our existing/evolving ABS legislation/policy. 3. I am not aware.	1
C. NATIONAL RECOGNITION OF ILCs IN ISSUING PIC AND MAT			
5.	Shall the national ABS policy/law respect the ILCs' right to grant FPIC and right to sign MATs, and in what way?	1. Yes, to large extent. 2. Yes, to some extent. 3. No, not at all. 4. I do not know.	2*
6.	In accordance of Article.6.1 and Article.6.2 of Nagoya Protocol, does your country's ABS legislation/policy make the PIC mandatory before access/utilization of genetic resources or associated ITK?	1. Yes, the PIC is mandatory in our existing/evolving ABS legislation/policy. 2. Yes, the PIC is mentioned in our existing/evolving ABS legislation/policy, but it is <u>not</u> mandatory. 3. No, there is no mention of PIC in our	1

Q.No.	QUESTIONS OF OPINION SURVEY	RESPONSE OPTIONS	REPLY
		existing/evolving ABS legislation/policy.	
7.	Does your country's ABS legislation/policy provide to ensure participation and involvement of ILCs in creating procedures/ format of PIC?	<ol style="list-style-type: none"> 1. Yes, our existing/evolving ABS legislation/policy has such a provision. 2. No, there is no such provision in our existing/evolving ABS legislation/policy. 3. I am not aware. 	1
8.	Is your country committed to consult, involve or engage the ILCs in issuing the PIC to user Parties before accessing/ utilizing any genetic resources and associated ITK?	<ol style="list-style-type: none"> 1. Yes, our country is fully committed. 2. Yes, our country is somewhat committed. 3. No, our country has no such mandate. 4. I cannot say. 	1
9.	As envisaged in Article.5.1 of Nagoya Protocol, does your country's ABS legislation/policy include provisions of drafting the mutually agreed terms (MAT) on equity principles, opposing the dominating positions of user countries (usually developed nations)?	<ol style="list-style-type: none"> 1. Yes, our country has legal provision in ABS law/policy to draft MAT on equity principles. 2. Yes, our country has legal provision in ABS law/policy to draft MAT, but <u>not</u> on equity principles. 3. No, our country has no legal provision in ABS law/policy to draft MAT. 4. I cannot say. 	1
10.	In accordance of Article.12.3(b) of Nagoya Protocol, does your country's ABS legislation/ policy provide for engaging your ILCs in developing the MAT?	<ol style="list-style-type: none"> 1. Yes, our country's ABS law/policy provide for engaging ILCs in developing the MAT. 2. No, our country has no such provision in ABS law/policy. 3. I cannot say. 	1
D. IMPORTANCE TO COMMUNITY PROTOCOLS OF ILCs			
11.	In accordance of Article.12.3(a) of Nagoya Protocol, does your country's ABS legislation/policy provide to ensure the development of community protocols before granting any PIC to users of ITK?	<ol style="list-style-type: none"> 1. Yes, our existing/evolving ABS legislation/policy provides to ensure the development of community protocols. 2. No, there is no such provision in our existing/ evolving ABS legislation/ policy. 3. I do not know. 	Nat
12.	Does your country's ABS legislation/policy provide for supporting the concerned ILCs to develop community protocols of your indigenous people?	<ol style="list-style-type: none"> 1. Yes, our existing/evolving ABS legislation/policy has such a provision. 2. No, there is no such provision in our existing/ evolving ABS legislation/ policy. 3. I am not aware. 	Nat
E. ACCESS OF ILCs TO BIORESOURCES IN THEIR TERRITORIES			
13.	Does your country restrict the ILCs' access to bio-resources in forests and protected areas?	<ol style="list-style-type: none"> 1. Yes, our country fully restricts our ILCs' access to bioresources in forests and protected areas 2. Yes, our country selectively restricts our ILCs' access to bioresources in 	3

Q.No.	QUESTIONS OF OPINION SURVEY	RESPONSE OPTIONS	REPLY
		forests and protected areas 3. No, our country does not restrict our ILCs' access to bio-resources in forests and protected areas. 4. I cannot say.	
14.	Does your country ensure the rights of ILCs to exchange genetic resources and ITK within and amongst themselves?	1. Yes, our country fully ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves. 2. Yes, our country partially ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves. 3. No, our country restricts our ILCs exchanging genetic resources and ITK within and amongst themselves. 4. I cannot say.	1
F. FAIR AND EQUITABLE SHARING OF BENEFITS			
15.	Is there recognition in national ABS policy/law of ILCs over users' access to genetic resources and traditional knowledge, and over sharing of benefits arising out of utilization of genetic resources?	1. Yes, to large extent. 2. Yes, to some extent. 3. No, not at all. 4. I do not know.	1
16.	As envisaged in Article.5.2 & Article.5.5 of Nagoya Protocol, does your country's ABS legislation/policy provide for sharing benefits with concerned ILCs in a fair and equitable way?	1. Yes, our country's ABS law/policy provides for sharing benefits with concerned ILCs in a fair and equitable way. 2. Yes, our country's ABS law/policy provides for sharing benefits with concerned ILCs, but <u>not</u> in a fair and equitable way. 3. No, our country's ABS law/policy does not provide for sharing benefits with concerned ILCs in a fair and equitable way. 4. I cannot say.	1
17.	How would the benefits received by your country further be shared with your indigenous people and/or local communities holding the genetic resource or associated ITK being accessed/ utilized?	1. I cannot say. 2. Our country has no clues about developing any such mechanism. 3. I suggest the following mechanism:	3*
G. ACCESS TO GENETIC RESOURCES AND SPACE FOR ILCs			
18.	In accordance of Article.12.2 of Nagoya Protocol, does your country's ABS legislation/policy ensure <i>effective</i> participation of your ILCs in establishing the mechanisms to inform the potential users of ITK about their obligations?	1. Yes, our existing/evolving ABS legislation/policy ensures <i>effective</i> participation of our ILCs. 2. Yes, our existing/evolving ABS legislation/policy ensures participation of our ILCs, but that is <u>not effective</u> . 3. No, there is no such provision in our existing/evolving ABS legislation/policy. 4. I am not aware.	1
19.	Does your country's ABS legislation/policy provide for	1. Yes, our existing/evolving ABS	1

Q.No.	QUESTIONS OF OPINION SURVEY	RESPONSE OPTIONS	REPLY
	disclosing the information pertaining to access of ITK to potential users in a language understandable to your ILCs?	legislation/policy provides for disclosing the information in a language understandable to our ILCs. 2. No, there is no such provision in our existing/ evolving ABS legislation/ policy. 3. I am not aware.	
H. ASSOCIATED TRADITIONAL KNOWLEDGE AND ILCs RIGHTS			
20.	Does your country truly respect, recognize and enforce the rights and ITK of your own indigenous people?	1. Yes, we do. 2. Yes, but not truly. 3. No. 4. I don't know.	1
I. INVOLVEMENT OF ILCs IN MONITORING OF ACCESS TO GENETIC RESOURCES			
21.	Does your country's ABS legislation/policy (or administrative measure) provide to involve your ILCs in monitoring of the access and utilization of genetic resources or associated ITK by the users?	1. Yes, our existing/evolving ABS legislation/policy or administrative measure provides to involve our ILCs in monitoring of the access/utilization of genetic resources by the users? 2. No, there is no such provision in our existing/evolving ABS legislation/policy or administrative measure. 3. I do not know.	1

NAt = Not Attempted; NAp = Not Applicable.

***Appendix to Questions' Responses**

Country	Legislation	Q.5	Q.17
India	- Biological Diversity Act 2002 - Biological Diversity Rules 2004	Section.41 of the Biological Diversity Act 2002 provides for constitution of Biodiversity Management Committees (BMCs) within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of landraces, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity. Section.41(2) provides that the National Biodiversity Authority and the State biodiversity Boards shall consult the BMCs while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the BMCs. Section.41(3) provides that BMCs may levy charges by way of Collection Fees from any person for accessing or collecting any biological resources for commercial purposes from areas falling within its territorial jurisdiction.	It is provided for in Section.21 of Biological Diversity Act 2002.



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