



## **Comparative Analysis of Biodiversity Governance: A Study of Access to Benefit Sharing (ABS) Regime in India and Russia**

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# 1. PROLOGUE

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For over two decades of Convention on Biological Diversity (CBD) came in existence, the biodiversity rich developing countries demanded of an International Regime which would ensure that access to genetic resources or indigenous traditional knowledge (ITK) associated with such resources has been subject to prior informed consent (PIC) from competent national authority and mutually agreed terms (MAT). The Regime would also ensure that these countries obtain a fair and equitable share of benefits of the use of genetic resources originating from their territory by setting up a clear and transparent framework for access and benefit sharing. After prolonged deliberations lasting over 16 years, the access and benefit sharing Nagoya Protocol with regard to genetic resources and associated traditional knowledge was adopted during the COP 10 at Nagoya, Japan. Nagoya Protocol is said to significantly advance the CBD's 3rd objective by providing a strong basis for greater legal certainty and transparency for both providers and users of genetic resources. Specific obligations to support compliance with domestic legislation or regulatory requirements of the Party (country) providing genetic resources and contractual obligations reflected in mutually agreed terms (MAT) are a significant innovation of the Nagoya Protocol. 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 will create incentives to conserve biological diversity, sustainably use its components, and further enhance the contribution of biological diversity to sustainable development and human well-being. However, the opinion of about half of the respondents of specific opinion survey on the effectiveness of Nagoya Protocol indicates that it may have mixed outcome due to complex reasons - global resource politics, partially successful negotiations, disinterest of many Parties in making and implementing domestic legislation on ABS, lack of capacities of the national governments, nature of soft law itself, and so on. Yet, the Nagoya Protocol is timely international instrument to pursue the countries enter into legal obligations and develop the ABS measures domestically.



## 2. INTRODUCTION

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### 2.1. Context of ABS - General

Historically, the genetic resources were accessed for free based on the world view 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 got changed and the UN Convention on Biological Diversity (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. Patent laws have changed over the course of about 200 years, from excluding genetic resources and the processes for producing them from patentability, to extending patents to all forms of unique plants and animals and the processes for making them. This drastic change in patenting laws has raised some alarm, particularly in developing countries that have not traditionally practiced plant or animal patenting. Whereas the people have historically considered genetic resources to be part of their “common heritage”, the globalization and the evolution of patent laws has significantly changed how we view these resources. Today, companies are accused of stealing when they take genetic resources or the traditional knowledge associated with these resources from communities or countries without the permission or fair compensation of the people from the communities or countries. The emergence of the term “biopiracy” reflects a shift in the perception of genetic resources from “common heritage” to “national heritage” and “regional heritage.” This new way of viewing genetic resources and the traditional knowledge associated with these resources has led to several controversies in the past few decades between technologically advanced countries and countries that are rich in biodiversity.

Piracy has also been rampant on the derivatives of genetic resources. Biopiracy also involves indigenous traditional knowledge (ITK) associated with genetic resources. ITK plays an important role in bioprospecting, the process of searching for and extracting potential compounds having commercial value from biological resources. The originators and custodians of much of this knowledge are the indigenous groups who through years of consistent usage through trial and error and keen observation have developed wealth of a knowledge base (Treso, 2008). With economic liberalization and opening up of borders, the scope for transboundary movements of genetic resources and indigenous knowledge systems are greatly enhanced (Chaturvedi, 2007). Researchers in Germany and UK often source their materials for screening from the traders. Once extracted, there is no need to access the natural material again as its chemical structure can then be synthesized (Richerzhagen, 2010). The scope of challenging illegal patents was limited; Indian Council for Scientific and Industrial Research (CSIR) could challenge the US patent on *turmeric* as India had documented evidence on its healing properties (Dhar and Anuradha, 2005). It has also been very difficult for countries to identify the possible instances of biopiracy.

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 Benefits<sup>1</sup>. For permitted access, the users of genetic resources are obliged to share benefits arising from the utilization of such resources with the providers; benefits, which help

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

providers to develop their own sustainable uses and to preserve biodiversity (Kamau, Fedder and Winter, 2011). Article 15.1 and 15.7 of the CBD acknowledge the sovereign rights of States to regulate access to genetic resources as well as their right to stipulate the sharing of benefits from the utilisation of genetic resources. Article 15.2 places a caveat requiring resource providing states not to impose restrictions that hinder access to genetic resources and thereby restrain conservation and sustainable use of biodiversity. Article 15.7 of the CBD implies that users of genetic resources are obliged to share benefits arising from the utilization of genetic resources with resource states (Kamau, Fedder and Winter, 2011). According to Article 8(j), the Parties to CBD have an obligation to share benefits from the utilization of traditional knowledge, innovations and practices of indigenous and local communities associated with genetic resources.

In above context, the biodiversity rich developing countries demanded of an International Regime which would ensure that access to genetic resources or indigenous traditional knowledge (ITK) associated with such resources has been subject to prior informed consent (PIC) from competent national authority and mutually agreed terms (MAT) have been established. The Regime would also ensure that these countries obtain a fair and equitable share of benefits of the use of genetic resources originating from their territory by setting up a clear and transparent framework for access and benefit sharing (Jospeh, 2010).

After prolonged deliberations lasting over sixteen 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 Convention<sup>2</sup> 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*

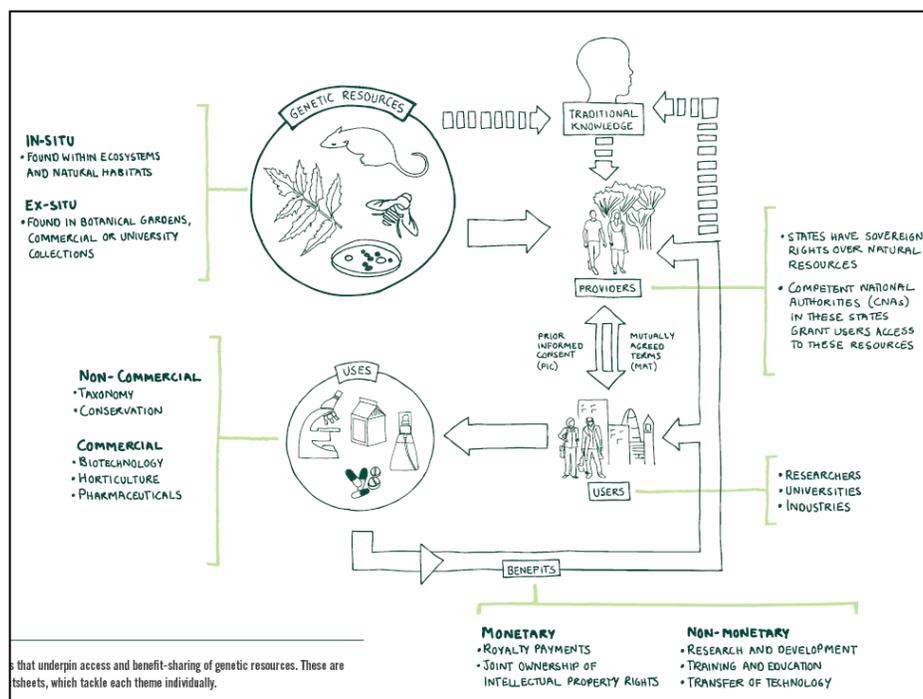


Fig.1: Diagrammatic representation of ABS system (Courtesy: CBD, 2012)

*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

<sup>2</sup> 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.



Nagoya Protocol and, as of now, 26 countries have ratified. It will come into force after 50<sup>th</sup> instrument of ratification.

Nagoya Protocol is said to advance significantly the CBD's third objective by providing a strong basis for greater legal certainty and transparency for both providers and users of genetic resources. Specific obligations to support compliance with domestic legislation or regulatory requirements of the Party (country) providing genetic resources and contractual obligations reflected in mutually agreed terms (MAT) are a significant innovation of the Nagoya Protocol (CBD Secretariat, 2011). These compliance provisions as well as provisions establishing more predictable conditions for access to genetic resources will contribute to ensuring the sharing of benefits when genetic resources leave a Party providing genetic resources. In addition, the Protocol's provisions on access to indigenous traditional knowledge (ITK) held by indigenous and local communities (ILCs) when it is associated with genetic resources will strengthen the ability of these communities to benefit from the use of their knowledge, innovations and practices (CBD Secretariat, 2011). 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, the Nagoya Protocol will create incentives to conserve biological diversity, sustainably use of its components, and further enhance the contribution of biological diversity to sustainable development and human well-being (CBD Secretariat, 2011).

## 2.2. Context of ABS - Russia and India

### Russia

The issue of genetic resources and access to and participation in the benefits of Russia became important after the ratification of the Convention on Biological Diversity in 1995. As the country has not yet established a National Focal Point for ABS, the national and domestic policy is yet to be decided by the Department of Environment and Environmental Security of the Ministry of Natural Resources and the Department of Science, Ministry of Economic Development and Trade of the Russian Federation. Additionally, the consolidation of national ABS regime has been difficult due to traditional and compartmentalized works. Country's fundamental biological research is carried out in the institutes and scientific centers of the Russian Academy of Sciences. Work on the selection & preservation of cultural diversity of plants and animals, regulation of "access and participation" in the agricultural sector has been regulated by the Russian Academy of Agricultural Sciences. Medical aspects of flora and fauna are dealt with the Russian Academy of Medical Sciences. Studies of genetic resources are held in many educational universities and institutes, specialized institutes of the Ministry of Agriculture, Ministry of Health and the Ministry of Natural Resources. Genetic resources in Russia are utilized by businesses such as industrial microbiology, plant breeding, breeding for commercial purposes, plants in nurseries, botanical gardens, zoos, etc. Access and benefit sharing issues are very important in Russia because around 40 nationalities and ethnic groups with a total of more than 200,000 people reside in Siberia, North and the Far East regions. They live highly rich diversity landscapes. In Russia, 28.3 million hectares of land is owned communally ancestral farmers and 17.1 million hectares are reindeer pastures and forests.



## 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. India is perhaps the first country in the world that has been able to tap into the magnitude of ABS having dealt with over 600 ABS applications. 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 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). Progress on putting in place the 3-tier system of biodiversity management has been patchy. The performance of BMCs is highly uneven. NBA is emphatic that Biological Diversity Act 2002 is not just a "very progressive piece of legislation" but also unique because "for the first time it talks of a decentralized way of managing and regulating India's biodiversity" (DTE, 2012).

### 2.3. Status of Biodiversity in Russia and India

Both the countries are the repositories of native, endemic, rare, wild/cultivated/domesticated and original forms of biological diversity. To realize the potential of access to genetic resources inherent in these biological resources and the extent of benefits that may arise out of the utilization of genetic resources and its derivatives, it is essential to know the extent of the diversity existing *in situ* and *ex situ* in both the countries. This realization makes a sense for understanding the urgency of establishing sound ABS mechanisms, legislation and procedures.

#### 2.3.1. Status of *in situ* Biodiversity in Russia

The ecosystems of Russia include polar deserts, tundra, forest tundra, taiga, mixed and broad-leaved forests, forest steppe, steppe, and semi-desert. Russian forests account for about 22% of the world's forest resources and 40% of the most valuable coniferous stands. It also possesses the largest wetland systems in the world, with lakes and wetlands, connected by 120000 rivers, covering 15% of the territory. About 80% of the Arctic species are represented in Russia. The country is bordered by 13 marginal seas of three oceans, with the coastline stretching some 60000 km. 65% of the territory is considered virtually untouched by economic and other human activities, whereas 20% of the territory has suffered considerable human impact. The most threatened biomes are the European steppe and the broad-leaved forests, which have almost disappeared. On its territory are 8 natural landscape zones that harbour more than 11000 species of vascular plants, 9000 species of Algae,



3000 species of lichens, 1370 species of mosses and 320 species of mammals, 730 species of birds, 75 species of reptiles, 30 species of amphibians, > 400 species of fish, > 150,000 invertebrate animals, including 100,000 insect species, 2000 mollusk species 10,000 spider species, etc.

The number<sup>3</sup> of protected areas of federal and regional importance is 13,628. The total coverage of protected areas, including marine areas, reaches 210,101,200 ha, with land extent covering 200,255,700 ha, accounting for approximately 11.7% of the Russian Federation territory. The percentage of forest cover in Russia reaches 45.4%. According to the state report “On Condition and Protection of the Environment in the Russian Federation in 2011”, there were 11,148 regional-level PAs with total area 125.8 million hectares (7.3% of total area of Russia) and 1598 local-level PAs with total area 27 million hectares (1.6% of total area of Russia) in the Russian Federation at the end of 2011. Protected marine areas cover 1.95% of the Russian exclusive economic zone (14.85 million hectares) and are compartments of 34 national-level PAs (19 strict nature reserves, 5 national parks, 10 federal nature sanctuaries). On March 4, 2013, the Russian Federation had:

- 102 state strict nature reserves with total area 33.8 million hectares (1.6% of total area of Russia);
- 45 national parks with total area 11,5 million hectares (0.7% of total area of Russia);
- 71 national-level nature sanctuaries with total area 13 million hectares (0.8% of total area of Russia);
- 28 national-level natural monuments with total area 0.04 million hectares (0.002% of total area of Russia).

### 2.3.2. Status of *ex situ* Biodiversity in Russia

Russian Federation has large depository of *ex situ* biological diversity existing in the following forms:

**Genetic and biological (zoological and botanical) collection:** Huge collection of diversity does exist in botanical gardens, herbaria, zoos, gene banks, etc. belonging to Russian Academy of Sciences, Medical Sciences, Agricultural Sciences, Ministry of Agriculture of Russia, Ministry of Education and Science of Russia, Russian Ministry of Health, the Ministry of Defense of Russia.

**Collection of Microorganisms (10616 strains of 97 species):** According to the Consolidated Catalogue of Microbial Cultures held in Russian Non-Medical Collections, the over 10,000 strains of microbes are preserved in the following institutions:

- Culture collection of the Botanical Institute. Komarov Sciences (BIN), St. Petersburg;
- Culture Collection of the Institute of Biology (BiNII) St. Petersburg State University, St. Petersburg;
- Culture Collection of the Institute of Plant Protection (WALS), St. Petersburg;
- Culture collection of the All-Russian Institute of flavorings, acids and dyes RAAS (VNIIPAKK), St. Petersburg;
- Culture Collection of Russian Institute of Agricultural Microbiology of the RAAS (ARRIAM), St. Petersburg;
- Culture Collection of the Institute of Biology, Ufa Scientific Center, RAS (IB), Ufa;
- Culture Collection of the Institute of Marine Biology (IMB), Vladivostok;
- Culture Collection of the Institute of Biophysics (IBSO), Krasnoyarsk;

<sup>3</sup> Source: The 2005 State Report on the Environmental Status and Protection in the Russian Federation



- Culture Collection of the Institute of Cell Biophysics (CSI), Pushchino;
- Culture Collection of the Institute of Molecular Genetics (IMG), Moscow;
- Culture Collection of the Institute of Plant Physiology. KA Timiryazev Academy of Sciences, Moscow;
- Culture Collection of the Institute of Ecology and Genetics of Microorganisms, Ural Branch of Russian Academy of Sciences (IEGM), Perm;
- Collection of Yeast Cultures Department of Soil Biology Department of Soil Science of Moscow State University. University (MSU KBP), Moscow;
- Culture collection of the Department of Microbiology, Faculty of Biology, Moscow State University. University (MSU CM), Moscow;
- Collection of Russian Anti-Plague Institute "Microbe", Saratov;
- Culture Collection of the Pacific Institute of Bioorganic Chemistry (TIBOH), Vladivostok.

### 2.3.3. Status of *in situ* Biodiversity in India

India is one of the recognized mega-diverse countries of the world, harbouring nearly 7-8% of recorded species of the world, and representing 4 of the 34 globally identified biodiversity hotspots (Himalaya, Indo-Burma, Western Ghats and Sri Lanka, Sundaland). India is also a vast repository of traditional knowledge associated with biological resources. So far, over 91,200 species of animals and 45,500 species of plants have been documented in the 10 biogeographic regions of the country. In terms of endemic vertebrate groups, India's global ranking is 10<sup>th</sup> in birds, with 69 species; 5<sup>th</sup> in reptiles with 156 species; and 7<sup>th</sup> in amphibians with 110 species. Endemic-rich Indian fauna is manifested most prominently in Amphibia (61.2%) and Reptilia (47%). India is also recognized as one of the 8<sup>th</sup> Vavilovian centres of origin and diversity of crop plants, having more than 300 wild ancestors and close relatives of cultivated plants, which are still evolving under natural conditions.

The varied edaphic, climatic and topographic conditions and years of geological stability have resulted in a wide range of ecosystems and habitats such as forests, grasslands, wetlands, deserts, and coastal and marine ecosystems. Arid and semi-arid regions cover 38.8% of India's total geographical area. The cold arid zone located in the Trans-Himalayan region covers 5.62% of the country's area. The region is the stronghold of three cat predators – the lion, leopard and tiger. Of the 140 species of known birds, the Great Indian Bustard is a globally threatened species. The flora of the Indian desert comprises 682 species, with over 6% of the total plant species being endemic. The cold desert is the home of rare endangered fauna, such as the Asiatic Ibex, Tibetan Argali, Wild Yak, Snow Leopard, etc., and the flora is rich in endemism and economically important species. The major rivers of India and their tributaries traverse through varied geo-climatic zones, displaying high diversity in their biotic and abiotic characteristics throughout their 28,000 km linear drift. The current distribution of 783 species of freshwater fishes, belonging to 89 genera under 17 families, which includes 223 endemic fishes, is recorded in India. In total, the Indian fish population represents 11.72% of species, 23.96% of genera, 57% of families and 80% of the global fishes. The country is the third largest producer of fish in the world, with 2,411 fish species.

India has a vast coastline of 7,517 km, of which 5,423 km belong to Peninsular India and 2,094 km to the Andaman, Nicobar and Lakshadweep Islands, and an EEZ of 2.02 million km<sup>2</sup> with a very wide range of habitats (e.g. estuaries, lagoons, mangroves, backwaters, salt marshes, rocky coasts,



stretches and coral reefs, all of which are characterized by rich and unique biodiversity components). Another crucial ecosystem for India is its forest, covering 23.39% of the geographical area of the country (of which 75% occurs in the north-eastern states) and counting over 16 major forest types and 251 sub-types. Against the global trend of deforestation, it is worth underlining the achievement made by India in stabilizing its area under forest cover over the years.

The extent of species endemism in vascular plants alone ranges from 32% to 40% in the mountain ecosystems. Other groups, such as reptiles, amphibians and fish show more than 50% of species endemism in Western Ghats. Of the 979 bird species recorded from the Himalayan region, four Endemic Bird Areas have been delineated for priority conservation measures and, likewise, identification of Key Biodiversity Areas (KBAs) has been initiated in Western Ghats.

#### 2.3.4. Status of *ex situ* Biodiversity in India

A large pool of *ex situ* biodiversity does exist in India in following various forms:

1. **Zoological Parks:** The Central Zoo Authority of India (CZA) is the governing authority of all 40 zoos in India.
2. **Botanical Parks:** There are 19 different botanical gardens existing in various cities.
3. **Herbaria:** Principal herbaria in the country are: Central National Herbarium, Kolkata; Forest Research Institute, ICFRE, Dehradun; Blatter Herbarium, Mumbai; French Institute of Pondicherry, Pondicherry; Botanical Survey of India, Deccan Regional Centre, Hyderabad.
4. **Gene/Seed Banks:** These include the National Bureau of Plant Genetic Resources, New Delhi; National Bureau of Animal genetic Resources, Karnal; and at Agriculture Universities, NGOs, and other Institutes.
5. **Collections of Microorganisms:** These collections exist with their culture lines in the following institutions/companies:

WDCM912	Anaerobic Bacterial Resource Centre
WDCM934	WHYLABS Resource Centres for Microorganisms
BDUWDCM976	National Facility for Marine Cyanobacteria
WDCM119	Culture Collection, Department of Microbiology
WDCM462	Collection of Insect Pathogens, Dept. of Entomology
WDCM173	Division of Standardisation
WDCM166	DMSRDE Culture Collection
DCM40	Delhi University Mycological Herbarium
WDCM946	Goa University Fungus Culture Collection and Research Unit
WDCM430	Indian Type Culture Collection
MCCWDCM930	Microbial Culture Collection
WDCM561	MACS Collection of Microorganisms
WDCM448	Biological Nitrogen Fixation Project College of Agriculture
MTCCWDCM773	Microbial Type Culture Collection & Gene Bank
NCDCWDCM775	National Collection of Dairy Cultures
NCIMWDCM3	National Collection of Industrial Microorganisms
NFCCIWDCM932	National Fungal Culture Collection of India
NIICCWDCM961	NII Microbial Culture Collection
WDCM972	North Maharashtra Microbial Culture Collection Centre



WDCM107	Culture Collection, Microbiology and Cell Biology Laboratory
RRJWDCM846	Regional Research Laboratory, Jammu
WDCM562	Food & Fermentation Technology Division, Mumbai University
WDCM931	Vishva-Bharati Culture Collection of Algae
WDCM497	Fungal Culture Collection

#### 2.4. Scale in Earth's Biodiversity Governance in Context of ABS System

Even though the Convention on Biological Diversity (CBD) provides that the countries have sovereign rights over the biological diversity in their territories, the governance of biodiversity through the prism of national sovereignty remains both a challenge as well as an opportunity, particularly in its management as a public good for sustaining development. Since the CBD was signed in 1992, the nation states continue to have certain ideological differences on how to share biodiversity and link efforts of conservation and sustainable use with questions of ethics of equity, ways and means of accessing biodiversity, and sharing the benefits of its use (Pisupati, 2012). CBD reaffirms Parties' right to utilize their resources "*pursuant to their own environmental policies*" (Article.3) and determines the Parties' sovereign rights to regulate access to genetic resources under Article 15(1). In accordance with Article 15(5), access to genetic resources requires the "*prior informed consent*" (PIC) of the country of origin. According to Article 15(2) the Contracting Parties shall endeavor to create conditions to facilitate access to genetic resources by other Contracting Parties and not to impose restrictions that run counter to the objectives of the Convention (Koester, 2006). Further conditions for being granted access to genetic resources are *that*: the utilization of such resources is environmentally sound<sup>4</sup>, access is on mutually agreed terms (MAT)<sup>5</sup>, and the benefits of the utilization are shared in a fair and equitable way on mutually agreed terms<sup>6</sup>. These provisions on access to genetic resources and benefit sharing from their utilization are normally referred to as access and benefit-sharing (ABS).

India, along with Philippines and Brazil, led the world in developing the ABS system elaborately through couple of laws. On the contrary, the evolution of ABS system in Russian Federation is relatively slow and scattered. But, considering the global scale of the subject and the connected issues of sustaining the biodiversity conservation, it is very pertinent to compare the ABS legislation, measures, institutions and processes in both the countries.

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<sup>4</sup> cf. Article 15(2) of CBD

<sup>5</sup> cf. Article 15(4) of CBD

<sup>6</sup> cf. Article 15(7) of CBD



## 3. AIM AND OBJECTIVES

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### 3.1. Aim of the Case Study Research

This case study research entitling “Comparative Analysis of Biodiversity Governance: Case of ABS Regime in India and Russia” was conceptualized with the aim of understanding status of evolution of domestic ABS legislation or measures in India and Russia so as to develop or reform further the legal and policy apparatus of both the countries based on cross-learning and comparative analysis.

### 3.2. Objectives of Case Study Research

- To perform comparative analysis of the legal and policy instruments on ABS existing in India and Russia
- To study the extent of recognition of indigenous people and local communities in national ABS laws in India and Russia
- To conduct survey on international ABS regime or Nagoya Protocol, and its implementation in India and Russia

# 4. • METHODOLOGY

## 4.1. Method of Research

To conduct the present case study the “Evaluative Research” form of the Applied Research was employed. Evaluative Research is a type of applied research in which one tries to determine how well a program or policy is working or reaching its goals and objectives. In other words the Evaluative Research measures the effectiveness of a program, policy, or way of doing something.

## 4.2. Sampling

In order to conduct the contents analysis of the domestic ABS measures of India and Russia, it was clearly a purposive sampling that was adopted. Likewise, for conducting the opinion survey, the purposive sampling was employed. Before conducting the opinion survey, the list of possible respondent groups was identified as under:

- A. Associations & Forums of Indigenous Peoples, Tribal Movements
- B. Parties to CBD & Nagoya Protocol (India: National Biodiversity Authority and CBD/ABS National Focal Point in Ministry of Environment & Forests; Russia: CBD Primary National Focal Point)

Said respondent groups were contacted physically or electronically to express their opinion in 2 different types of questionnaires (Q.2 and Q3). The list of respondents is given in Table.1 below.

Table.1

<i>Respondent Group</i>	<i>Q Type</i>	<i>India Respondents</i>	<i>Russia Respondents</i>
A: Indigenous Peoples	Q.3	Mizoram Chakma Development Forum (MCDF)	Center for Support of Indigenous Peoples of the North (CSIPN)
A: Indigenous Peoples	Q.3	NESAM TRUST	Interregional Association of Indigenous Peoples of North of the Krasnoyarsk Region and Evenkiya
A: Indigenous Peoples	Q.3	Citizens Foundation	Russian Association of Indigenous Peoples of the North, Siberia and the Far East (RAIPON)
A: Indigenous Peoples	Q.3	Centre for Policy Solution	Association "Aleskam"
A: Indigenous Peoples	Q.3	M. Sudhakar (Individual)	Inuit Society "YUPIK"
B: Party to CBD/ NP	Q.2	National Biodiversity Authority, Ministry of Environment & Forests	Department of Environmental Protection and Ecological Safety, Ministry of Natural Resources



Q.3 NAT-ABS = Format for Associations & Forums of Indigenous Peoples, Tribal Movements, CSOs & Individuals  
 Q.2 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 40 different organizations of A group each were contacted in India and Russia for getting their opinion in Q.3 questionnaire formats.

### 4.3. Research Techniques and Tools

This case study employed both *non-reactive*<sup>7</sup> (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 variables<sup>8</sup> 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.2 and Annex.Q.3. Respondents of opinion survey were approached physically as well as through e-mails.

### 4.4. Time frame

India part of opinion survey was done before joining the Summer School, whereas the Russian part of opinion survey was conducted between 20 and 27 July 2013. Content analysis of ABS legislation or policies of India and Russia was also performed between 20 and 27 July 2013. The following time frame was proposed to complete present case study research. Some of the responses of various respondents were added until 15 August 2013, and the complete draft report of this case study was produced on 15 November 2013.

### 4.5. Constraints & Opportunities

<i>Constraints</i>	<i>Opportunities</i>
Nobody from English or Russian speaking people joined this group.	Several professors of SFU extended help on personal grounds.
Language barrier dissipated the communication effectiveness.	Many relevant documents of Russia could become available in English.
Most of Russian respondents are on summer vacation during the study.	Some potential respondents understood the importance of issues.

<sup>7</sup> 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.

<sup>8</sup> Operational definition of the variable includes how the researcher systematically notes and records observations.

## 5. RESULTS

### 5.1. Comparison of National ABS Legislations in India and Russia

As to implement the provisions under Article 15 of the Convention on Biological Diversity (CBD), India's experience in ABS is pioneering in world. Experience from India offers rich lessons to other countries who seek to move beyond approaching ABS as special issue. On the contrary, Russian Federation is in the process of evolving ABS legislation and the mechanisms. As process of ABS system, the Ministry of Natural Resources, however, recognizes the customary laws of indigenous people and folk varieties. Comparative analysis of the legislation in both the countries is summed up in the Table.2 given below.

Table.2

S. No.	Aspect	India	Russia
1.	Laws	<p>Definite laws promulgated to govern the access to biological diversity. The laws include:</p> <ul style="list-style-type: none"> <li>• Biological Diversity Act, 2002</li> <li>• Biological Diversity Rules, 2004</li> </ul> <p>Access to the genetic resources of Annex-I agricultural crops is governed by:</p> <ul style="list-style-type: none"> <li>• Protection of Plant Varieties and Farmers' Rights Act, 2001</li> </ul>	<p>No consolidated law on ABS. The cases are dealt invariably under the following laws by different Ministries/ authorities:</p> <ul style="list-style-type: none"> <li>• Patents Act, 1993</li> <li>• Law on Veterinary Medicine, 1993</li> <li>• Law on Selection Achievements, 1994</li> <li>• Law on Copyright and Related Rights, 1994</li> <li>• Law on State Regulation of Foreign Trade, 1994</li> <li>• Law on Wildlife, 1995</li> <li>• Law on Science and State Science and Technology Policy, 1996</li> <li>• Law on Participation in the International Exchange of Information, 1996</li> <li>• Law on State Regulation in the Field of Genetic Engineering, 1996</li> </ul>
2.	Access to Genetic Resources	<p>Access to genetic resources is governed by NBA under Article 3, 4, 6 &amp; 20 of Biological Diversity Act 2002 through ABS agreements based on mutually agreed terms (MAT).</p>	<p>Transfer of ownership of genetic resources is governed by specific 'contractual agreements' between the accessing entity and the concerned Ministry or authority.</p>
3.	IPR Systems	<p>The entities interested in IPR over any genetic resource or associated TK need a clearance from NBA before applying for patent or other form of IPR. Likewise, the farmers or breeders claiming novelty in innovations need to register with PVVFA for IPR over the seed variety or new breed.</p>	<p>Multiple laws applied to the transfer of genetic resources provide exclusively for the protection of rights to traditional "folk" varieties of plants and animals. Granting of special rights to breeders of plants and animals is ensured within the ABS mechanisms. Yet, the mainstream IPR system though concentrates on</p>



S. No.	Aspect	India	Russia
			patent protection, the use of "confidential commercial information", and rights of the copyright, trade marks, etc.
4.	Protection of ITK	Access to associated ITK to genetic resources is governed by NBA under Article 3, 4, 6 & 20 of Biological Diversity Act 2002 through ABS agreements based on mutually agreed terms (MAT). However, the customary law of indigenous people is not recognized by these laws.	Although there is no single law governing the ABS system, yet the composite of several federal laws recognize the customary laws of indigenous people and the <i>sui generis</i> system of IPR. The ITK of indigenous communities is considered a subject of IPR and thus protected in ABS mechanism, and 'contractual agreement' is signed if the ITK is utilized.
5.	ABS Mechanism	ABS agreements under the Biological Diversity Act 2002 are divided into 4 categories. Each of these categories needs application to NBA in designated form. Form-I deals is used in case of direct access to biological resources and/or associated TK is sought; the Form-II is necessary for such entities that seek transfer of research results from India to any foreign country; the Form-III is meant for the ones seeking IPR on bioresources and/or associated TK; and Form-IV is applicable for those seeking transfer of biological resources and/or associated TK to third party. Before entering into ABS agreement, the NBA consults concerned State Biodiversity Board for 'prior approval' (not PIC in true spirit) and ascertaining the mutually agreed terms (MAT).	The evolving ABS system follows the principles of "prior informed consent" and "mutually agreed terms", as envisaged in Nagoya Protocol. Yet, the instruments of PIC and MAT need elaborate design and testing in ABS cases.
6.	ABS Implementation	ABS system is regulated by National Biodiversity Authority (NBA), created as per Article 20 of Biological Diversity Act, 2002. Access to the genetic resources of Annex-I agricultural crops is governed by Protection of Plant Varieties and Farmers' Rights Authority (PVPFRA) created under the Protection of Plant Varieties and Farmers' Rights Act, 2001.  Except the Annex-I agricultural crops, access to and benefit sharing from all	International cooperation in this area legally worked out better than for domestic use. No clear mechanism for equitable sharing of benefits between the state, the region and the local community for the use of genetic resources has evolved. Since there is no single law dealing with the ABS mechanisms, hence there is no single agency regulating access to genetic resources. Many agencies e.g. Ministry of Health, Ministry of Industry, Technology and Science,



S. No.	Aspect	India	Russia
		<p>the bioresources and/or associated TK are dealt with through a 3-tier structure: National Biodiversity Authority (NBA) at the apex level, the State Biodiversity Board (SBB) as intermediary body, and Biodiversity Management Committee (BMC) at the local level. There is very clearly defined mechanism in place to regulate the access to and benefit sharing from the bioresources and/or associated TK.</p> <p>Although the ABS is regulated by NBA that functions within the Ministry of Environment &amp; Forests, but other Ministries are kept in loop by NBA (under article 8(4c), dealing with agriculture, biotechnology, ocean development, medicine, science &amp; technology, and scientific research.</p>	<p>Russian Academy of Sciences, Ministry of Economic Development and Trade, Ministry of Culture, Ministry of Education, Ministry of Natural Resources, Ministry of Agriculture, Russian Agency for Patents and Trademarks, etc. implement the fluid procedures laid down as ABS mechanisms.</p>
7.	ILCs in ABS Mechanisms	<p>The indigenous people and local communities (ILCs) have received some recognition in the ABS mechanisms. Article 41(1) of Biological Diversity Act 2002 provides for the formation of Biodiversity Management Committees (BMCs) at level of village council (<i>gram panchayat</i>). This BMC is constituted by indigenous or local people residing in territory of village council; and this village institution is mandated by law to function for 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. Article 41(2) provides that the NBA and SBBs shall consult the BMCs while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within territorial jurisdiction of BMCs.</p>	<p>It is articulated by the Ministry of Natural Resources that participation of ILCs in the benefits sharing and access processes is ensured, but there is no established body of evidences witnessing the active participation of ILCs. Although the social and political interests of ILCs are taken into account, and ILCs are considered in-charge of resources in their territories, yet the conceptual views of the interests of ILCs are missing in the current ABS mechanisms. More inclusion of indigenous people is envisaged.</p>



## 5.2. India-Russia Comparative Analysis of Stakeholders' Opinions

### A. Respondents' Awareness about ABS

On the question of awareness about “international regime on ABS” (Annex.Q.3: q.1), 60% of India’s and 80% of Russia’s surveyed indigenous organizations/individuals responded that they were aware of “Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization (ABS)” evolved under UN CBD. Similarly, 80% of India’s and 60% of Russia’s surveyed indigenous organizations/individuals (Annex.Q.3: q.2) responded that the said ABS was connected to the indigenous people and local communities (ILCs). *It indicates that majority of the indigenous organizations/individuals in both the countries have awareness about international ABS regime and its relevance to them.*

Whether India/Russia signed the (international law) ‘Nagoya Protocol on ABS’ or not was the question (Annex.Q.3: q.3) that was responded *positively* by 60% of India’s and only 40% of Russia’s surveyed indigenous organizations/individuals. Likewise, the national ABS law/policy has been developed in India (in opinion of 60% respondents) and in Russia (in opinion of only 40% respondents) (Annex.Q.3: q.4). So the *majority of surveyed indigenous organizations/ individuals showed that India has advanced in terms of evolving the national ABS law/policy, while majority of the respondents in Russia did not confirm the development of national ABS law/policy.* The same is validated through the responses of competent authorities of India and Russia (Annex.Q.2: q.1&2).

### B. ILCs as Primary Stakeholders in ABS Policy/Law Making

Indigenous people and local communities (ILCs) are one of the primary stakeholders in the process of developing the international policies, legislations or institutions related to: a) access to genetic resources held by ILCs, and b) access to traditional knowledge associated with genetic resources held by ILCs. It has been confirmed by 80% each of the surveyed indigenous organizations/individuals both in India and Russia (Annex.Q.3: q.5). Despite the clear concerns of the ILCs, *there are scanty evidences that they were involved as primary stakeholders in the process of developing the international policies, legislations or institutions by global organizations of biodiversity governance, such as CBD.*

#### C<sub>1</sub>. Necessity of Participation of ILCs in ABS Policy/Law Making and Negotiation Processes

According to 100% of the surveyed indigenous organizations/individuals both in India and Russia (Annex.Q.3: q.6), the “active participation of indigenous people and local communities (ILCs) in the process of developing the international policies, legislations or institutions is essential”. Similarly, 100% and 80% of the surveyed indigenous organizations/individuals, respectively, in India and Russia (Annex.Q.3: q.7), the “indigenous people and local communities (ILCs) needed/need to be involved in negotiation process during developing the international policies, legislations or institutions”. Thus the opinions clearly exhibit that *participation and involvement of ILCs is very much required in international ABS policy & legislation making and negotiation processes being undertaken through global forums of biodiversity governance.*

#### C<sub>2</sub>. 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% and 20% of the surveyed indigenous organizations/individuals, respectively, in India and Russia (Annex.Q.3: q.8) responded that their country involved/involves ILCs in developing national ABS instrument to little extent. 20% respondents in each country opined that their country did/does not involve ILCs in developing national ABS instrument. Thus, responses of sizeable respondents confirm that *neither India nor Russia has 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.2: q.3&4) confirmed the participation of ILCs in national ABS law/policy making to a great extent and active. However, Russian government authorities were found unaware of any such participation of ILCs in national ABS law/policy making, and validated no participation in the process. 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; while Russian authorities confirmed it 'to some extent' on the question of respecting, integrating or incorporating in the national ABS policy/law the concerns, voices or viewpoints of ILCs (Annex.Q.2: q.6).

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.3: q.9). Only 20% each of Indian and Russian respondents opined 'affirmatively'. Same 20% of Indian respondents *declined* any such possible involvement of ILCs. In case of Russia, 20% respondents said that 'no ABS instrument evolved or evolving in the country'. Lastly, the majority of respondents (60%) each in India and Russia gave no opinion on the question (Annex.Q.3: q.9). The analysis of the responses of indigenous organizations/individuals, thus, indicates that *there is remote possibility on part of India and Russia of involving the ILCs in developing the PIC and MAT*.

Indigenous organizations/individuals surveyed in India 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.3: q.10). The same response was conveyed by 20% of Russian respondents. Sizeable ratio of Russian respondents (40%) said that 'no ABS instrument evolved or evolving in the country' (Annex.Q.3: q.10). Therefore, *Indian 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; while such participation of ILCs was reported low in Russia, partly because no ABS instrument is in place as yet*.

#### **D. National Recognition of Customary Laws/Institutions of ILCs**

Majority of surveyed indigenous organizations/individuals in India (60%) responded 'affirmatively' that India respects, recognizes and enforces the rights and ITK of own indigenous people, but not truly (Annex.Q.3: q.11). However, 40% of Indian respondents *declined* that India respects, recognizes and enforces the rights and ITK of own indigenous people. Russian respondents showed varying trend in their responses. 20% of them were 'affirmative' that



Russia respects, recognizes and enforces the rights and ITK of own indigenous people; and 40% of them opined that Russia respects, recognizes and enforces the rights and ITK of own indigenous people, but not truly (Annex.Q.3: q.11). Thus, *the trend of responses in both India and Russia exhibits that the countries only partially respect, recognize and enforce 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 from India; while none of the respondents from Russia confirmed the same (Annex.Q.3: q.12). On the other hand, 20% respondents each from India and Russia responded 'negatively' on issues of recognition of customary law/institutions. However, majority of respondents (60% each) in both India and Russia were unaware of such issues (Annex.Q.3: q.12). Therefore, it is hereby summed up that *the indigenous organizations/individuals have the opinion that their respective country's ABS legislation/policy recognizes least the customary law/institutions of indigenous people.*

Contrary to the above, the national competent authorities of both India and Russia 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.2: q.7). 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 or Russia.

#### **E. 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 Indian respondents indicate that the PIC is mentioned in India's existing ABS legislation/policy, but it is not mandatory (Annex.Q.3: q.13). No respondent, on the other hand, from Russia responded as Indian respondents did. But, 20% of Russian indigenous respondents indicated that PIC is not in place in Russia's evolving ABS law/policy, and 20% of them say the no ABS law/policy is evolving in Russia (Annex.Q.3: q.13). India's 40% respondents and Russia's 60% respondents showed lack of awareness on the same. The analysis of the responses reveal that only India has scope of PIC of indigenous people in country's ABS law, but PIC is not made mandatory in Indian law/policy. Analysis in section-5.1 above validates this fact that *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.* Same is confirmed in next para too.

India's national competent authorities opined 'to some extent' on the question whether national ABS policy/law should respect the ILCs' right to grant FPIC and right to sign MATs (Annex.Q.2: q.8). It indicates India's lack of seriousness on necessity of PIC of indigenous people. On the other hand, Russian authorities expressed high need of respecting the ILCs' right to grant FPIC and right to sign MATs and inculcate such needs in ABS law/policy (Annex.Q.2: q.8).

Identical to above response, India's competent authority conveyed "the PIC is mentioned in existing/evolving ABS legislation/policy, but it is not mandatory", and Russian authorities said



“there is no mention of PIC in our existing/evolving ABS legislation/policy” 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.2: q.9). 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.2: q.10). But the analysis of existing legislation in India given in section-5.1 does not witness the same. Russia, on the other hand, has responded honestly that there is no such provision in existing/evolving ABS legislation/policy ensuring participation and involvement of ILCs in creating procedures/format of PIC (Annex.Q.2: q.10). *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 or Russia in the same spirit as it is envisaged in Article.6.1 and Article.6.2 of Nagoya Protocol.* However, both the countries have 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.2: q.11).

Both India’s and Russia’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.2: q.12). Analysis given in section-5.1 also reveals the same position of both the countries. Besides, both India and Russia have confirmed that their ABS legislation/policy provides for engaging ILCs in developing the MAT, in accordance of Article.12.3(b) of Nagoya Protocol (Annex.Q.2: q.13). *It is reflection in the opinions of national competent authorities that the position of both the countries 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.*

#### **F. Importance to Community Protocols of ILCs in Countries**

Surveyed indigenous organizations/individuals were asked to respond whether their country’s ABS legislation/policy provides for supporting the concerned ILCs to develop community protocols. Only 20% of India’s respondents were ‘affirmative’ that India’s ABS legislation/policy has provision in support of community protocols (Annex.Q.3: q.14). Rest majority of the respondents showed ignorance about such provisions in India’s ABS legislation/policy. Similarly, majority of surveyed indigenous organizations/individuals from showed ignorance about such provisions in Russia’s evolving ABS legislation/policy (Annex.Q.3: q.14). However, 20% of Russian respondents denied of any such provision in evolving ABS legislation/policy, while 20% completely refused the existence of any ABS legislation/policy in Russia (Annex.Q.3: q.14). Thus *the responses of indigenous organizations/individuals indicate that evolving/existing national ABS legislation/policy has no real importance given to community protocol, if any such provision exists.* Same questions were responded by national competent authority of only Russia by saying that no such provision existed in evolving ABS legislation/policy (Annex.Q.2: q.14 & 15).

#### **G. 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. Both in India and Russia, 20% of surveyed indigenous organizations/individuals confirmed the full restriction of ILCs’ access to bioresources in forests and protected areas. Besides, 80% of Indian respondents and 40% of Russian respondents confirmed selective restriction of ILCs’ access to bioresources in forests and protected areas (Annex.Q.3: q.15). Therefore, *it is revealed from the analysis that both India and Russia put restrictions on their 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.2: q.16). 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. But, Russian authorities accepted the selective restriction on ILCs’ access to bioresources in forests and protected areas (Annex.Q.2: q.16).

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 in both India and Russia (Annex.Q.3: q.16). Only 40% responded in each country, from whom 20% each said that their respective country partially ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves, and 20% each responded that their respective country restricts ILCs exchanging genetic resources and ITK within and amongst themselves (Annex.Q.3: q.16). So, *it is pertinent to draw a conclusion that both India and Russia do 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.2: q.17). However, Russian authorities confirmed that Russia partially ensures the rights of ILCs to exchange genetic resources and ITK within and amongst themselves (Annex.Q.2: q.17).

#### **H. Fair and Equitable Sharing of Benefits**

Only 20% each of India’s and Russia’s 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.3: q.17). India’s 80% and Russia’s 40% respondents were clueless about it; while 40% of Russian respondents negated the same (Annex.Q.3: q.17).

In India and Russia both, each 20% of surveyed indigenous organizations/individuals confirmed that their country further shares the fraction of benefits [received from user countries (usually developed countries)] with ILCs holding the accessed/ utilized genetic resource or associated ITK (Annex.Q.3: q.18). India’s 20% and Russia’s 60% respondents were doubtful that acquired benefits would further be shared with ILCs (Annex.Q.3: q.18). *It is thus understood that the indigenous organizations have least confidence that the governments of both the countries would share received benefits with ILCs holding the accessed/ utilized genetic resource or associated ITK.*



National competent authorities of both India and Russia 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.2: q.18). On the question "does your 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', while Russian authorities did 'negatively' (Annex.Q.2: q.19). *Although 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, yet the observations do not confirm a fully evolved mechanisms to share the benefits with ILCs in fair and equitable manner.*

### **I. Access to Genetic Resources and Space for ILCs**

India's 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; while Russian authorities also responded the same but their ABS legislation/policy ensures the participation as *not effective* (Annex.Q.2: q.21). India confirmed that country's existing/evolving ABS legislation/policy provides for disclosing the information in a language understandable to our ILCs; while Russia did not confirm the same (Annex.Q.2: q.22). *It thus indicates that India leads Russia 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.*

### **J. Associated Traditional Knowledge and ILCs Rights**

Both India and Russia responded 'affirmatively' on question of truly respecting, recognizing and enforcing the rights and ITK of their own indigenous people (Annex.Q.2: q.23). Unfortunately, the opinions of indigenous organizations could not be gathered, so it is hard to make a comparison.

### **K. 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 from India said that 'there is no such provision in existing ABS legislation/policy or administrative measure' (Annex.Q.3: q.19); while 40% of the Indian respondents were unaware of the issue. In Russian contexts, 40% of surveyed indigenous organizations/individuals highlighted that no ABS instrument being evolved or evolving in country (Annex.Q.3: q.19). Majority of Russian respondents (60%) 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 from India (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.3: q.20); while in Russia, 20% of respondents opined the same. In Russia, 40% of surveyed respondents said that no ABS instrument being evolved in the country (Annex.Q.3: q.20). In both the countries, 40% of the respondents each were unaware of the issue. *It shows that India*



*and Russia 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.2: q.24); while Russian authorities clearly say that there is no such provision in existing/evolving ABS legislation/policy or administrative measure.

#### **L. Awareness and Capacity Building of ILCs**

India and Russia have taken or been taking measures for awareness-raising of ILCs about the ABS, Nagoya Protocol and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain. In India, 40% of the surveyed indigenous organizations/individuals confirmed that the measures are taken or being taken to large extent; while 40% of the respondents declined any such measure yet taken or being taken (Annex.Q.3: q.21). In Russia, on the other hand, only 20% of surveyed indigenous organizations/individuals confirmed that the measures are taken or being taken to some extent; while 40% of the respondents declined any such measure yet taken or being taken (Annex.Q.3: q.21). Thus *it is understood from the responses of indigenous organizations that India and Russia have undertaken some or sporadic measures for awareness-raising of ILCs about the ABS, Nagoya Protocol and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain. There is lot to do for both the countries. The same is validated by responses of the national competent authorities of India and Russia, as illustrated in following para.*

According to the national competent authorities of both India and Russia, the countries are quite committed to the awareness-raising of their ILCs about the ABS, Nagoya Protocol and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain (Annex.Q.2: q.25). India has mentioned in official responses about the measures that have been taken for awareness-raising of their ILCs about the ABS, Nagoya Protocol and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain (Annex.Q.2: q.26). Russia has not taken any such measure so far. India also opined that the ILCs are active players in receiving such awareness-raising activities (Annex.Q.2: q.27).

Among the surveyed indigenous organizations/individuals, 60% and 20% from India and Russia, respectively, said that some measures have been taken for capacity building of ILCs about the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain (Annex.Q.3: q.22). Likewise, 40% each from India and Russia responded that no such measure has taken place in their respective country. *This analysis reveals that India has taken quite many measures for capacity building of ILCs about the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK, while Russia is just initiating such activities. The same is also confirmed in following para containing the official responses of countries.*

Competent authorities of both the countries indicated that India is much committed and Russia somewhat committed to capacity building of ILCs on the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain (Annex.Q.2: q.28). The ILCs are active players in the capacity activities in India, while they are passive recipients in the capacity efforts of Russia (Annex.Q.2: q.29). It is made clear by the



authorities of India that country has taken or been taking measures for capacity building of ILCs on the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain; whereas the authorities of Russian Federation were not confident about the same (Annex.Q.2: q.30).

### **M. 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)?” Russia’s 20% respondents said that their ILCs are able to check the illegal transfer (misappropriation), but with mixed results (Annex.Q.3: q.23). However, 20% of Russian respondents opined that their ILCs are able to check successfully the illegal transfer (misappropriation). Russia’s 20% respondents and India’s 60% respondents claimed that their ILCs are NOT able to check successfully the illegal transfer (misappropriation) (Annex.Q.3: q.23). *The data of the responses exhibits that Russia’s indigenous organizations are positive about their ILCs that they would be able to check the biopiracy, while India’s indigenous organizations showed no confidence on their ILCs that they might check the biopiracy.*

Both India’s and Russia’s 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.3: q.24). Simultaneously, 40% of India’s and 60% of Russia’s 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.3: q.24). Similarly, 40% respondents from India and 20% respondents from Russia 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.3: q.24). 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; while the Russian counterpart respondents expressed the same relatively positively.*



## 6. DISCUSSION

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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. 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 Benefits. Article 15.1 and 15.7 of the CBD acknowledge the sovereign rights of States to regulate access to genetic resources. Over 16 years of negotiations in CBD led to the adoption of Nagoya Protocol in 2010. In accordance of this international ABS regime, the Parties are obliged to evolve their respective national ABS legislation/policy frameworks or administrative measures. Present case study research encompassed on to compare the recognition, involvement, space, benefit sharing and acknowledgement being extended by Indian and Russian governments to their respective indigenous people and local communities. The study was conducted in strict limitations of resources and time; thus was based on opinion surveys of indigenous organizations/individuals and national competent authorities. Analysis of existing/evolving laws or policies dealing with ABS also became part of the study.

Although the concept of ABS has evolved over a period of 16 years and the trajectory comprises sizeable number of groups, meetings and negotiations that took place in international forums, yet the awareness level about ABS among the government officers & representatives, scientists, academia, communities and indigenous people is very minimum. Of late, since advent of Nagoya Protocol, the awareness about international ABS regime has started building up. The awareness among the indigenous communities is of special interest, as they are the primary stakeholders of genetic resources and associated ITK in the ambit of Nagoya Protocol on ABS. The study confirms the general observation with the fact that majority of the indigenous organizations/individuals in both India and Russia have awareness about international ABS regime and its relevance to them. Majority of surveyed indigenous organizations/individuals also showed that India has advanced in terms of evolving the national ABS law/policy, while majority of the respondents in Russia did not confirm the development of national ABS law/policy in their country.

Next critical area concern is the recognition of indigenous people and local communities (ILCs) as the primary stakeholders by the international forums, especially CBD, in the process of developing the policies or legislation. Until the Nagoya Protocol agreed upon in 2010, the ILCs were not considered important in international negotiations at various forums under CBD. Only recently such importance to ILCs is being given. Yet, the opinion survey has revealed that there are scanty evidences that they were involved as primary stakeholders in the process of developing the international policies, legislations or institutions by global organizations of biodiversity governance, such as CBD.

Following the inadequate recognition of ILCs, the issue of participation in ABS policy/law making and negotiation process at international and national contexts is worth understanding. Even if the international forums do not adequately consider the ILCs as primary stakeholders in



policy/law making process, the participation of ILCs is the key. The indigenous organizations of both India and Russia opined that the participation and involvement of ILCs are very much required in international ABS policy & legislation making and negotiation processes being undertaken through global forums of biodiversity governance. It is a clear indication of ILCs that their participation is not invited desirably. Similar 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, neither India nor Russia has good record of involving respective ILCs in making national ABS policy or law. On the contrary, Indian 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; while such participation of ILCs was reported low in Russia, partly because no ABS instrument is in place as yet. 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 both India and Russia also exhibits that the countries only partially respect, recognize and enforce the rights and ITK of own indigenous people. The indigenous organizations/individuals have the opinion that their respective 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 or Russia in the same spirit, as it is envisaged in Article.6.1 and Article.6.2 of Nagoya Protocol. Particularly in India, 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 both the countries 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 evolving/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 both India and Russia put restrictions on their own ILCs' access to bioresources in forests and protected areas. It is pertinent to draw a conclusion that both India and Russia do 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 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. On the other hand, Russia has yet to evolve even a consolidated legislation on ABS; thus the examples of fair and equitable sharing of benefits literally do not exist in the country. Opinions of indigenous organizations led to understand that the ILCs have least confidence that the governments of India or Russia 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 countries 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 Russia 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 and Russia 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.

The ABS is new not only for the ILCs but also for the governments of the world. Therefore, intensive efforts are essential for creating awareness among the ILCs and other stakeholders and for building the capacities of all concerned. To understand the status of efforts made by Indian and Russian authorities in this connection, the opinions were known. It is understood from the responses of indigenous organizations that India and Russia have undertaken some or sporadic measures for awareness-raising of ILCs about the ABS, Nagoya Protocol and their rights in context of access/utilization of genetic resources and associated ITK and benefits they may obtain. There is lot to do for both the countries. The same is validated by responses of the national competent authorities of India and Russia. However, on front of capacity building the analysis reveals that India has taken quite many measures for capacity building of ILCs about the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK, while Russia is just initiating such activities. The same is also confirmed in the official responses of both the countries. Speed and seriousness in the efforts are desirable.

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; while the Russian counterpart respondents expressed the same relatively positively. Additionally, the ILCs might check the biopiracy once they are educated and empowered to do so; however, the current capacities of ILCs in India and Russia do vary, according to the opinions of indigenous organizations. The data of the responses exhibits that Russia's indigenous organizations are positive about their ILCs that they would be able to check the biopiracy, while India's indigenous organizations showed no confidence on their ILCs that they might check the biopiracy. In either situation, without checking the biopiracy the objectives of ABS cannot be realized adequately.



## 7. CONCLUSION AND RECOMMENDATIONS

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India's progressive legislation on ABS 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.

Widespread practice of concluding agreements or arrangements on benefit-sharing is missing in Russia. Contractual arrangements (mainly in the field of industrial microbiology, pharmacology and biotechnology) regulate the access to genetic resources and participation in the benefits of their use. But these agreements underrate the interests of ILCs as primary stakeholders. Russian authorities need to start from scratch to promulgate and enact the ABS legislation.

Since advent of Nagoya Protocol, the awareness about international ABS regime has started building up. The awareness among the indigenous communities is of special interest, as they are the primary stakeholders of genetic resources and associated ITK in the ambit of Nagoya Protocol on ABS. But, only recently the importance to ILCs is being given. Despite the emphasis given in Nagoya Protocol on the need to recognize and incorporate the customary laws and institutions, the countries seldom have 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, both India and Russia have been casual on the issue of PIC of indigenous people and have 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 governments 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 and Russia do 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. On the other hand, Russia still has to walk along way. Overall, the mechanisms of sharing the benefits fairly and equitably would take long time to be established in the countries provided the efforts are made seriously by the governments. 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 and Russia might involve the ILCs in monitoring the access and utilization of genetic resources or associated ITK by the user countries, but for namesake. On front of capacity building, India has taken quite many measures for capacity building of ILCs about the ABS, Nagoya Protocol, PIC, MAT and their rights in context of access/utilization of genetic resources and associated ITK, while Russia is just initiating such activities.

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; while the Russia has some hope that the biopiracy would be checked. After all, without checking biopiracy the objectives of ABS cannot be realized adequately.

### **Recommendations for India**

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.

### **Recommendations for Russia**

It is hoped that Russia will join the major international processes in the period of 5-10 years. During this time, it is necessary for the authorities:

- To practice contractual agreements that take into account the interests of all parties to the proceedings;
- Streamline the accounting system (depository), control and monitoring of transactions (agreements) within the country and in the international market (through Clearing-House Mechanism);
- To form the consolidated legal framework on ABS and to evolve the ABS mechanisms;
- To engage in the process of ILCs through a series of demonstration projects; and
- To carry out an economic assessment of strategic genetic resources of the country and to assess the possible benefits at the national, regional and local levels, including specific reserves and national parks.



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