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# Understanding the Biological Diversity Act for its Compliance

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**THURSDAY 21<sup>ST</sup> FEBRUARY**

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New Delhi, 110001 India

# CHALLENGES OF UNDERSTANDING

**WE DO NOT SEE THINGS AS THEY ARE -**

**WE SEE THINGS AS WE ARE -**

# CHALLENGES

## ■ **Action on –**

- Establishment of biodiversity compliance cells at company level
- Re-orienting the personnel to understand, adopt & implement BD Act 2002 of India
- Internalizing the Biodiversity philosophy – at international and national level
- Agriculture Sector constitutes a major area where mainstreaming of biodiversity is a necessity.

## ■ **Identification of –**

- Gaps
- Deficiencies
- Formulation of cost effective strategy



○ What is Biodiversity?

○ Biodiversity represents the variety of life on earth:

**Species diversity** (numbers and kinds of living organisms)



# GENETIC DIVERSITY

(Genetic Variations Within Species)



# ECOSYSTEM DIVERSITY

(variety of habitats, biological communities and ecological process).



# INDIA - CROP GENETIC DIVERSITY

Stands 7<sup>th</sup> in the world in terms of contribution of species to agriculture and animal husbandry.

➤ **Has 800 crop species**

- Wild relatives -320
- Millets- 51
- Legumes- 31
- Fruits-109
- Vegetables- 54
- Medicinal plants – 3000



Source: *India's Fourth National Report to the CBD, 2009*



# INDIA – A MEGA BIO-CULTURALLY DIVERSE COUNTRY

## One of the Oldest & Biggest Repositories of -

- **Diverse Biological Resources (BRs)/Genetic Resources (GRs)**
- **Diverse & Huge Associated Traditional Knowledge (ATK)**  
And has immense potential for
  - IPRs
  - Benefit Sharing (BS)
  - Improvement in Livelihoods



**Lawsonia inermis – Bioresource**  
**Dyeing the skin with henna – Traditional Knowledge**

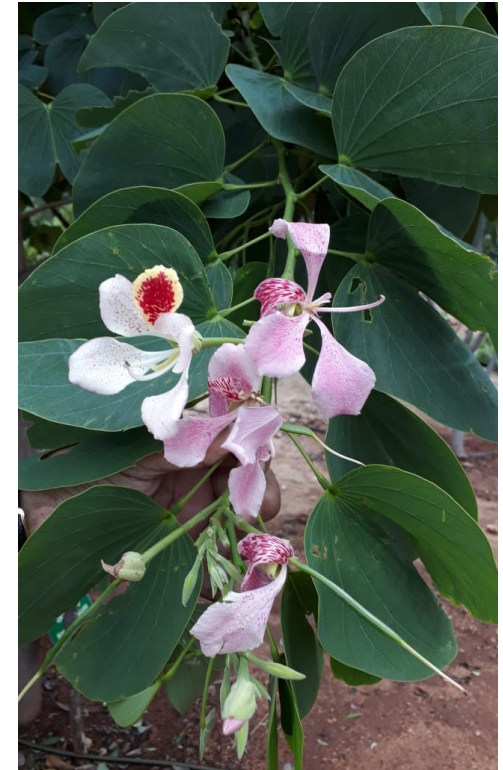


# BECOMING A PARTY TO CBD

India became Party to Convention on Biological Diversity (CBD) on 18<sup>th</sup> February 1994.

Main objectives of CBD

- ❑ conservation of biological diversity;
- ❑ sustainable use of its components;
- ❑ fair and equitable sharing of benefits arising from use of genetic resources.



Orchid Tree  
*Bauhinia monandra*

# GENETIC DIVERSITY - COMMERCIALISATION

- Since the world has become a global village and new sciences like **biotechnology** and **genetic engineering** have matured into applications in our daily life a need has been felt to protect the interest of conservers of **biological /genetic resources** in various countries whose genetic diversity is being exploited for commercial purposes by technologically advanced multi-nationals, companies, institutions and countries.



# COMPLIANCE OF REGULATORY FRAMEWORK – A CHALLENGING ISSUE...

- *Convention on Biological Diversity (CBD)*
- *PPV & FRA, 2001*
- *Biological Diversity Act 2002*
- *Patents (Amendment) Act 2005*
- *Nagoya Protocol on Access & Benefit Sharing- 2014*
- *International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)*
- *Strategic plan 2011-2020 & Aichi Biodiversity Targets*
- *Sustainable Development Goals (SDGs)*



# CHALLENGES ...

- **Biodiversity Act, 2002** – Understanding and articulating Bioresources, Traditional Knowledge, Access & Benefit Sharing, Normally Traded Commodities, Commercial Utilization, PBRs, **ITC HS Code**;
- **Amendment** (2017) to Indian Forest Act 1927 – Bamboo deleted from section 2



# INDIAN GOVERNMENT AWAKENED BY – BIOPIRACY

The commercial development of naturally occurring biological materials, such as plant substances or genetic cell lines, by a technologically advanced country or organization without fair compensation to the peoples or nations in whose territory the materials were originally discovered.

- ❑ Turmeric Patent
- ❑ Neem Patent
- ❑ Basmati Patent Long slender aromatic rice – Texmati
- ❑ Naphal (wheat) variety suitable for biscuit



**Neem Tree**

***“You cannot change your destination overnight, but you can change your direction overnight”***

*- Jim Rohn*



# SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) are a bold, universal agreement to end poverty in all dimensions and craft an equal, just and secure world – for people, planet and prosperity by 2030. The 17 SDGs and 169 targets are a part of transforming our world: the 2030 Agenda for Sustainable Development, which was adopted by 193 Member States at the historic UN General Assembly Summit in September 2015, and came into effect on January 1, 2016.



# CBD LED TO PARADIGM SHIFT

- Sovereignty over Genetic Resources (GRs) with Nation States.
- GRs no longer common heritage of human kind
- Recognition of Indigenous and local communities as guardians of BD & TK.
- **Requirement to share benefits with the providers of GRs.**
- IPRs temporarily transform knowledge from a public good into a private good so that owners of IP can recoup their expenditure in creating new knowledge.



# BIOLOGICAL DIVERSITY ACT 2002

*came into force - February 2003*

- To protect **Sovereign rights** of India over its biological resources.
- To stop misappropriation of Bio/Genetic Resources (**Biopiracy**)
- To **protect** biodiversity by documenting **PBR**.
- To **regulate access & use** of Biodiversity .
- To ensure sustainable utilisation and **equitable benefit sharing**.
- To Provide legal recognition & support to the **Biodiversity and associated traditional knowledge**.

## New Concepts

- People's Biodiversity Register (PBR)
- Access & Benefit Sharing Mechanism (ABS)
- Prior Informed Consent (PIC)
- Mutually Agreed Terms (MAT)
- Material Transfer Agreement (MTA)



# DEFINITION OF IMPORTANT TERMS

- PIC - means a written authorisation given by the traditional community to an applicant in the prescribed manner, for the conduct of a particular activity that entails access to and use of the said traditional knowledge, based on an access application
- MTA - An agreement outlining **conditions** under which material is provided from the owner to another entity for a specific use.
- MAT - in order to ensure the **sharing of benefits** arising from the commercial or other utilization of the genetic resources with the Contracting Party providing such resources



# IMPLEMENTATION OF BD ACT

through three tiered institutional structure

**National  
Level**

**National Biodiversity Authority**

**State  
Level**

**State Biodiversity Board**

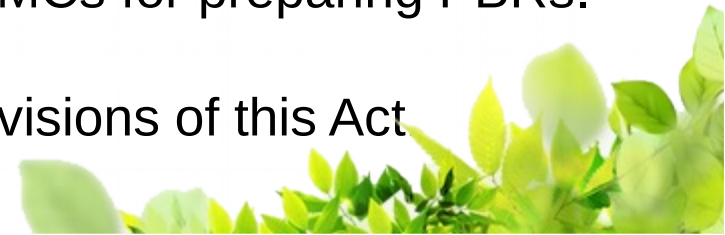
**Local  
Level**

**Biodiversity Management Committee**



# FUNCTIONS OF NATIONAL BIODIVERSITY AUTHORITY

- Advise GoI on **conservation** of biodiversity, **sustainable use** of its components and equitable sharing of benefits.
- Regulate activities and issue guidelines for access to biological resources and for fair and equitable benefit sharing. **Foreigners require prior approval of NBA** for access to biological resources and/or associated knowledge for use.
- Take measures necessary to **oppose the grant of IPR** in any country outside India on Indian biological resource obtained and /or associated knowledge.
- Advise the State Governments in the selection of areas of biodiversity importance to be notified **as heritage sites** and suggest measures for their management.
- NBA and SBBs provide guidance and **technical support** to BMCs for preparing PBRs.
- Perform **such other functions** necessary to carry out the provisions of this Act



# FUNCTIONS OF STATE BIODIVERSITY BOARDS

- ❑ **Advise** the State Government, subject to guidelines issued by the Central Government, on conservation of biodiversity, sustainable use of its components and equitable sharing of benefits.
- ❑ **Regulate** by granting of approvals or otherwise requests for **commercial utilization** or bio survey and bio utilization of any biological resource by Indians;
- ❑ Perform such other functions as necessary to carry out the provisions of this Act or as prescribed by the State Government.



# Functions of BIODIVERSITY MANAGEMENT COMMITTEE

- **Promoting conservation**, sustainable use and documentation of Biological Diversity.
- **Levy charges** by way of collection fees from person(s) accessing or collecting bioresource for commercial use from its territorial jurisdiction.
- To prepare People's Biodiversity Register (**PBR**) in consultation with local people.
- Maintain **Register** about details showing bioresource/TK accessed, fees imposed, benefits accrued and mode of sharing
- Provide **support to NBA and SBB** in their decisions.



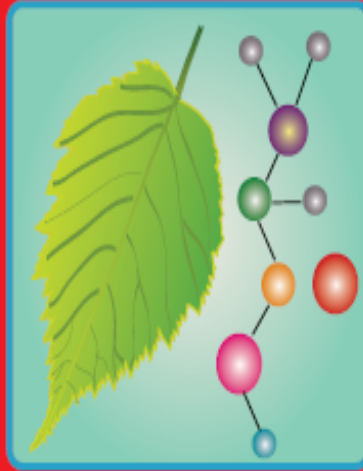
# PRESENT ACCESS & BENEFIT SHARING REGIME IN INDIA



Access to  
Bioresources



Transfer of  
Research Results



Seeking Patent



Third Party Transfer



Collaborative  
Research Project



# ABS REGIME

- ABS plays critical role in implementing CBD.
- ABS most disputed and difficult to implement.
- Biological resources and derivatives
- Poor understanding of ABS principles results in inefficient policy development.
- Several stakeholders unfamiliar with international ABS debates.
- Bio-diplomacy is gaining importance.
- India -pioneer in implementing ABS
- *Trichopus zeylanicus*,( arogyapacha), Kanni Tribe
- Nagoya Protocol - 2014




# ACCESS AND BENEFIT SHARING (ABS)

- ABS refers to the way in which genetic resources are accessed, and benefits resulting from their **use shared between the users and providers.**
- Prior to CBD, bioresources were considered **common heritage of mankind**. The country providing raw material for developing useful products therefore never got any benefits from commercialisation of those products.
- CBD however, reaffirms **sovereign rights of states** over their natural resources, and provides that the authority to determine access rests with the national governments and is subject to national legislation.
- Long-standing demand of biodiversity rich countries such as India for a **legally-binding instrument on ABS**, to address concerns of misappropriation of genetic resources and associated traditional knowledge and this ultimately resulted in adoption of **Nagoya Protocol**.



# ABS GUIDELINES 2014 - VIS-À-VIS - EASE OF DOING BUSINESS

## The Guidelines provide :

- ✓ legal certainty
  - ✓ clarity and transparency in the transaction
  - ✓ simplified procedure for the Indian researchers / Govt. institutes to carry out basic research outside India
  - ✓ options of benefit sharing for different users
  - ✓ graded benefit sharing
  - ✓ establishing supply chain from source to manufacturer
  - ✓ **In line with Nagoya Protocol**
  - ✓ Upfront payment on high economic valued bioresources (Red sanders)
  - ✓ apportioning accrued benefits to the community / BMC of the accessed area of commercialised bioresource (s)
  - ✓ For the first time **Trader** Captured
  - ✓ For the first time **Purchase Price** captured for levying Benefit sharing
- 

# IMPLEMENTATION ISSUE - EXEMPTIONS UNDER THE ACT

Act provides exemption of certain activities from its purview :

- To local people and community for free access to use bioresources within India.
- To growers and cultivators, vaidas and hakims (practitioners of traditional medicinal systems) to use bioresources.
- To biological resources, normally traded as commodities notified by the Central Government under section 40 of the Act.
- To collaborative research through government-sponsored institutes subject to conformity with guidelines and approval of the Central / State Governments.
- To access value added products of the primary bioresource.
- **For research, bio-survey and bio-utilization for research by Indians in India.**
- Access for conventional breeding or traditional Practices.
- Bio Resources included in ITPGRFA list



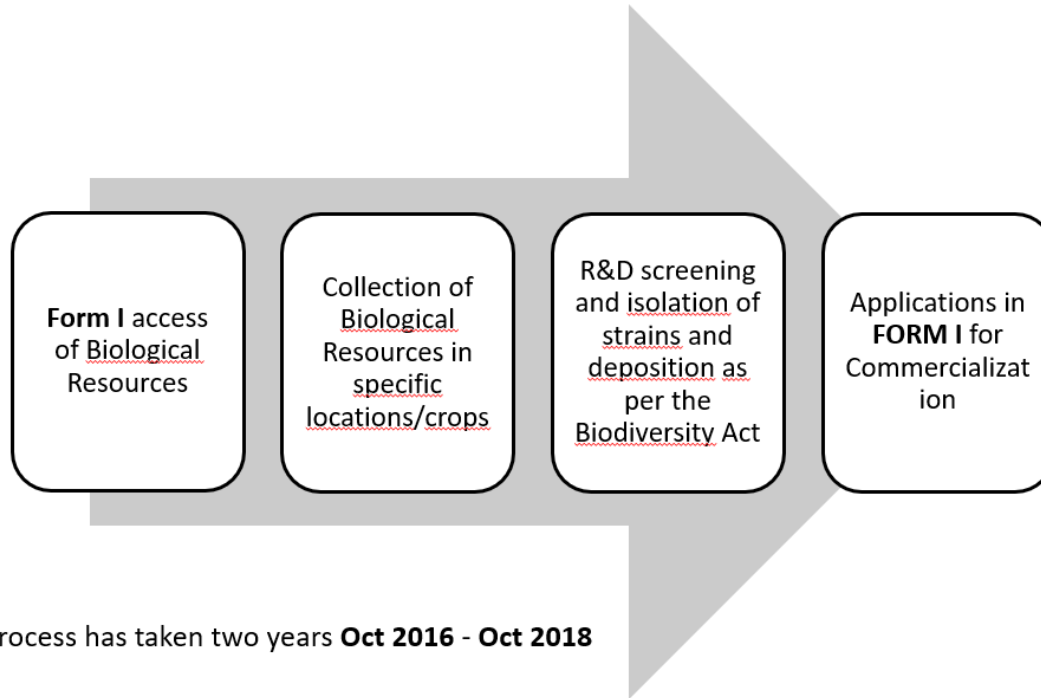
# IMPLEMENTED ABS AGREEMENTS - INDIA

- **PepsiCo** exported 2000 MT seaweed to Malaysia, Philippines and Indonesia. The seaweed is grown by fisherman community in Tamil Nadu. The collection, cleaning and baling was done by women self help groups. They were given training by the company. The NBA was paid royalty @ 5% of FoB amounting to Rs. 3.9 million by the exporter. Efforts are being made by the SBB to form BMCs of the 754 benefit claimers spread across four districts. Due to claims that this seaweed is becoming an invasive species, NBA has now stopped providing access permits.



# ABS - CASES

## ➤ Valagro Biosciences – compliance with the Biodiversity Act



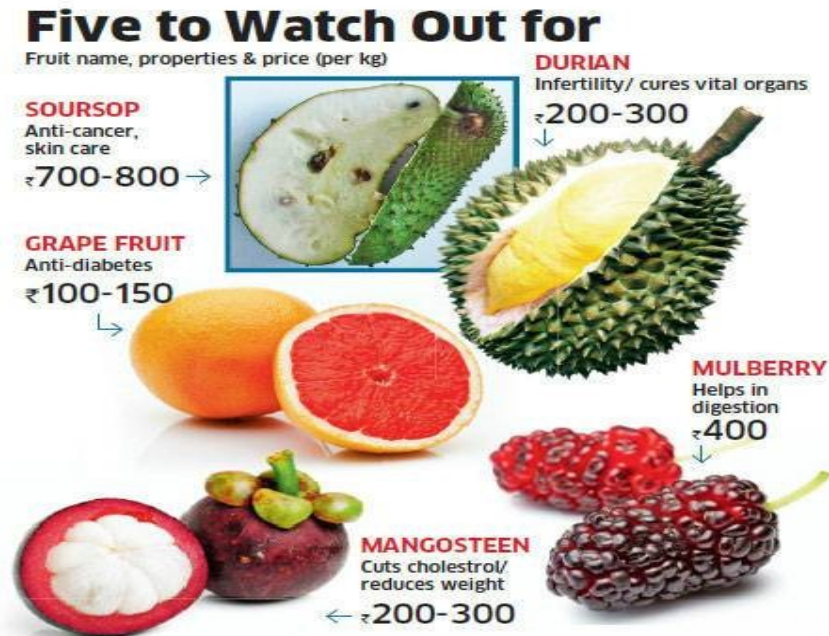
The entire process has taken two years **Oct 2016 - Oct 2018**

10 BSA signed in December 2018



# PROVISIONS IN BDA RELEVANT TO ABS

\*Under Sec 6 (2)- The NBA may while granting the approval under this section , impose benefit sharing fee or royalty or both or impose conditions including the sharing of financial benefits arising out of the commercial utilisation of such rights.



# MONETARY AND NON-MONETARY – BENEFIT SHARING

- Grant of joint ownership of IPRs to the NBA, or where benefit claimers are identified, to such benefit claimers
- Transfer of technology
- Location of production, research and development units in such areas, which will facilitates better living standards to the benefit claimers
- Association of Indian scientists, benefit claimers and the local people with research and development in biological resources and bio-survey and bio-utilization
- Setting up of venture capital fund for assisting the benefit claimers
- Payment of appropriate monetary compensation and non-monetary benefits to the benefit claimers
- Payment of Royalty, Licence Fee , Upfront Payments etc



## PENALTIES

- Sec-55, 56, – Imprisonment for a term which may range from 3 to 5 Years  
5.00 to 10 .00 Lakh Rupees;
- **Sec- 58 –The Offences under this Act shall be cognizable and Non Bailable ( Criminal Offences).**
- \* Sec-59 - The provisions of this Act shall be in addition to and not in derogation of the provisions in any other law for the time being in force , relating to forests or wildlife.



**If we do not know where we are going  
Any road will take us there**

**Thank You!**