



ACCESS & BENEFIT SHARING PROVISIONS UNDER BIODIVERSITY CONSERVATION LAW IN AUSTRALIA & ITS IMPLICATIONS FOR INDIA

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Abstract

Australia played a major role in the developing ABS framework under biodiversity conservation law. Australia is a megadiverse country with complex ABS experience and possessed huge support from the biodiversity stakeholders. Australia has adopted the regulations regarding access benefit sharing under article 15 of CBD, 1992. The Australian legislation is in compliance with PIC and MAT. The agreement reaffirms faith in CBD, 1992, Bonn Guidelines, 2001 and Nagoya Protocol, 2009. The government system of Australia is a constitutional federation which is made up of six sovereign governments, two autonomous territories, and a national government. It has a 'common law' system adopted from Britain. Australia's experience is extensive with ABS to draw lessons about developing an effective institutional mechanism for public and private sector with equitable benefit sharing in scientific and commercial access. The access and benefit sharing provisions under biodiversity conservation law in Australia have potential impact to design its national laws and policies for India by synergizing environmental law and intellectual property rights in a sustainable framework.

Keywords: Biodiversity Conservation, Access & Benefit Sharing, Indigenous People, Traditional Knowledge, Bioprospecting.

I. INTRODUCTION & OVERVIEW

Ever since the *Convention on Biological Diversity (CBD)*, 1992 sets out principles and guidelines for access to the biological diversity and equitable sharing,¹ Australia played a major role in the developing ABS (ABS) framework under biodiversity conservation law. Although it remained a contentious issue but warranted an amicable and consensual legal framework because the *CBD*, 1992 enjoined to the member state to come in conformity to principles of sustainable development, sovereignty over natural resources, and equitable benefit sharing of biological resources at national jurisdiction.² This is supplemented by *Bonn Guidelines*, 2001 and *Nagoya Protocol*, 2009. Under this

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¹Wolfgang E. Burhenne, 'Biodiversity: The Legal Aspect' XXII (5 and 6) *Environmental Policy and Law*, 324-25 (1992)

²Nomani, Md.Zafar Mahfooz., 'Sustainable Development Law In Public Policy Context: Teasing Illusions, Pragmatic Explanations & Prognostic Alternatives', K.M.Baharul Islam *et al*, (Ed.) *Public Policy Agenda: Decrypting Sustainability for India*, Bloomsbury, New Delhi:197-208 (2016)

framework, the ABS system proposed to implement an international certificate of the original source and legal provenance. Seen in this perspective, Australia has been a pioneer in shaping the *Nagoya Protocol*, 2009 provisions to be replicated world at large.³ However, in the wake of *Trade-Related Aspect of Intellectual Property Rights (TRIPS) Agreement*, 1995 and *World Trade Organization (WTO)* the intellectual property rights (IPR) issues merged with the sustainable use of biodiversity within environmental law framework.⁴ This is reflected in the objective of *TRIPS Agreement*, 1995 as well as Article 27 which stated that the nations should provide protection of patents to the inventions without any discrimination in any field of technology. Accordingly, the members of WTO came to the conclusion that an optional exception can be made and members may exclude from patentability “plants and animals and the other microorganism”. Australia like many of its key trading partners such as Japan, United States, European Union, and New Zealand allows the patentability of plants and animal if required proof of patentability is met.⁵ Thus Australia is a megadiverse country with complex ABS experience and possessed huge support by the biodiversity stakeholders. Australia’s experience is extensive with ABS to draw lessons about developing an effective institutional mechanism for public and private sector with equitable benefit sharing in scientific and commercial access.⁶ The *CBD*, 1992 unlike *TRIPS Agreement*, 1995 is accepted widely around the globe as it is not restrictive in nature and helps to facilitate the access benefit sharing.⁷

II. HISTORY & EVOLUTION OF ABS

The history and evolution of ABS are to be seen as a continuum of IP and environmental law amalgam of *CBD*, 1992 unlike *TRIPS Agreement*, 1995. The text of the *CBD*, 1992 is opened for signature at the Rio Earth Summit in 1992 and ratified by coming into force 29th December 1993. A panel of experts is established to clarify principles and concepts related to access and benefit-sharing in 1998. The Ad Hoc Open-ended Working Group on ABS with the mandate to develop guidelines to assist with the implementation of the ABS provisions of the *CBD*, 1992 was constituted in 2000. The following chart depicts the historical evolution of biodiversity and ABS laws.

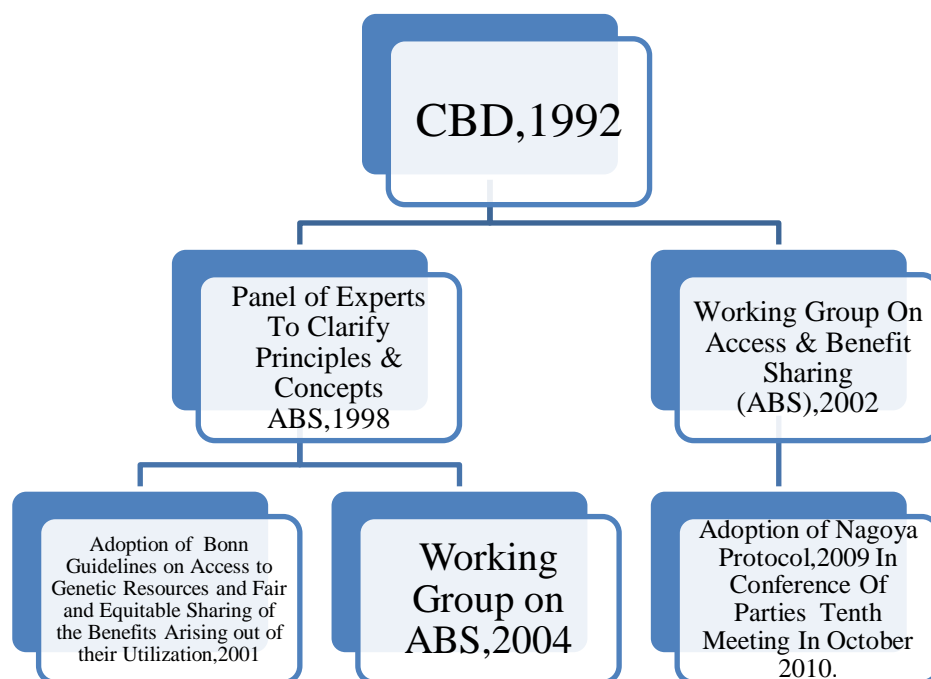
³ Christian Prip, G. Kristin Rosendal, et.al, The Australian ABS Framework: A Model Case for Bioprospecting?, 42(2014).

⁴ Nomani, Md.Zafar Mahfooz., ‘WTO, TIRIPS Agreement And Protection of Plant Variety: Imperatives And Implication for Indian Intellectual Property Regime’, A.K. Kaul& V.K. Ahuja (Ed.) *Law Relating To Intellectual Property Rights: Retrospect & Prospect*, Pp. 117-133, University of Delhi, Delhi. (2001)

⁵ Nomani, Md. Zafar Mahfooz. & Rahman F., ‘WTO, India & Regional Trade Blocks’, in Jamil Ahmad et al (Ed.) *WTO, India & Regionalism in World Trade*, New Century Publications, New Delhi1-38(2011)

⁶ Christian Prip, G. Kristin Rosendal, et.al, “The Australian ABS Framework: A Model Case for Bioprospecting?”

⁷ Convention on Biological Diversity, 1992. Articles 1, 8(j), 15, 16, and 19, available at: <http://www.cbd.int/convention/text> (last visited on August 15, 2017).

Figure-I : Historical Evolution of Biodiversity & ABS Law

The Conference of the Parties adopted the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization*, 2001 at the World Summit on Sustainable Development, governments call for action to negotiate an international regime to promote the fair and equitable sharing of benefits arising from the use of genetic resources in 2002.⁸ The Working Group on ABS is given the mandate to negotiate an international regime on access and benefit-sharing, in accordance with decision VII/19 D of the Conference of the Parties in 2004. The Conference of the Parties at its tenth meeting in October 2010 establishes a clear process for the finalization of the international regime on access and benefit-sharing known as *Nagoya Protocol*, 2009.⁹ Under this backdrop, Australia's has proposed some major amendments to the *TRIPS Agreement*, 1995 and WTO. The amendments to Article 27.3(b) to provide additional conditions for patentability: a) the providing the source of the genetic material; b) providing the source of related traditional knowledge used to obtain the material; c) providing the proof of fair and equitable sharing; and evidence of the PIC from the government of the traditional community. Australia understands the need for detailed analysis to

⁸ Nomani, Md. Zafar Mahfooz., 'ABS Models of Intellectual Property Rights under Biological Diversity Convention and Bonn Guidelines: A Critical Appraisal under India Perspective', Vol. 2, *Journal of the Faculty of Juridical Sciences*, Mody Institute of Technology and Science, pp. 91-106.(2010)

⁹ Ad Hoc Open-Ended Working Group on Access And Benefit-Sharing, *Compilation Of Submissions By Parties On Experiences In Developing And implementing Article 15 Of The Convention At The National Level And measures Taken To Support Compliance With Prior Informed Consent and Mutually Agreed Terms Addendum submission By Australia*[Fifth Meeting Montreal, 8 - 12 October 2007]Item 3 Of The Provisional Agenda*

ensure the compatibility of access to material in accordance with the local legislation and its compliance with *CBD*, 1992.¹⁰

III. AUSTRALIAN BIODIVERSITY LAW

Australia's biodiversity has developed largely in isolation over many millions of years, making it one of the world's mega-diverse countries with high-level endemism bonded with technologically advanced industry, Australia is economically strong geographically, as it sits in a quiet part of the South Western Pacific Rim. It is distant to Africa, South America, South, and North Asia and is twelve thousand miles from Western Europe. Socially and culturally, it is part of the Anglo-Saxon heritage of the United Kingdom shared by Canada, New Zealand and to a lesser extent, by the United States and India.¹¹ Australia is a developed economy but at the same time is a stable country because of its geographical position. Australia has adopted the regulations regarding access benefit sharing under Article 15 of *CBD*, 1992. Australia ratified the *CBD*, 1992 on 18 June 1993. In 1996, it released its National Strategy for the Conservation of Australia's Biological Diversity known as National Biodiversity Strategy. This strategy defines Australia's access to genetic resources policy goal ensuring that the social and economic benefits of the use of genetic material and products derived from Australia's biological diversity accrue to Australia.¹²

The Australian constitutional federation which is made up of six sovereign governments, two autonomous territories and a national government has a 'common law' system.¹³ The Australian legislation is in compliance with PIC and Mutually Agreed Terms (MAT). The agreement reaffirms faith in *CBD*, 1992; *Bonn Guidelines*, 2001 and *Nagoya Protocol*, 2009. The Australian administration is active in developing legislation which deals with biodiversity; their area of work includes detailed national legislation, effective implementation of legislation regulation, raising awareness among the users of genetic resources, effective contractual system, and implementation of strong national legislation. Being a developed country with an annual per capita income of US\$50,150 (2008),¹⁴ Australia is a successful economy. Australia is physically very large, the area of the landmass of Australia is of 7.692 million square kilometers, and over 10 million square kilometers of marine area is

¹⁰ Nomani, Md. Zafar Mahfooz., 'Biological Diversity, IPR & Sustainable Development: A Critical Appraisal of Access & Benefit Sharing Models of U.S., Australia & India' VI (11 & 12) *International Journal of Environmental Consumerism*, 40-55(2010)

¹¹ Geoffrey Burton, ABS: ABS Law And Administration In Australia, 94, *Revista Internacional de Direito De Cidadania*, Australia (2009)

¹² Objective 2.8 of the National Strategy for the Conservation of Australia's Biological Diversity, 1996.

¹³ *Supra* note 11 at 95.

¹⁴ Australian Department of Foreign Affairs and Trade available at: <http://www.dfat.gov.au/geo/fs/aust.pdf> (last visited on August 5, 2017)

also administered under its jurisdiction.¹⁵ The Australian biodiversity is rich because of isolation, as a rich country in biological diversity Australia is developed and is both provider and user of biological resources. 10 percent of world species are found in Australia. The whole Australian biodiversity legislation was directly influenced by the fact that Australia is a rich country in terms of biological resources.

Overall, Australia faces the same challenges as faced by developing nations such as India, China, and Brazil like harsh climate change which causes loss of bio-diversity, remote and inaccessible areas and failure of policies regarding biodiversity. The legislation regarding biodiversity itself is a complex web of regulations which requires the proper attention from lawmakers and corrects definition of complex terminology with unrestrictive legislation. It is very important to develop legislation which is not harsh on the sector of bioprospecting and does not create any impediments and unnecessary regulations.

IV. REGULATION OF ABS AGREEMENT

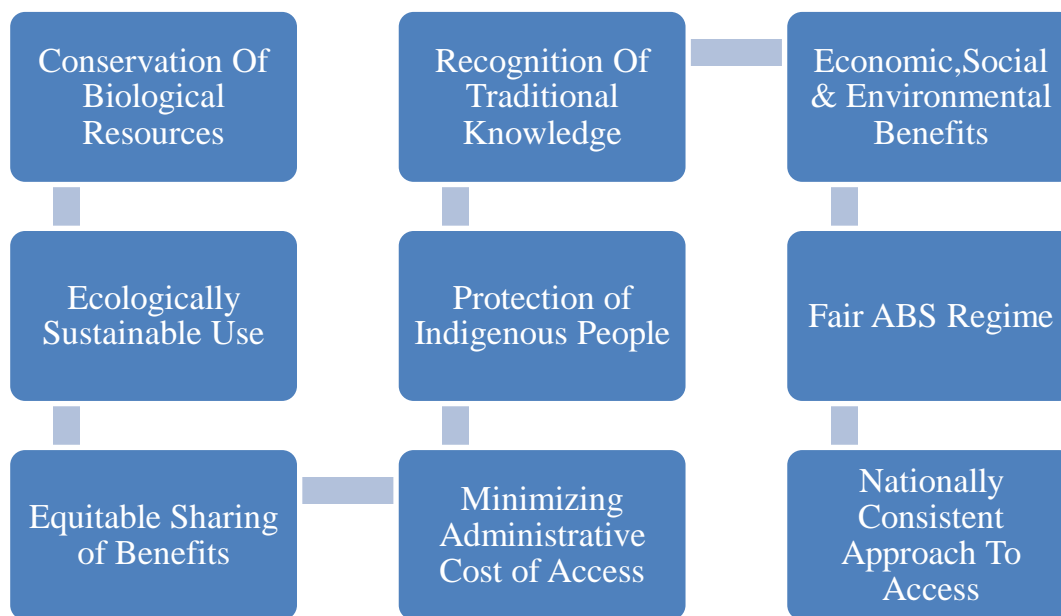
Australia's biodiversity is both rich and unique and ranges between 7 and 10 percent of all species of the world. A report prepared for the Australian Biological Resources Study in 2009 estimated that 566,398 species exist in the country. Australia has adopted the regulations regarding access benefit sharing under article 15 of CBD, 1992. The Australian ABS development took huge leaps during recent years in terms of various workshops on PIC, MAT, Material Transfer Agreement (MTA) and implementation of *Nagoya Protocol*, 2009 was developed during meetings of Australian ABS is in compliance with guidelines recommended by *CBD*, 1992 such as PIC, MAT, and MTA. Having ratified the *CBD*, 1992 in 1996, it pronounced *National Biodiversity Strategy* in 1996. This strategy is supportive of the adoptions of the Bonn Guidelines, 2001 by adopting the legal framework in October 2002.¹⁶ This standard agreement between governments is known as a Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources (the Nationally Consistent Approach). There are 14 policy principles with 11 agreed standard elements, shape this policy framework and these are to be stressed upon before implementation of the policy. The agreement is to ensure consistency and uniformity with clear legal elements across Australian government jurisdiction. The virtual certificates of PIC, source, and origin are governed by online public register, transparent system and instant verification of certificates.

¹⁵Australian Government, Geosciences Australia; *available at*: http://www.ga.gov.au/oceans/mc_LawSea.jsp, (last visited on August 5, 2017).

¹⁶The Nationally Consistent Approach for Access to and the Utilization of Australia's Native Genetic and Biochemical Resources was adopted by the Australian Council of Governments in October 2002. *available at*: <http://www.environment.gov.au/biodiversity/publications/access/nca/index.html>

The ABS provisions are designed to ensure that the access to genetic resources and equitable benefits sharing among traditional knowledge (TK) holder and indigenous and local communities (ILCs). The ABS model can be monetary can be *in situ* and *ex-situ*, monetary and non-monetary commercial and non-commercial which ensure that access and benefit-sharing happen in a fair and equitable way. This is developed by national laws and Competent National Authorities (CNAs) frameworks in conformity with *CBD*, 1992; *Bonn Guidelines*, 2001 and *Nagoya Protocol*, 2009. The federal level ABS system is based on the assumptions that genetic resources related research and development are an important ecosystem service as it produces economic outcomes that increase the diversity of the environment and contribute to its conservation. Section 301 of the *Environment Protection Biodiversity Conservation (EPBC) Act*, 1999 is the basis of regulation at the federal level which underpins the following objectives.

Figure-II: Flow Chart of Biodiversity & ABS Law



Australia's focus was not to redefine genetic resources but to identify the purpose of research on genetic and other biological resources. This is defined as "access to biological resources", a term not defined in the *CBD*, 1992. The access is defined under Regulation 8A.03 of *Environment Protection Biodiversity Conservation (EPBC) Regulation*, 2000 as under:

Access to biological resources means the taking of biological resources of native species for research and development on any genetic resources, or biochemical compounds, comprising or contained in the biological resources.¹⁷

¹⁷Regulation 8A.03, *Environment Protection Biodiversity Conservation (EPBC) Regulation*, 2000

This definition makes sure that every form of the organism is included. The linking of biological resources with the purpose it is collected for and the definition avoids any unnecessary confusion with harvesting, trade of commodities, forestry etc. Australian system applies only on the native species, not on the species which belongs to another country. Australia doesn't want to take advantage of any accidental possession of any species from other countries. Australia fully supports the view of respecting national sovereignty, which makes it compatible with Article 3 of *CBD*, 1992. Australia wants to create a model which can set an example for respecting national sovereignty. The legal framework is provided under the Part 8-A of *EPBC Regulations*, 2000 provides access to biological resources in Commonwealth areas.¹⁸ This section is very descriptive and wide in scope and allows ABS regulations to work unhindered.

VI. BENEFIT SHARING PROVISION

Australia ABS system has modeled to foster Research and development with a transparent framework and low cost.¹⁹ The permit from the native species and other biological resources is based on Article 15.5 of *CBD*, 1992. This is known as the PIC in accordance with Article 15.5 of *CBD*, 1992 for commercial as well as for non-commercial purposes. Special conditions may be attached to those applications which seek access to the conserved or protected area of biodiversity. There is a permit fee of 50 AUD if the access is sought for commercial purposes. However, the access for all other non-commercial purposes such as taxonomy is free provided it complies with biodiversity laws, ABS Agreement and not injurious to the environment.²⁰

Figure-III: Characteristic Features of Australian ABS System



¹⁸ Regulations 8-A, *Environment Protection Biodiversity Conservation (EPBC) Regulation*, 2000

¹⁹ Queensland Government, *Queensland Aboriginal and Torres Strait Islander Justice Agreement*, (2000)

²⁰ AIMS - Queensland Government Agreement, *Biotechnology Benefit Sharing Agreement Between Aims And The State Of Queensland*, on July 26th 2000 [<http://www.aims.gov.au/pages/about/corporate/bsa-aims-qld.gov.html>]

Only the Competent National Authority (delegate of the Minister) can approve the permit for commercial purposes if they comply with biodiversity laws, does not cause harm to the environment and has entered under an access benefit agreement. The non-commercial purposes do not require any kind of benefit sharing agreement but must ensure that operations will not cause any loss environment. The applicant provides this information in the form of a Statutory Declaration. In the Declaration, the applicant also undertakes to negotiate a benefit-sharing agreement if he later wishes to commercialize. This provision is important for both biodiversity managers and applicants. It ensures serendipitous scientific discoveries can be commercialized without any penalty for the researcher having obtained the “wrong” permit.²¹ The applicant must also share a taxonomic copy of any newly discovered species discovered by them and to seek permission before transferring any specimen to the third party. The permit can be issued in two days, to encourage scientific research. In 2012, Australia provided the ABS Initiative with EUR 250,000 for specific projects and activities in the Pacific region. Also in 2012, the Australian government, jointly with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the ABS Initiative, organized the Oceania Biodiscovery Forum in Brisbane. Participants from the Pacific Islands deepened their understanding of global standards for the use of genetic resources and the needs and interests of stakeholders.²² Thus the Australian ABS Agreement with the Secretariat of the SPREP provided EUR 250,000 for specific projects and activities in the Pacific region and Oceania Biodiscovery Forum in Brisbane in 2012.²³

VII. PROTECTION OF INDIGENOUS PEOPLE & TRADITIONAL KNOWLEDGE

The Australian legislation places great importance on the equitable benefit sharing, protection of indigenous people and original holder of the traditional knowledge under *Environment Protection and Biodiversity Conservation Act (EPBC)*, 1999 and *Native Title Act*, 1993. This is important because biodiversity of Indigenous areas (either traditionally owned or held under Western property rights regimes) has often been unlawfully ‘collected’ through ‘bioprospecting’ and exploitation of TK.²⁴ It is believed that the unregulated bioprospecting directly affects the indigenous communities and also effects the environment negatively. The Australian system ensures equitable and fair sharing of the benefits earned from the use of bioresources of Australian biodiversity and also entrenches the rights of indigenous communities in federal land or water. The applicant must enter into an access benefit-sharing agreement with the indigenous holder of the resources or traditional knowledge if they seek a permit for use. If the benefit occurred through the agreement then it is mandatory to share this benefit with

²¹ Supra note 11 at 97.

²² Australia Access Benefit Sharing, available at: <http://www.abs-initiative.info/countries-and-regions/global/australia/> (Visited on July 29, 2017)

²³ Supra note 11 at 94.

²⁴ Virginia Marshall, “Negotiating Indigenous ABS Agreements in Genetic Resources and Scientific Research”, 14 (2013)

indigenous communities. The government does not interfere in the decisions regarding sharing of benefits within the community and these decisions are up to the indigenous owners of the resources.²⁵

The government's role in a particular situation is to lend a helping hand towards indigenous communities. It is a well-recognized fact by the government that not all indigenous communities possess enough wealth to start a negotiation with the applicant based on equitable sharing of benefits. The Competent National Authority must be assured about the conditions for mutually agreed terms and prior informed consent have been met in a benefit-sharing agreement with Indigenous owners. The permit will be granted by the competent national authority after this only.²⁶ These conditions are set out in Regulation 8-A.10 of *Environment Protection Biodiversity Conservation Regulations, 2000* to assist applicants and owners for ABS.²⁷ The protection of traditional knowledge under ABS agreement is afforded by Regulation 8A.08 of *Environment Protection Biodiversity Conservation Regulations, 2000*. The requirements for disclosing and inclusion under ABS agreement are set out in mandatory terms.

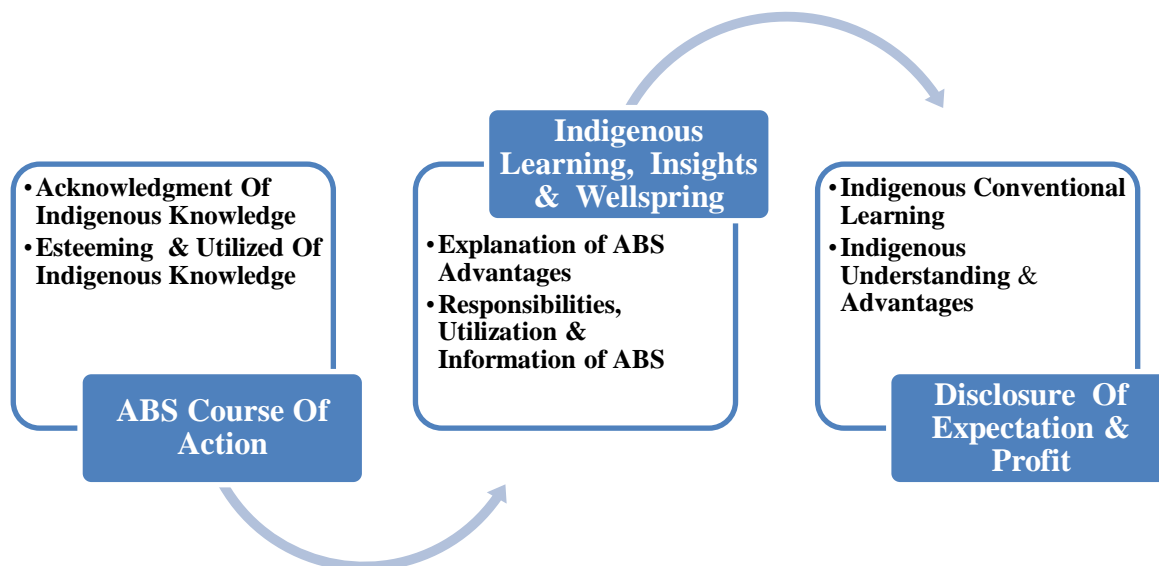
Figure - IV: Mandatory Requirements of Australian ABS Agreement

²⁵Department of Aboriginal and Torres Strait Islander Policy and Development, [Towards a Queensland Government and Aboriginal and Torres Strait Islander Ten Year Partnership: About the Ten Year Partnership](http://www.atns.net.au/reference.asp?) [http://www.atns.net.au/reference.asp?]

²⁶Queensland Government, [Queensland Aboriginal and Torres Strait Islander Justice Agreement](http://www.atns.net.au/reference.asp?), (2002) [http://www.atns.net.au/reference.asp?]

²⁷Regulation 8A.10 of *Environment Protection Biodiversity Conservation Regulations, 2000* deals with informed consent:

1. If the access is sought for a biological resource which lies in an area that is indigenous people's land and if an access provider and owner of the land is same or a native title holder for the land, it is required for the owner or native title holder to give informed consent to a benefit-sharing agreement concerning access to the biological resources.
2. In considering whether an access provider has given informed consent to a Benefit sharing agreement, the Minister must think about the accompanying issues:
 - a. whether the access provider had sufficient learning of these Regulations and could take part in sensible transactions with the candidate to allow the benefit sharing agreement;
 - b. whether the access provider was given sufficient time:
 - i. to think about the application for the permit, incorporating time to counsel with important individuals; and
 - ii. if the organic assets are in a region that is indigenous individuals' territory and an access provider for the assets is the proprietor of the land, to counsel with the customary proprietors of the land; and
 - iii. to arrange the benefit-sharing assertion;
 - c. if the biological resources are in an zone that is indigenous people's property and an access provider for the assets is the proprietor of the land and is represented by a land council — whether the perspectives of the land council about the matters mentioned in paragraphs (a) and (b) have been looked for;
 - d. if access is sought to the biological resources of an area in relation to which native title exists — the views of any representative Aboriginal/Torres Strait Islander body or anybody performing the functions of a representative body, within the meaning of the Native Title Act 1993, for the area about the matters mentioned in paragraphs (a) and (b);
 - e. whether the access provider has received independent legal advice about the application and the requirements of these Regulations
3. The Minister may be fulfilled that informed consent has been given by any native title holders who may be affected by the issue of a permit if the benefit-sharing agreement:
 - a. is a registered indigenous land use agreement, under the Native Title Act 1993, for the area; and
 - b. authorises the action proposed to be taken under the permit; and sets out the native title holders' consent to the issue of the permit.



The ABS Agreement should result in to sensible advantage sharing courses of action, which may include acknowledgment of and esteeming of any indigenous learning, insights and wellspring of the information, for instance, regardless of whether the wellspring of learning is logical or other open archives, from the entrance supplier or from another gathering of Indigenous people.²⁸ The explanation about the advantages, responsibilities, and utilization of indigenous knowledge should be clearly disclosing the expectation of profit from ABS agreement. This mandatory requirement is to be followed by the applicant to be granted a permit. This model is in the process of implementation in many countries. the requirement of disclosure in the intellectual property applications. The GRID system supports the requirement of disclosure as well as IPR to the domestic as well as the foreign researchers by providing transparent manner.²⁹

IX. IMPLICATION FOR INDIA

The biodiversity conservation laws and ABS provision need to learn in the Indian context because it is one of ten largest countries in the world with a total area of more than 3 million km². India is also well-recognized as a highly ecologically diverse country, with a high diversity of habitat, ranging from alpine to tropical ecosystems, containing a high level of endemism³⁰ and one of the eight mega-

²⁸Partnerships Queensland (2004): *Partnerships Queensland: The Way Forward for Aboriginal and Torres Strait Islander Queenslanders*, [http://www.atns.net.au/reference.asp?]

²⁹Conservation of Biodiversity By Traditional Knowledge Holders/Local Communities: <http://www.austlii.edu.au/au/journals/ailr/1999/40.html>

³⁰M. Ahmedullah *et al.*, *Endemic Plants of the Indian Region*, I Botanical Survey of India; Calcutta: 261 (1987)

diverse hotspots in the world.³¹ Although it occupies only 2 percent of global space, India contains nearly 7 percent of global faunal diversity.³² The Indian model of biodiversity conservation meticulously extended to an array of legislative, administrative and policy initiatives. India's concern for comprehensive legislation bears legitimacy because it is one of the twelve mega diversity regions of the world and constitutes seven percent of the world's flora. The comparative study of Australian and Indian ABS model has a demand and tendency of replicating.³³ The documentation of the ABS model has the obvious benefit of checking patents based on TK in the public domains. However, in broad terms, the IP protection to knowledge, innovations, and practices include documentation of TK,³⁴ registration and innovation patent system,³⁵ and development of a *sui generis* system.³⁶ It is sometimes believed that proper documentation of associated TK could help in checking bio-piracy. It is assumed that if the material and knowledge are documented, it can be made available to patent examiners world over as prior art. It is also hoped that such documentation would facilitate tracing of indigenous communities with whom benefits of commercialization of such knowledge have to be shared.³⁷ On the other hand, others believe that documentation may facilitate bio-piracy. It has also been suggested that India should develop legislation which would extend the circle of potential holders of patents and make patents available to local communities. Community IPRs are premised on the idea that the current patent system heavily tilts towards the northern industrial model of innovation. The idea is, therefore is to foster intellectual property laws which recognize the more informal, communal system of innovation through which farmers and indigenous communities produce, select, improve and breed a diversity of crop and varieties.

X.CONCLUSION & SUMMATION

³¹Mittermeier Russell *et.al.*, '[Biodiversity Hotspots](#)', In: Zachos Frank *et.al.*, (Eds.) *Global Biodiversity Conservation: The Critical Role of Hotspots*, Springer Berlin Heidelberg; Berlin, Heidelberg, 3-22(2011)

³² V.B. Mathur *et.al.*, India's Fifth National Report to Convention on Biological Diversity. Ministry of Environment, Forests and Climate Change. <https://www.cbd.int/doc/world/in/in-nr-05-en.pdf> Government of India, 5:10(2014)

³³Shiva V. S., H. Afsar. G.B. Jafri, and R. Holla-Bhar, *The Enclosure and Recovery of the Common: Biodiversity, Indigenous Knowledge and Intellectual Property Rights*. Research Foundation for Science, Technology and Ecology. New Delhi. 163-174(1997)

³⁴ Nomani, Md. Zafar Mahfooz. & Rahman F., 'Bio Piracy of Traditional Knowledge Related Geographical Indications: A Select Study of Some Indian Cases', III(3) *Manupatra Intellectual Property Reports (MIPR)*, F/135-152(October,2016)

³⁵ Nomani, Md. Zafar Mahfooz. & Rahman F., 'Intellection of Trade Secret and Innovation Laws in India', 16(4)*Journal of Intellectual Property Right*, (2011) Pp341-350 [ISSN 0971-7544]: <http://nopr.niscair.res.in/bitstream/123456789/12449/1/IJPR%2016%284%29%20341-350.pdf>

³⁶Nomani, Md. Zafar Mahfooz., 'Environment Agriculture and Challenges of Bio-Piracy: A Blue Print of Indian *Sui Generis* Legal Order', 1(2) *Indian Journal of Environmental Law*, Bangalore 3-22, (2000)

³⁷ T.Greaves, 'Tribal Rights', in S. Brush and D. Stabinsky (Eds.), *Valuing Local Knowledge: Indigenous People and Intellectual Property*,4 (1996). Washington, D.C.: Island Press.[http://www.idrc.ca/en/ev-98741-201-1-DO_TOPIC.html] See also: Greaves, T. (ed.) (1994). *Intellectual Property Rights for Indigenous Peoples: A Source Book*, (1994). Society for Applied Anthropology, Oklahoma City, USA.

Australia is a very experienced nation in terms of the ABS regulations and has developed one of the most advanced and efficient legislation regarding biodiversity. The importance of Australia becomes evident by the fact that it is one of the first countries which developed legislation in compliance with Article 3 of CBD, 1992. The participation of Australia in the Nagoya Protocol is very beneficial for Nations with a federal form of government as it will help them to develop a regulation system which is compatible with both state and national governments. The Australian system is very well defined in every aspect of bioprospecting. ABS legislation of Australia is advanced and one of the first countries which developed a national effect to the third objective of the CBD,1992 with permits are mandatory for all biodiscovery and benefit sharing agreements with a commercial objective. The ABS model provides transparency and innovation in the field of protecting the ecosystem services to the responsible governments. The governments can allocate budget much efficiently if they are able to identify the areas which are giving rise to the development of products that are derived through biodiversity. The other experiences of Australia in the field of bioprospecting will also help other nations to prepare a system based on the Australian model. On the issue of benefit sharing and development, Australia is a well-known supporter of the guidelines and resolutions listed under Nagoya protocol which stipulates the effective implementation of the access benefit sharing parallel with the sustainable development, this includes the implementation of a clear legislation in accordance to PIC, MAT and MTA and posses a landmark in refurbishing Indian model of ABS.
