

Use of Science Diplomacy in Promoting Kenya-India Collaborative Research in Access to Benefit Sharing (ABS) Protocol



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General Introduction

Kenya was one of the nominated countries as the national case study for the ABS Capacity Building Initiative. The country assessment of its viability as a test-bed was carried out in September 2015 with a work- plan adopted in April 2016. Development of a single-window online portal to manage ABS applications and permits was mooted to enable Government Agencies for performing a targeted monitoring of utilization of Kenyan genetic resources and associated knowledge by researchers. Researchers planning to carry out research in Kenya or with materials from Kenya are supposed to seek research permits from designated national resource providers.

This ABS permit is evidence that researchers and resource providers have entered into Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT). Moreover, in specific cases, an export permit is required, and the agency involved would process its grant. There is a certain level of cooperation in the administration of permits, particularly where a permit is required from one preceding authority before the other authority grants a permit. A single- window online system would increase compliance with Kenyan ABS regulations, reduce duplication of effort, minimize workload on authorities, improve quality of service to researchers, and finally facilitate research and development as the basis for access and benefit- sharing.

The process involved identification of NEMA¹, KWS,² KFS,³ KEPHIS,⁴ and NACOSTI⁵ core permit processes, detailed study and analysis of current processes and design of a suitable single

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window system. Kenya is a signatory to different international treaties and conventions; among them are the Convention on Biological Diversity as well as the Nagoya protocol.

Convention on Biological Diversity

The Convention on Biological Diversity (CBD) is an international agreement (negotiated under the guidance of the United Nations), adopted at the Earth Summit in Rio de Janeiro in 1992. The ABS Capacity Development Initiative aims to contribute to poverty reduction, food security, and technology transfer, social development, including equity and rights and biodiversity conservation. It has following three main objectives:

- a) to promote conservation of biodiversity;
- b) to use its components in a sustainable way; and
- c) to share fairly and equitably benefits arising from the use of genetic resources.

As one of the most widely ratified international treaties on the environmental issues, it has generated enormous interest in biodiversity, both in developed and developing countries. To advance further the implementation of the third objective, the World Summit on Sustainable Development (Johannesburg, September 2002) called for the negotiation of an international regime within the framework of the Convention to promote and safeguard fair and equitable sharing of benefits arising from utilization of genetic resources. The Convention's Conference of the Parties responded at its seventh meeting in 2004 by mandating its *Ad hoc* Open-ended Working Group on Access and Benefit Sharing to elaborate and negotiate an international regime on access to genetic resources and benefit-sharing. After six years of negotiation, this working group efforts resulted in the realization of Nagoya Protocol.

Nagoya Protocol

This for access to genetic resources and the fair and equitable sharing of benefits arising from their utilization was adopted at the tenth (10th)

meeting of the Conference of the Parties on 29 October 2010, in Nagoya, Japan. Researchers working with genetic resources and associated data would require greater attention since the Nagoya Protocol on Access and Benefit Sharing (ABS) has come into force in October 2014.

In some countries, all these functions are within the ministries, while in others these have been domesticated through agencies and through independent institutions as set out in the respective laws. In Kenya, the Nagoya Protocol came into force after the present ABS regulations were domesticated. Guidance have been provided in CBD, Nagoya Protocol, IUCN explanatory guidelines, and the AU-ABS guidelines. Further guidelines can be obtained from different country's domestic measures such as the EU-ABS law, Brazil ABS law, Ethiopia ABS law, and Costa Rica ABS law, among others. The frameworks should have legal clarity and certainty, simple and with no arbitrary rules.

ABS Regime

Researchers planning to carry out research involving genetic material and associated traditional knowledge from Kenya must seek research permits from multiple agencies. In specific cases, an ABS permit and export permit may be required as well. Several independent government institutions (each with its own mandate, laws, policies, acts and legal policies) are involved in the permitting process at different level. There is a certain level of cooperation in the administration of permits, particularly where a permit is required from one authority before the other authority grants a permit; different institutions largely operate independently (in silos) thus there is a lack of co-ordination and clear communication structure. Researchers are faced with a situation whereby they need to visit multiple offices, make multiple applications and with uncertainty await for longer times before getting a requisite research permit. In some instances, a researcher who unknowingly fails to have applied and does not have receipt of a permit from one agency is forced to abandon a phase of research since he/she must then secure missing permit before proceeding further.

This results in frustrations to researchers, and discourages making Kenya as a research destination uncompetitive (from longer periods taken) and in some cases illegal research and transfer of genetic resources taking place. Moreover, there are duplication of research efforts since there is no single window portal of research in Kenya that would serve as a reference point in monitoring research being carried out and accessing what genetic resources or associated knowledge. After research permits are issued, there are no mechanisms to enforce compliance and to allow monitoring of issued permits. This is owing to ambiguous policies and laws to monitor ABS research.

Salience of Biological/Genetic resources and Traditional Knowledge in Scientific R&D

Biodiversity at present is a critically important environmental and developmental issue. There is a need to implement Articles 15 (Access to Genetic Resources) and 8(j) (Traditional Knowledge) of the CBD. CBD addresses measures geared towards identification, understanding and monitoring of biological diversity and its impact. However, some challenges identified are, like inadequate funding, inadequate skills/competencies; inadequate infrastructure and facilities; weak knowledge management and low investment in physical sciences research facilities.

Researchers must ensure that they have legal clarity in how they can and cannot use Kenyan genetic resources on which they carry out research. Not only must they work within the spirit in the Convention on Biological Diversity (CBD) but also they have legal and regulatory, requirements to meet. Although the Nagoya Protocol was negotiated and agreed globally, it is the responsibility of each of the state to develop its procedures and practices

Earlier research related to R & D was without a specific policy, legal and regulatory framework for the ABS. As the result, most of these research permits took longer to be prepared and approved. The key realization regarding benefits (financial or otherwise) of the research to Kenya, was lost. In addition, there was also uncertainty

about the legal processes by which permits and contracts were negotiated and approved. The development and implementation of the ABS Single system is the first step by the country to address constraints and challenges faced by researchers when applying for research permits in Kenya and actualization of research and development benefits for the Country.

Kenya-India Linkages and Development Partnerships

Kenya gained independence from Britain in 1963; with a population of nearly 40 million (42 percent below 14 years), The country has a great ethnic diversity. And Kenya and India are members of the international fora of the likes of United Nations, Non-Aligned Movement, Commonwealth of Nations, G-77 and G-15 and the Indian Ocean Rim Association for Regional Cooperation, and they often cooperate with each other on these fora. The Indian Diaspora in Kenya has contributed actively in the trade and culture and Kenya's progress has been attributed to India's involvement and support in health, academics and research along with many Kenyans who studied in India.

In the recent times, there is a growing trade (US\$ 3.87 billion in 2013-14) and investment partnership. Indian firms have invested in telecommunications, petrochemicals and chemicals, floriculture, etc. and have executed engineering contracts in power and other sectors. There have been a series of high-level exchanges between India and Kenya. An India-Kenya Trade Agreement was signed in 1981, under which both countries accorded Most Favoured Nation status to each other. The India-Kenya Joint Trade Committee (JTC) was set up at the ministerial level in 1983 as a follow-up to the agreement.

Objectives of the paper

The objective of this paper has been to conduct a comparative overview between Kenya and India in the management of biodiversity under the Rio '92 agreement and the Access to Benefit Sharing (ABS) as was envisaged in the Nagoya Protocol. Considering India's science, technology and innovation advancements in ABS administration,

management and use, the paper seeks to identify strengths and opportunities for collaboration bilaterally, and the areas include the following:

- Capacity-building of resource persons responsible for collecting, collating, analyzing and disseminating information relating to biodiversity policy and law;
- Development of tools, methodologies, guidelines, capacity -building for strengthening frameworks for implementing ABS provisions of the Biological Diversity Act; and
- Establishment of collaboration for strategic, programmematic, institutional and long-term cooperation and institutional strengthening in the implementation of biodiversity related issues.

Kenya Situational Analysis

The Government of Kenya (GOK) is currently implementing Vision 2030; the country’s development blueprint covers period from 2008 to 2030. This Vision 2030 aspires for high quality Research and Development (R & D) services and facilities for promoting research-related services within the country

Kenya Economic Outlook

The *Global Economic Prospects* report of World Bank forecasts Kenya’s economy to grow by 5.5 percent in 2018 up from 4.9 percent growth it projected for 2017 as the inflation eases; which was driven mainly by services (which accounted for 66 percent of growth) and industry (which accounted for 19 percent of growth). Agriculture

accounted for 15 percent of growth, the lowest in the recent years. Growth in services was driven by real estate (which grew 12 percent) and transport and storage (which grew percent), and growth in industry was driven by construction (which grew 8.2 percent) and manufacturing (which grew 6.2 percent).

Science, Technology and Innovation

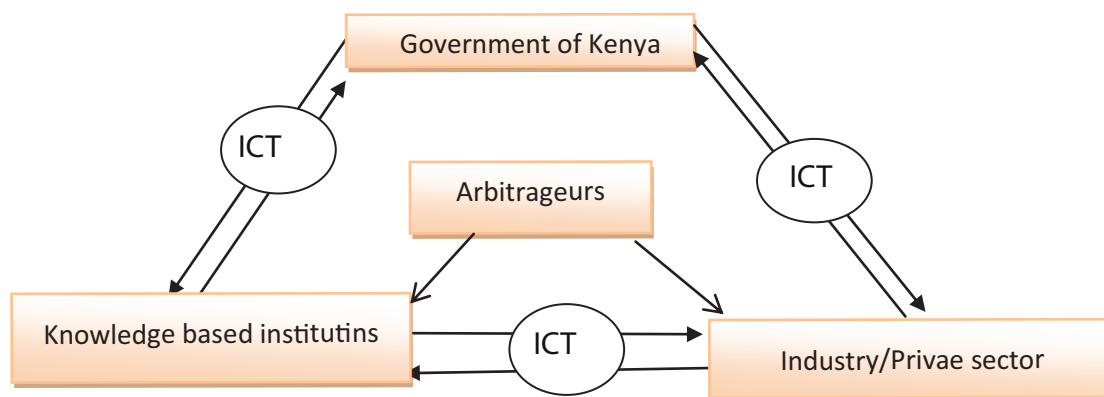
The framework of a functional and sustainable knowledge-based economy predicated on the Public Private Partnerships (PPP), called “Triple-helix type 4” (Figure 1) which involves linking Knowledge based Institutions (KBIs) or academia with industry/private sector; the Government, and arbitrageurs (financiers).

This model of development has not yet properly taken roots in Kenya although legal mechanisms and implementing institutions such as KENIA and Linking Industry With Academia (LIWA) have been established and operationalized for dealing with it.

Scientific Cooperation

Kenya is engaged in a number of strategic agreements for different forms of partnerships and collaborations in ST & I with a number of countries and organizations. The country has acceded to a number of international treaties touching on ST&I for which many Government entities are the National Focal Point. There is a need to review existing agreements (MoUs) to reflect current global and national realities in ST&I and socio-economic dispensation and ensuring

Figure 1: Triple-helix type 4



strategic value for Kenya. Further, the projects rationalize Kenya's Focal Point institutions for many global commitments in the ST&I.

Some of these engagements are: Indo-Africa, Japan-JICA, Korea-KOICA, Joint Commissions - Africa and Middle East, Europe, America, etc. Multilateral cooperation's include, the United Nations Development System (UNDS), Biological Toxins Weapons Convention (BTWC), International Center for Genetic Engineering and Biotechnology (ICGEB), etc.

ABS Regime

Kenya was selected to be one of the partner countries in the current work-plan from April 2015 to March 2018 of the ABS initiative. In summer 2015, in collaboration and with authorization of the Kenyan Government and Ministry of Environment and Natural Resources the ABS Initiative team conducted an assessment of the country. After the assessment, there was consensus that a shared online system would increase compliance with Kenyan ABS regulations, reduce duplication of efforts, reduce workload for authorities, improve quality of service for applicants, and finally facilitate research and development as the basis for any benefit sharing while at the same time enforce compliance and monitoring of the issued permits.

The current efforts in Kenya towards a system that fosters certainty, transparency and clarity in the access and use of genetic resources, was founded on the basis of this law. There have been several efforts to support implementation of the Nagoya protocol in Kenya. One output of the efforts and processes has been the ABS toolkit. This toolkit documents requisite process for accessing the genetic resources in Kenya. According to the ABS toolkit document there are ABS challenges in Kenya like individuals have trouble while seeking to access the genetic resources or the associated knowledge for research or commercial purposes due to various licenses/permits issued by various government institutions.

India Situational Analysis

Trade and Economic Ties with Kenya

India and Kenya have growing trade and commercial ties. Bilateral trade amounted to \$2.4 billion in 2010-2011 but Kenyan imports from India accounted for \$2.3 billion; the balance of trade was heavily in India's favour. India is Kenya's sixth largest trading partner and the largest exporter to Kenya. Indian exports to Kenya include pharmaceuticals, steel, machinery and automobiles while Kenyan exports to India are largely primary commodities such as soda ash, vegetables and tea. Several leading Indian public sector insurance companies participate in KenIndia Assurance Co. Ltd. More recent investments by the Indian corporate in businesses in Kenya include Essar Energy (petroleum refining), Bharti Airtel, Reliance Industries Ltd. (petroleum retail); Tata (Africa) (automobiles, IT, pharmaceuticals, etc.)

India offers 101 fully funded scholarships annually for Kenyans for training them in technical skills under its Indian Technical and Economic Cooperation Programme. The late Kenyan Nobel Peace laureate and environmentalist Prof. Wangari Maathai was conferred the 2005 Jawaharlal Nehru Award for International Understanding in March 2007 by the then Indian President, Shri APJ Abdul Kalam. She was also conferred the 2006 Indira Gandhi Award for Peace, Disarmament and Development by the President, Smt. Pratibha Patil in November 2007.

India's Pan-African e-Network project seeks to make available tele-education and tele-medicine facilities to African countries including Kenya. Indian investments in Kenya are worth \$1.5 billion, and India's pharmaceutical exports have played a key role in making essential drugs available at the affordable prices in Kenya

ABS Regime

The CBD provides a road map for the conservation and sustainable and equitable use of biodiversity. It emphasizes that biodiversity occurring within a nation is the sovereign property of its people.

In pursuance of the CBD, the Indian Parliament passed the Biological Diversity Act 2002 (BDA) for:

- 1) Conservation of biodiversity,
- 2) Sustainable use of its components, and
- 3) Fair and equitable sharing of benefits arising out of the use of biological resources and associated traditional knowledge. (Similar to the Kenya Domestication of the RIO '92.)

To strengthen capacity of these institutions, and to bring in behavioral changes to manage natural resources in an integrated, participatory and sustainable manner, UNDP is supporting a project in five selected districts of the two Indian states (Madhya Pradesh and Jharkhand).

The National Biodiversity Authority (NBA) was established by the Central Government in 2003 to implement India's Biological Diversity Act (2002). The NBA is a Statutory Body and it performs facilitative, regulatory and advisory functions for the Government of India on issues of conservation, sustainable use of biological resources and fair and equitable sharing of benefits arising out of the use of biological resources. It provides a framework for access to biological resources and sharing benefits arising out of such access and use. The Act also includes in its ambit transfer of research results and application for intellectual property rights (IPRs) relating to Indian biological resources.

The Biological Diversity Act (2002) mandates implementation of the provisions of the Act through decentralized system with the NBA focusing on advising Central Government on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources; and advising the State Governments in the selection of areas of biodiversity importance. The NBA considers requests by granting approval or otherwise for undertaking any activity in biodiversity use.

The NBA offers a wealth of information on ABS regulations, procedures, projects and the

various permits issued. It delivers its mandate through a structure that comprises the Authority, Secretariat, SBBs, BMCs and Expert Committees. Since its establishment, NBA has supported creation of SBBs in 29 States and facilitated establishment of around 62,500 BMCs.

The National Biodiversity Authority gives approval, based on the agreement with the State Biodiversity Boards (SBBs), only after establishing mutually agreed terms (MAT's) and an equitable benefit-sharing agreement between the users of the biological resources and associated knowledge and concerned local bodies and benefit claimers.

The State Biodiversity Boards (SBBs) focus on advising State Governments, subject to any guidelines issued by the Central Government, on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources. The SSBs also regulate, by granting of approvals or otherwise upon requests for commercial utilization or bio-survey and bio-utilization of any biological resource by the Indians. The local level Biodiversity Management Committees (BMCs) are responsible for promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling knowledge relating to biological diversity.

In cases where an approval of the National Biodiversity Authority is required for the use of Indian biological resources and associated knowledge and such an approval is not obtained, the punishment can extend to five years imprisonment or a fine of ten lakh rupees or both. In cases where the State Biodiversity Board needs to be intimated about the use of Indian biological resources and associated knowledge, and it is not done, the punishment can extend to three years imprisonment or a fine of five lakh rupees or both. Any offence under the Act is cognizable and non-bail able.

Kenya-India Collaboration in Research on CBD and ABS Protocols

The National Biodiversity Authority (NBA) has set up the Centre for Biodiversity Policy and Law (CEBPOL) to deal with emerging and current biodiversity governance and policy-related issues. The objective of this collaboration is the provision of professional support, conducting research, capacity-building activities, advice and expertise to the Government of India and Norway on a sustained basis.

The NBA conduct capacity-building workshop on “Nagoya protocol” for the ASEAN, East Asian and South Asian countries to share India’s experiences relating to ABS and traditional knowledge. It collaborated with ACB for strategic, programmatic, institutional and long term cooperation on biodiversity related issues. The overall objective was “to train senior level policy makers on issues of ABS and TK for an effective implementation of the Nagoya Protocol on ABS as well as engage in effective implementation of national ABS provisions for sustainable development in India and ASEAN regions”.

The UNEP-GEF and MoEF Project on strengthening implementation of the Biological Diversity Act and Rules was with focus on its Access and Benefit Sharing (ABS) Provisions. The GEF project on ABS was the first ever global project - a programme to access genetic resources, assess their economic value and share the benefits arising out of them among the local people. This project is being implemented in five states of India, Andhra Pradesh, Gujarat, West Bengal, Himachal Pradesh and Sikkim, and it is funded by Global Environmental Facility (GEF) and Government of India. The executive organisations are the National Biodiversity Authority (NBA) in collaboration with five SBBs, UNEP-Division of Environmental Law and Conventions (UNEP/DEL/C), United Nations University - Institute of Advanced Studies (UNU-IAS).

From the above, it is evident that India has a highly developed mechanism (Establishment

of SBBs, BMCs and Expert Committees) in the management of biodiversity. The Biological Diversity Act (2002) allows decentralized system, where state Governments have the control in biodiversity management. The NBA focuses on advisory role to the Central and State Government on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources. This has been simplified through the establishment of an online portal for ease of management.

Conclusion

India has also established strong bilateral and multilateral collaborations and initiatives with CEBPOL - Centre for Biodiversity Policy and Law, India, ASEAN, UNEP-GEF, India-UNDP, CBD-COP 11, among others. In addition, India has established two databases, namely, Expert and Endemic databases, that aid researchers and scientists to identify relevant resource persons based on their expertise. Kenya looks forward to collaborate with India in the management of biodiversity under the Rio ‘92 agreement and the Access to Benefit Sharing (ABS), as envisaged in the Nagoya Protocol.

The following are the areas of interest that Kenya would be willing to engage moving forward with possible support and linkages through India’s Technical and Economic Cooperation (ITEC), Research Information System for Developing Countries (RIS) and other stakeholders working under the Access to Benefit Sharing (ABS) and the Nagoya Protocol:

- Under the CEBPOL Kenya’s resource persons responsible for collecting, collating, analyzing and disseminating information relating to biodiversity policy and law would be trained through establishment of appropriate linkages with NACOSTI Kenya;
- Under UN-GEF, development of tools, methodologies, guidelines, capacity-building for strengthening frameworks for implementing ABS provisions of the Biological Diversity Act;

- Establishment of collaboration between NACOSTI and NBA for strategic, programmatic, institutional and long-term cooperation on biodiversity related issues.
- Establishment of India and Kenya partnership to strengthen institutional structures involved in the implementation of the Biodiversity Act, resulting in behavioral changes in managing natural resources in an integrated, participatory and sustainable manner.

Endnotes

- ¹ National Environment Management Authority
- ² Kenya Wildlife Service
- ³ Kenya Forestry Service
- ⁴ Kenya Plant and Health Inspectorate Service
- ⁵ National Commission for Science Technology and Innovation

References

- Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs. (2017, May). Retrived from <https://sustainabledevelopment.un.org/TFM/STIForum2017>.
- Revitalizing and Harnessing Science, Technology and Innovation for Kenya's Prosperity and Global Competitiveness. (2013-2017). Retrieved from <http://www.education.go.ke/index.php/tenders?download=100:transport-t&start=10>.
- (http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/Wildlife__Conservation_and_Management_Act___Cap_376_.pdf) The Environmental Management and Co-ordination (Amendment) Act, (2015, June) Retrieved from <https://www.nema.go.ke/images/Docs/Legislation%20and%20Policies/emca%20am%20act%202015.pdf>
- The Wildlife (Conservation and Management) Act, (Revised Edition 2009 (1985)) Retrieved from http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/Wildlife__Conservation_and_Management_Act___Cap_376_.pdf
- The Forest Conservation and Management Act. (March, 2017). Retrieved from <https://kenyaforests.org/resources/Forest%20Conservation%20and%20Management%20Act%202016.pdf>
- The Kenya Plant Health Inspectorate Service Act. (2013, February). Retrieved from <http://www.stak.or.ke/wp-content/uploads/2016/08/Kenya-Plant-Health-Inspectorate-Service-Act2012.pdf>
- The Science Technology and Innovation Act. (2013, March). Retrieved from <http://www.education.go.ke/index.php/downloads/file/121-the-science-technology-and-innovation-act-2013>.
- India-Kenya Bilateral Relations. (2017, June) Retrieved from http://www.mea.gov.in/Portal/ForeignRelation/Kenya_June_2017.pdf
- Aichi Biodiversity Targets Nagoya Protocol in force and operational (2015, October). Retrieved from <https://www.cbd.int/doc/strategic-plan/targets/T16-quick-guide-en.pdf>
- Nagoya protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity, Secretariat of the Convention on Biological Diversity - United Nations Environmental Programme (Published in 2011 Retrieved from <https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf>
- India Biological Diversity Act, 2002. (2003, February). Retrieved from http://www.wipo.int/wipolex/en/text.jsp?file_id=185798#LinkTarget_273 .