

## **Access to and Sharing of Benefit of Genetic Resources under the Nigeria Law**

***Amokaye Oludayo G., Ph.D.***

*Senior Lecturer in Department of Private and Property Law,*

*Faculty of Law, University of Lagos, Akoka.*

*Email: dayoamokaye@yahoo.co.uk.*

### **Abstract**

The question of accessing genetic resources in gene-rich developing countries such as Nigeria and equitable sharing of the benefits thereof has been a recurring problem despite numerous international agreements to overcome this challenge. Controversies over access to GR commonly relate to the concerns over the ownership and control of GR, transparency and problem of bio-piracy, rights of the indigenous and local communities, mechanisms for sharing of benefits arising from exploitation and commercialization of GR and associated intellectual property rights. This paper discussed the legal and institutional framework for accessing and sharing genetic resources in Nigeria with the context of the newly enacted National Environmental (Access and Sharing of Benefits) Regulation 2009. It discussed numerous entry requirements imposed by the Regulation and other obligations imposed on a permit holder including the obligations to conduct environmental impact assessment and quantitative and qualitative sharing of the benefits with the indigenous communities and Nigeria people. The paper also identified certain gaps and challenges that may render the regulation sterile while proffering practical solution to overcome the identified challenges.

**Keywords:** Genetic Resources, Access to and Sharing of Genetic Resources (ABS), Environmental Regulation, Intellectual Property and Indigenous Knowledge, Convention of Biological Diversity.

## Introduction

The international legal regimes for accessing and equitable sharing of benefits (ABS) of genetic resources (GR) are encapsulated in several multilateral environment agreements such as the Convention of Biological Diversity, (CBD) Cartagena Biosafety Protocol,<sup>i</sup> Bonn Guidelines on the Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of the Utilisation,<sup>ii</sup> FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)<sup>iii</sup> and Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits.<sup>iv</sup> These Agreements primarily recognise the sovereign rights of the gene-rich countries to freely regulate “access” to their GR in accordance with their “national legislation” and facilitates “equitable sharing of the benefits thereof on fair and equitable basis” through domestic legislation.<sup>v</sup>

Consistent with these Agreements, Nigeria, a country rich in plant genetic resources, existing in wild forms in the plants’ natural habitats and in diverse crops<sup>vi</sup> recently enacted the National Environmental (Access to Genetic Resources and Benefit Sharing) Regulation, [Access Regulation]<sup>vii</sup> aimed at securing easy access to and sharing of the benefits of her genetic resources. The Regulation clearly outlines the legal and institutional regime for ABS in Nigeria and establishes the appropriate authority to grant access permit to prospectors. It further formalises prior-informed consent mechanism in the context of access to GR and imposes legal obligations on the access-granting authority, communities and permit holders. Finally, it outlines the procedure for sharing of benefits arising from the bio-prospecting in Nigeria.

This article while setting out to capture the contemporary institutional and legal frameworks for ABS arrangements in Nigeria, it also identifies some challenges in the Regulation that may render the enforcement of the Regulation less beneficial to Nigerian people and proffers some useful comments for future reforms. Consequently, the paper is divided into four parts. Part One is the introductory part while Part Two examines the provisions of the Access Regulation focusing mainly on the institutional framework, permit regime (including eligibility criteria, procedure for the grant and revocation of a permit and conditionality), scope and degree of information required in the Material Transfer Agreement, prior informed consent (PIC) and benefit sharing terms in MTA, obligations imposed on the licensee and various offences under the Regulation. Part Three while identifying the problems of monitoring and intellectual property rights (IPRs) as major challenges to the efficient and effective enforcement of the Regulation, it also proffers useful and incisive suggestions that can make the Regulation workable and realistic. Part Four is the concluding part.

## Part Two - Institutional and Legal Framework

### *i. Competent authority*

The competent authority to grant permit to bio-prospectors is the National Environmental Standards and Regulation Enforcement Agency (Agency)<sup>viii</sup> who also doubles as the National Focal Point (NFP) to Biosafety Clearing House established under Cartagena Protocol.<sup>ix</sup> The exercise of the licensing authority is conditioned upon the identification and preparation of the national inventory of the status of the biological diversity of Nigeria including threatened, endangered, endemic and rare species. Such inventory may be conducted solely by the Agency or in collaboration with other agencies whose duties and responsibilities relate directly to the collection, custody and research into the specific genetic resources or a collaborating research institute or university.<sup>x</sup>

### *ii. Procedure for Accessing Genetic Resources*

It is the requirement of the law that an applicant seeking access to GR in Nigeria must first apply in the prescribed form and obtain an access permit from the Agency.<sup>xi</sup> Such application must disclose some reasonable and verifiable information about the identity of the application and the purpose for which permit is being sought.<sup>xii</sup> In addition, the applicant must supply information

relating to the financial outlays of the project including details of the sponsors of the project, details of the previous collection or research conducted in any country (if any) and scientific name of the taxa (both in latin and common name).xiii Where the applicant is a body corporate, it must disclose additional information about the registration status of the company, registered business object of the company, the names of directors, and contact persons in respect of the application.

### **iii. Prior Informed Consent (PIC)**

A core requirement for the grant of an access permit by the Agency is the evidence of prior informed consent (PIC) from interested persons, local communities and other stakeholders or relevant agencies and a research clearance certificate from relevant agencies in support of an application.xiv A PIC serves a twin functions in context of Nigerian environment. First, in a pluralistic land tenure system where legal control of land is at variance with physical control,xv PIC requirement ensures that the local communities or landowners who exercise physical control over the GR are duly consulted by the prospectors before an access permit can be granted.xvi Second, the requirement of PIC reduces or possibly eliminates conflicts that may arise when permit is granted to foreign prospectors by the government without prior local input or consultation.xvii By consulting the local land owners prior to the grant of a permit, access and exploitation of the GR can be easily facilitated.

A PIC may be obtained from a singular or multi source(s). A PIC from a singular source is one obtained from the relevant competent agency or national authority, indigenous and local communities, collaborating institutions or agency while a multi-source consent is one obtained from the federal, state and local government(s) and collaborating agency or institution. But where the genetic resource is conserved *ex-situ*, the PIC must be obtained from the appropriate body, agency or organization responsible for the *ex-situ* collection.xviii

A PIC submitted by an applicant must contain detailed information about the applicant legal entity, structure and financial budget for the genetic resources prospect and parties involved in the grant of PIC. It must also include information about the type and quantity of genetic resources to which access is sought, commencement date and duration of the research, geographical location or sites in Nigeria in which the prospecting for genetic material will take place, evaluation report on the impact of access to conservation and sustainable use of biodiversity, purpose of the collection, research and expected results and accurate information on intended use, including taxonomy, collection, research and commercialization of the genetic resources. In addition, the PIC must detail information on where the gene prospector intends to locate the research and development of the genetic resources, how the research and development is to be carried and local collaborators as well as third-party involvement, nature of benefits attached to such access including but not limited to benefits from derivatives and products arising from the commercial and other utilization of the genetic resources, monetary and non-monetary benefit sharing arrangement and procedure for negotiation and communication with the stakeholders.xix

Furthermore, the Agency may, for the purpose of technical examination, require further information, documents or materials connected with the application from the applicant which the applicant is obliged to submit. Failing which, his application may be rejected.xx By providing for elaborate PIC procedure, the Regulation resolves the twin issues of who is entitled to consent to genetic access: government, private owners or local communities and the scope of information required to ground an application.

### **iv. Material Transfer Agreement**

An application for access permit is predicated on a formal Material Transfer Agreement (MTA) between the local gene providers, which may be public institution or local communities, and foreign gene-users or prospectors.xxi Although MTA is usually a private agreement between private actors,xxii Schedule 3 of the Access Regulation prescribed specific information that an MTA must

disclose. These are information on the identity of parties to the agreement, reference to the Convention on Biological Diversity, legal status of the provider and user of genetic resources, mandate or general objectives of provider and user of genetic resources and details of genetic resources covered by the Agreement.xxiii

**v. Transparency and Public Participation**

A request for the grant of an access permit must be advertised in at least two national newspapers before a permit can be issued by the Agency.xxiv The advertisement must specify the name and other particulars of the applicant, the activity to be undertaken for which access permits is required, location or site of genetic material, country of destination of genetic material, and the time within which representations or objections in respect of the proposed access permit may be made to the Agency.xxv Such advertisement serves two purposes. First, it enables the stakeholders particularly the local communities to comment on the access request as well as raising reasonable objections to the access request. Such objections must not be based on emotions, political sentiments or personal idiosyncrasies or sensitivities to the project; an opposition must establish a clear nexus with actual or threatened environmental harms or public health consideration such as outbreak of loss of biodiversity, resources depletion, damage to ecosystems, socio-economic disruptions and displacement or extinction to wildlife population arising out of epizootic diseases.xxvi

A permit may be denied if the Agency is satisfied that the activity to be carried out by such access to genetic resources will not facilitate sustainable management and utilization of genetic resources for the benefit of the people of Nigeria after a proper review of the application and representations or objections to the proposed access permit from the public.xxvii But in taking a final decision to approve or reject a request, the Agency must consider the economic and environmental implications against the public interest benefits and come to the conclusion that the overall public interest would be served and that the benefits that would be realised from the access to genetic resources outweigh the economic and environmental costs. But where it has reasonable grounds for refusing to issue the access permit, it has to inform the applicant of the reasons for such refusal in writingxxviii. The transaction time within which a permit may be granted is sixty days after the receipt of an application for an access permit. This includes the time to examine the application and communicate written decision to the applicant.xxix

**vi. Duration and Conditions of a Permit**

A permit is valid for one year from the date of issuance.xxx A permit may be granted unconditionally or conditionally.xxxi The imposition of conditions upon the exercise of access permission usually takes place concomitantly with the grant of an access permit. Hence, there is no question of having to characterise the nature of the condition separately from the grant of a permit.xxxii This is not to say that the imposition of conditions by the Agency is by itself a decision that an applicant shall be entitled to proceed to prospect for genetic resource; rather the source of the applicant's right to prospect remains in the access permit.xxxiii

A condition attached to a permit may be used to achieve several environmental, social and economic purposes. It can be used to either conserve certain genetic resources *in situ and ex-situ* or to protect the depletion of endangered plant and animal species, or preservation of important natural habitat or the reinstatement of damage to the ecosystem as a result of genetic prospecting. Nevertheless, conditions attached to the grant of an access permit may be altered, amended, varied or revoked by the Agency or upon request by the permit holder.xxxiv Where the conditions attached to a access permit are varied, altered or revoked, a written notice to revoke, vary or amend the conditions must first be served on the holder and it must state the reasons for the proposed action.xxxv

Although the power of the Agency to impose and vary conditions is expressed in wide terms but it is clearly not an unlimited power. Conditions imposed must fairly and reasonably relate directly

to the permitted access to prospect genetic resources and to local considerations but must not be unnecessarily extraneous.<sup>xxxvi</sup> The exercise of the discretionary power to impose condition must be reasonable. Where a condition attached to a permit is unreasonable, a permit holder may challenge such unreasonable condition imposed in the permit in the court. The appropriate court to challenge the Agency's discretion is at the Federal High Court.<sup>xxxvii</sup> Although the Federal High Court may review the activities of the Agency, in practice, Nigerian courts generally defer to the regulatory authority's discretion unless it is shown that the Agency disregards something it ought to have taken into account or had regard to something which it should not have taken into account.<sup>xxxviii</sup>

In a related town planning case of *Adebutu v. Lagos City Council*,<sup>xxxix</sup> where the discretion of Town Planning Authority to impose conditions on a building permit was challenged by the plaintiff, the court held that a statutory power to impose conditions, even though expressed in the widest terms, must be held to be subject to limitation in four well-defined respects:

- a) the conditions must not effect a fundamental alteration in the general law relating to the rights of those on whom they are imposed, unless the power is expressed in the clearest possible terms;
- b) the conditions must be such as fall fairly within the ambit of the statute;
- c) the conditions must not be unreasonable, that is, such as Parliament clearly cannot have intended should be imposed; and
- d) a condition may be void for uncertainty, and thus enforceable, if it is ambiguous or uncertain in its application.

A fundamental condition of an access permit is the obligation on the holder to abide by the laws of the Federal Republic Nigeria relating to traditional and community rights over ownership and custody of genetic resources, including the collective rights to benefits accruing from knowledge, innovations, discoveries, uses and practices acquired overtime and for the conservation and sustainable use of the genetic resources.<sup>xl</sup> It is also implied conditions of the permit that a holder shall deposit with the relevant Agency duplicates and holotypes of all genetic resources and records of all intangible components of plants of genetic material collected and furnish quarterly reports to the Agency on the status of research, including all discoveries from research involving genetic resources or intangible components thereof.<sup>xli</sup>

#### **vii. Register of Permit**

It is a statutory requirement that a register of access permit must be kept in a public registry regularly managed and updated by the Agency. The register shall contain information about the applicant, duration and scope of access granted by the Agency. Such registry must be accessible to the citizens and non-citizens seeking information about bio-prospecting and GR discoveries in Nigeria.<sup>xlii</sup>

#### **viii. Obligation to prepare and submit EIA**

Generally, under the Nigerian EIA Act<sup>xliii</sup> and Access Regulation<sup>xliv</sup> an environmental impact assessment is mandated in agriculture or agro allied projects, fisheries, forestry, industry, food and beverage processing activities where such activities will have significant or adverse impact on human or the environment or lead to the introduction of any exotic species into the environment or likely lead to unsustainable use of natural resources. Since the definition of forestry is wide enough to accommodate GR prospecting, biotechnology and bio-pharming, EIA is compulsory under Schedule 1 of the Act. Although the Regulation is silent as to when the EIA Report is to be submitted, the standard practice is that the EIA must be submitted along with application for Access Permit. The pre-permit EIA report must show the lists of plants and animals present in core and buffer areas of the proposed access site and ecosystem. The status of identified species will be cross-checked according to IUCN list of threat categories viz., endemic, endangered, vulnerable, rare, indeterminate and insufficiently known. In certain cases, it is also considered desirable to conduct vegetation analysis

using standard phyto-sociological methods. Frequency, density, dominance, importance value index and life form are the most commonly used vegetation study parameters. Computations of dominance indices provide information about the structure and stability of the vegetation. In case of aquatic ecosystems the measurement of primary productivity must also be included in EIA. Vicinity of the site to protected and notified forests and existence of wildlife corridors must also be recorded in the EIA. Data on these parameters provide a broad understanding of the status of the vegetation and wildlife of the area.

Another important aspect of EIA of GR is extent of dependency of the local people on the bio-resources of the project site such as collection of firewood, medicinal plants etc. Although the economic or social effects are not intended by themselves to require preparation of environmental impact assessment, but when an environmental impact is prepared and economic or social, natural or physical environmental effects are interrelated, then the EIA Report must discuss all these effects on the human environment.<sup>xlv</sup> Furthermore, a permit holder is obligated to prepare and submit a semi annual status report on the environmental impacts of any ongoing collection of genetic resources or intangible components and a final status report on the environmental impacts of collection of genetic resources or intangible components in the event that the collection is of duration of three months or less. The Report must show any environmental change that the GR prospecting may cause to the natural environment whether any such change occurs within or outside Nigeria, and it includes any effect of such change on health and socio-economic conditions.<sup>xlvi</sup>

**ix. Confidentiality of Information**

An applicant may request that some information relating to access to genetic resources provided to the Agency shall be held on confidential basis.<sup>xlvii</sup> Such information held as confidential with respect to the relevant applicant is not to be accessible to a person inspecting the register of access permits upon application.<sup>xlviii</sup>

**x. Revocation of Permit**

The Agency may, on its own volition, or on the application by an access permit holder, vary the terms and conditions of an access permit. It may suspend, cancel or revoke any access permit issued where the holder is in contravention of any of the conditions imposed on the Access permit or those implied under the regulations or of the agreements made pursuant to its grant.<sup>xlix</sup> A non compliance with an obligation under the MTA Agreement particularly those relating to negotiated monetary and non-monetary benefits arising from the right of access granted and the use of genetic resources and traditional knowledge in accordance with the guidelines specified in the Third schedule to the Regulations may be a ground for revocation of an access permit.<sup>l</sup> Before a permit could be suspended, cancelled or revoked, the Agency must give a written notice of its intention to do any of these acts to the holder of the permit during which the holder could make representations within thirty days from the date of such notice.<sup>li</sup> Where a permit is suspended, cancelled or revoked, the Agency shall publish such suspension, cancellation or revocation order in at least two newspapers with nationwide circulation and enter same into the Register of Access permits.<sup>lii</sup> A suspended, cancelled or revoked permit is subjected to the same legal incidents of expired permits in terms of renewal.<sup>liii</sup>

**xi. Benefit Sharing Arrangements**

Another core requirement for the grant of an access permit is the existence of benefit-sharing agreement between the access seeker and owners of the GR. In practice, terms and conditions under which the benefits arising from the utilisation and subsequent application and commercialisation of the GR could be shared between the permit holder and the owners are usually expressed in the MTA. Although negotiation of benefit-sharing terms could be private in nature, the Access Regulation prescribes some terms which may guide an investor and access owner when negotiating benefit-sharing agreement in an MTA and which may make the processing of the application more attractive.

The benefit sharing arrangements envisaged under the Regulation, though widely drawn, are in two-folds. The first involves the participation of Nigerian citizens and institutions in the execution of the activities granted under the permit. This will involve the employment of technical and non-technical local staff in the genetic prospecting and commercialisation activities that must be well-remunerated.<sup>liv</sup> The second is the monetary and non-monetary benefits arising from the right of access and the use of genetic resources and traditional knowledge in accordance with the MTA Agreement. Such monetary benefits may accrue to the government or community involved. Monetary benefits may include the payment of access fees, royalties, licences fees in case of commercialisation, special fees payable to conservation and biodiversity trust fund, advance payments, milestone payments, research funding, salaries and preferential terms, joint ventures, joint ownership of intellectual property rights and proceeds from access to traditional knowledge. Non-monetary benefit may include, but not limited to sharing of research and development results, collaboration and cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, participation in product development and capacity building through education and training. It also include admission of the provider to *ex-situ* facilities and databases of GR of the permit holder, transfer of knowledge and technology to the genetic provider under fair and most favourable terms including concessional and preferential terms, access to scientific information relevant to conservation and sustainable use of biological diversity including biological inventories and taxonomic studies, contribution to the local economy, engagement in health and food security research relevant to the country use and joint ownership of relevant intellectual property rights.<sup>lv</sup>

.Additionally, the holder of a permit is under an obligation to report his genetic discoveries to the Agency.<sup>lvi</sup> This is important to enable the Agency have information not only about the nature of the discoveries but also on how the benefit can be shared. He is also required to grant reasonable access to all Nigerian citizens all GRs collected in Nigeria whether such genetic resources and intangible components are held locally or abroad.<sup>lvii</sup>

### **xii. Offences and Penalties**

It is an offence under the Regulation to access genetic resources in Nigeria without a valid permit from the Agency.<sup>lviii</sup> It is also an offence to engage individually or in concert with another in any activity that may have an adverse impact on any ecosystem, lead to the introduction of any exotic species or unsustainable use of natural resources without an Environmental Impact Statement.<sup>lix</sup> Any person convicted of an offence under the Regulations shall be liable to a fine of not less than ₦1,000,000.00 but not exceeding ₦10,000,000.00 or to an imprisonment for a term not exceeding one year or to both such fine and imprisonment and an additional fine of ₦100,000. 00 for every day the offence subsists.<sup>lx</sup> Where the offence is committed by a body corporate, upon conviction, it shall be liable to a fine not less than ₦10,000,000 but not exceeding ₦100,000,000.00 and an additional fine of ₦1,000,000.00 for everyday the offence subsists.<sup>lxi</sup>

### **Gaps and Challenges**

A fundamental lacuna in the Regulation is utility of benefit-sharing provision for the holders of traditional knowledge (TK)<sup>lxii</sup> holders when Nigerian law does not protect proprietary rights in TK on GR. Despite similarities between IPRs over inventions, ideas and TK that suggests the relevance of intellectual property for tackling misappropriation of TK, the right of the communities to obtained intellectual property rights over their knowledge under the Nigeria law has been constrained by the “certain accepted notions of intellectual property relating to ownership, originality, duration, fixation, inventiveness and uniqueness”.<sup>lxiii</sup> The inability of the community to have IPRs over their TK on GR also has serious implications for benefit sharing in the MTA? How will the IPRs of the local communities on TK be protected in the MTA? Who is entitled to negotiate MTA and grant PIC to access seeker where the gene is located in a family or private land within a community: community head or family head or private landowners? How will be benefits and inter-related IPRs be enjoyed by

the local communities? How and who will calculate the benefit of the GR? Who will monitor the breach of the benefits in cases where a permit holder fails to render account or under disclose the benefits?

Another constraint that may militate against traditional people to actively negotiate MTA and derive full benefit of their traditional knowledge is their low level of illiteracy and level of awareness. The awareness of the traditional people on the importance of genetic resources and TK and the need to protect them is still low. Many local communities are not aware that they should share benefits from use of genetic resources and associated traditional knowledge they own. The provisions of the Regulation on benefit sharing are unheard of at the local level, same as model MTA for transfers or prior informed consent for access. Thus, in practice, the local accomplices of the gene-bio-pro prospector continue to exploit the ignorance and illiteracy of the local community to extract undue advantage in their favour. A direct way to do this is to draft the MTA widely in a standard form and unduly skewed it in favour of the bio-prospectors to the detriment of the local communities and landowners.

To secure proper MTA that will be mutually beneficial to the Nigerian people particularly the local communities, it will be necessary for the Agency to embark on educational and public campaigns programmes in all the major languages within and around those communities where GR are located. The educational and public awareness campaigns may be done solely or in active collaboration with the relevant local governments, opinion leaders and non-governmental organisations (NGOs) operating in the area of GRs conservation and biodiversity. Furthermore, the Agency should seek to obtain and regularly update data on TK on genetic resources by various traditional communities in Nigeria as way of public protection of such TK from unjust exploitation. Ultimately, the intellectual property right law should be amended to permit the communities to register their TK on GR which they can assign legally and freely to the foreign GR seekers and prospectors.

Beyond this, the capacity of the access-granting Agency to properly and effectively enforce disclosure requirement on GR discoveries is doubtful. Monitoring problem may arise in several ways. First, a permit holder may fail to disclose or under-disclose his discoveries after accessing the GR. Second, a dubious permit holder may smuggle part of his valuable discoveries from the country before disclosing some parts of it to the Agency. Monitoring problem may also arise where the benefits upon which a permit is granted is under-represented or fraudulently misrepresented to the Agency. Although the Regulation provides for mandatory disclosure of GR discoveries by permit holders as well as transparency procedure in the administration of the Regulation, it is doubtful whether the Agency has the requisite capacity to effectively monitor the activities of a permit holder who may decide to be dubious. Firstly, the Agency has insufficient personnel with no or limited experience in policing bio-pirates and low budgetary allocation to carry out its enormous statutory responsibilities. Secondly, policing of bio-piracy is usually a collective, coordinated and aggressive effort of many relevant law enforcement agencies given the antics of many bio-pirates. A way of this is for the government to adequately fund the capacity of personnel of relevant law enforcement authorities such as Custom services, and Quarantine and law police to monitor, arrest and prosecute offenders. Another way is for the Agency to exchange information and collaborate on regular basis with both municipal and international agencies responsible for the monitoring of illegal movement of GR within and outside the country.

Another major challenge is the difficulty of securing effective enforcement of the breach of benefit-sharing of the GR provisions in the Regulation. The threshold issues here are: how would the Agency monitor the utilisation of the GR as well as commercial benefits disclosed by the applicant after access has been granted particularly when further utilisation and commercialisation of the GR is done offshore? What about the unanticipated derivatives or benefits of the GR not disclosed or unforeseen at the time of application? How would the benefits arising from the access to the GR be calculated and who does the calculation: the Agency or permit holder? Supposing also the gene-pro prospector is not the same user of the genetic resources but merely acted only as a middle-man: who

will share the benefits of the GR with the provider: the permit holder or assignee of the benefits? If the benefit has been assigned, how would the permit holder monitor the benefits of the GR assigned to a third party?

If we assume but without conceding that some of the monitoring issues can be resolved by the Agency, can the Agency enforce an MTA which engrosses the benefit-sharing terms but freely entered into by private persons? Put differently, would the state deploy public resources to enforce private contract between the private parties? Under the private law of contract in Nigeria, no person can take benefit or responsibility under a contract for which he is not a party no matter how beneficial the contract may be for his sake. Therefore, the Agency cannot on its own or in conjunction with owners of the GR institute an action for a breach of benefit-sharing provisions in a MTA which is not a privy to. In effect, the benefit sharing provision in the Regulation is advisory in nature to guide parties in the negotiation and drafting of an MTA and cannot be construed as imposing an obligation on the Agency to enforce the benefit-sharing provisions in an MTA in the event of a breach by a permit holder.

Another noticeable challenge is the enforcement of the requirement of transfer of technology (including biotechnology) to gene providers and the IPRs of the commercial benefits of the GR provisions in the Regulation. In several environmental and economic treaties, the issue of technology transfer and the concomitant intellectual property protection has been a long drawn battle between developing and developed countries. Technology transfer as argued by the developed countries is not free and is hinged on appropriate pricing and intellectual property protection. It is, therefore, inconceivable that an access regulation can compel technology by fiat without adequately addressing the intellectual property component of technology transfer. Consequently, if technology transfer is a crucial element in benefit sharing calculus in the access Regulation then a holistic examination of the extant intellectual property laws in Nigeria will be necessary and indispensable.

A cursory examination of the extant Nigeria's intellectual property regime reveals some difficulties. Firstly, Nigeria does not have any law that protect plant breeder rights an important intellectual property protection devise to attract foreign plant breeders that may be interested in accessing Nigerian GR and further engagement in plant cross-breeding and commercialisation. Secondly, the Patents and Designs Act, 1970<sup>lxiv</sup> though allows for the patent of a product or invention if it is new, results from inventive activity and is capable of industrial application; or if it constitutes an improvement upon a patented invention and also is new, or results from inventive activity and is capable of industrial application, its relevant and utility to modern biotechnology inventions is doubtful in many respects. First, the Act exempts from patent protections all products of nature, mathematical formulae, printed matters and business method. Second, patent is denied for an invention obtained in respect of "plant or animal varieties, or essential biological processes for the production of plants and animals (other than microbiological processes and their products)".<sup>lxv</sup> The effect of this is that most bio-engineered or transgenic plants, animals and derivatives including novel food and feeds may not be patentable because the Act fails to either clarify the terminologies "plant and animal varieties" and "microbiological processes" or to define the stage at which a process will pass to constitute microbiological process, warranting the grant of patent for such invention or to specific procedure for differentiating a genetically modified methodologies from that ordinary biological processes. The effect of this is that Patent Office is left with the discretion to determine the nature of plant varieties or genetically-modified plants excluded under the Patents and Designs Act.

Furthermore, presently, the Nigerian Patent Office and the courts are yet to be confronted with having to decide whether the entire plant or animal organism or rDNA innovation at molecular level is a patentable subject matter under the Act. Neither has there being any decision whether rDNA obtained through the process of manipulation of plant genes by genetic engineering is an invention. But whether a plant and animal molecule is an invention capable of being patented would ultimately

depend on the interpretation of the provisions of Sections 1(1)(a)(b), 4(b) and (5) of the Patents and Designs Act particularly in relation to biotechnological processes and products.

In view of the intellectual protection issue that may arise in the implementation of the Regulation, it will be necessary for the Patents and Designs Act, 1970 to be amended to accommodate some basic IP concerns about biotechnology. Another alternative arrangement is to make regulations on IP specifically to biotechnology and plant breeders specific after due consultation with the stakeholders, detailing procedures, types and other criteria for the patenting of biotechnological inventions.

Finally, one way to deal with the plant breeders' right is to have a separate legal framework that will protect a plant breeder after a due consideration of the national interest and farmer's rights, including food security issues as done in other jurisdictions. This can be done by way of regulation by the Minister responsible for trade and industry with input from relevant Ministries such as Agriculture, Justice and Science. Regulations are more efficient than legislation in terms of speed, flexibility and cost.

## Conclusion

This paper briefly outlines the provisions of the Access Regulation on ABS of GR in Nigeria. Although the new Regulation opens a new vista on ABS in Nigeria, it is fraught with enforcement challenges that may deprive Nigerian people of the full commercial advantages of ABS of her genetic resources if they are not fully addressed. One of such challenges is the monitoring of discoveries and benefits accrued from commercialisation. This could be addressed if the human and institutional capacity of the enforcing authority is strengthened through constant training and education and collaboration with relevant international authorities. Other includes the intellectual property rights of both the permit holders and traditional knowledge holders. From the practical standpoint, it is obvious that the provision of the Access Regulation is insufficient to address the IP concerns. As means of resolving the IP issues arising from ABS of the genetic resources, there is the need to reform the intellectual property laws of Nigeria to accommodate contemporary issues arising from biotechnological innovations and inventions and plant breeding. A major succour for persons seeking access to GR in Nigeria is the transparent and simplistic procedure for securing permit to exploit abundant GR located in various parts of Nigeria.

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i Cartagena, January 29, 2000, 39 I.L.M. (2000) 1027 in force. 11<sup>th</sup> September 2003. Nigeria ratified this Protocol on

ii Conference of the Parties to the Convention on Biological Diversity, Access and Benefit-sharing as Related to Genetic Resources, Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilisation, U.N. Environmental Programme, 6<sup>th</sup> Meeting, U.N. Doc. UNEP/CBD/COP/6/21 (2002).

iii Nigeria is not a signatory to this Treaty. Other regional agreements are the African Model AU Model Legislation on

iv Nagoya, 30<sup>th</sup> October 2010 not yet ratified. Full text of the Protocol can be obtained at the CBD Secretariat online at

[www.cbd.int](http://www.cbd.int).

v Article 15(1) & (2) of the CBD provides that each Contracting Party shall determine access to its GRs and endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting parties and not to impose restrictions that run counter to the objectives of the Convention.

vi FAO, State of Plant Genetic Resources for Food and Agriculture in Nigeria: A Country Report, National Centre for Genetic Resources and Biotechnology, October, 2008, Annex One available on line at <http://www.fao.org/docrep/013/i1500e/Nigeria.pdf> (last visited on 4th April, 2012). See also *Natural Resources Conservation Action Plan*, Vol. 1, (The Presidency, Natural Resources Conservation Council, Abuja, May 1992) at p. 10.

vii. Regulation No. 2009. Prior to this Regulation, although Nigeria has enacted several laws to promote the sustainable conservation and domestic management of natural resources, they do not address the problems of collection, trade in and ABS of GR even though bio-trade and bio-prospecting activities for research and commercial purposes had been going on in Nigeria under a largely informal regime. Some of these laws include Endangered Species

(Control of International Trade) Act, *Cap E9, Laws of the Federation, 2004*; Forest Law, Forestry Law of Lagos State, *Cap. F6, Laws of Lagos State (2003)*; Forestry Law of Ogun State and Forestry Law, Sokoto State, *Cap. 44, Laws of Sokoto State*; Land Use Act, *Cap. L5, Laws of the Federation, 2004*; Animal Law, Wild Animal Protection Law, *Cap. 140, Laws of Northern Nigeria*; Wild Animal Protection Law, *Cap W1, Laws of Lagos State, 2003*; Agricultural (Control of Import) Act, *Cap. A13, Laws of the Federation of Nigeria, 2004*; Animal Diseases (Control) Act, *Cap. A17, Laws of the Federation of Nigeria, 2004*; Live Fish (Control of Importation) Act, *Cap. L24, Laws of the Federation of Nigeria, 2004*; National Crop Varieties Breed (Registration) Act, *Cap. N27, Laws of the Federation of Nigeria, 2004*; Nigeria Environment Standards and Regulation Enforcement Agency (Establishment) Act (Agency), Act. No. 25 of 2007 and Environmental Impact Assessment Act, *Cap. E12, Laws of the Federation of Nigeria, 2004*. For a seminal treatment of this problem, see generally, K. Nnadozie et al., *A Handbook on Laws and Policies on Genetic Resources Governing Access and Benefit Sharing*, (Environmental Law Institute, Washington DC., 2003).

viii Prior to the establishment of NESREA, the authority responsible for the grant of permit was Federal Environmental Protection Agency (FEPA). The Agency was scrapped in 1999 by the Presidency and merged with the Federal Ministry of Environment. However, following the the lacuna in the enforcement of municipal environmental law and implementation of treaties' obligations of Nigeria, the Federal Government of Nigeria established this Agency with the sole mandate to enforce and implement municipal and international environmental law. See Agency Act, Section 7(c), (e) and Section 8.

ix NESREA Act, s.7. As the National Focal Point with a specific mandate to communicate information on access and benefit sharing to Biosafety Clearing House.

x Regulation 3.

xi Regulation 5.

xii Regulation 5 and Schedule 1.

xiii Other relevant information to be provided on application include specific sites in which access will be undertaken, possible location, parts of the genetic resources to be collected, providers of the genetic resources for which access is sought, collection method to be employed, details of local collaborators (individual or corporate) and proposed use of the genetic resources - Regulation 5, First Schedule.

xiv Regulation 6. This is consistent with Article 15(5) of the Convention on Biological Diversity and Article 24 of Bonn Guidelines on Access and Article 6(1) of the Nagoya Protocol.

xv For a clearer understanding of the pluralistic land tenure in Nigeria, see, O. G. Amokaye, "The Impact of the Land Use Upon Land Rights in Nigeria" in R. Home ed., *"Local Case Studies in African Land Law"* (Pretoria University Law Press, South Africa, 2011) 59-78.

xvi The provision is a direct recognition of the beneficial interest of the land owners as the custodians of the genetic resources and prevents imposition of a licensee on the landowners by the government without prior consent. For a seminal treatment of the PIC at the international level, see, N. Kuei-Jung, "Legal Aspects of Prior Informed Consent on Access to Genetic Resources: An Analysis of Global Lawmaking and Local Implementation Toward an Optimal Normative Construction (2009) 42 *Vand. J of Transnational Law* 227.

xvii Conflict resulting from lack of local support for GR prospecting may be in form of prevention of access to the GR *in situ* through violence, kidnappings, murder and sabotage of the foreign prospectors as witnessed in the oil prospecting sector in Nigeria. Host communities may also demand efficient conservation and restoration of the GR and the environment. Local and international newspapers are full of reports of several attacks on foreign oil workers in the Niger-Delta. For example, in April 2004, two American workers employed by a contractor to ChevronTexaco oil production facility that had been abandoned in 2003 were kidnapped when armed militants attacked their boat with heavy gunfire. See Amokaye O.G. "The Convention of Biological Diversity, Access to and Exploitation of Genetic Resources and the Land Tenure System in Nigeria" 1999 (1) *Afr. Journal of Int'l Law*, 86; Mike Oduniyi & Josephine Lohor, Niger Delta: Chevron Suspends Production, *This Day*, Apr. 26, 2004, available at [www.thisdayonline.com](http://www.thisdayonline.com), Warri: The Making of a Middle East, *The Sun (Nig.)*, May 2, 2004; World: Africa Kidnaps rise in Niger Delta, Tuesday, July 6, 1999 available online at <http://news.bbc.co.uk/2/hi/africa/386870.stm>, Four Kidnapped in Oil-rich Niger Delta, Friday 9<sup>th</sup> April, 2010 available online at <http://www.presstv.ir/detail.aspx?id=122884&sectionid=351020505>,

xviii Regulation 6 & Schedule 2.

xix Schedule 2.

xx Regulation 9

xxi Regulation 7.

xxii The private actors involve are the gene-prospectors and owners of the genetic resources. Ownerships of genetic resources in developing countries may include both private owners and public owners. Private owners could be family,

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community or individual or government agencies such as federal or state fund research institutions and forestry institutions.

xxiii Other relevant information that the MTA must disclose are: the permitted and potential uses of the genetic resources, requirement of new prior informed consents in cases of changes of use or purpose, intellectual property rights, conditions of grants, benefit sharing arrangements, including commitment to share monetary and non-monetary benefits, environmental impact assessment obligation and the duration of the MTA .

xxiv Regulation 8

xxv Regulation 8.

xxvi Epizootic disease is the disease that affects many animals of the same kind at the same time.

xxvii Regulation 10(1).

xxviii Regulation 10(2).

xxix Regulation 12.

xxx Regulation 13.

xxxi Regulation 14(1).

xxxii *R v. North Yorkshire Country Council ex-parte Brown & Anor.* (1999) 1 All E.R. 969 at p. 974 per Lord Hoffman.

xxxiii *Ibid.*

xxxiv Regulation 14(3).

xxxv S.37(2).

xxxvi *Adebutu v. Lagos City Council* (1966) All N.L.R. (Reprint) 571; *Pyx Grannite Co. Ltd v. Ministry of Housing and Local Government* (1958) 1 Q.B. 554 at p. 572 per Lord Denning.

xxxvii Under the provisions of Section 351(1) (r) of the 1999 Constitution of the Federal Republic of Nigeria, the jurisdiction to entertain disputes between any agencies of the Federal Government is vested in the Federal High Court only. See also *NEPA v. Edeghero* [2002] 18 N.W.L.R (Pt. 798) p.79 at p.97.

xxxviii *Governor of Oyo State v. Folayan* [1995] 5 SCNJ 50 at 53.

xxxix *supra* note 49.

xl Regulations 14(2)(h), 18, 19

xli Regulation 14(2).

xlii Regulation 16.

xliii EIA Act, Cap E10, Laws of the Federation, 1990, s. 1.

xliv Regulation 1

xlv Environmental Impact Assessment Act, (EIA), s. 4. Although it may be desirable, diversity of habitats, ecosystems, distribution of species in various tropic levels, regeneration status of trees, viability of populations, and identification of key stone species, functional attributes of the ecosystems such as rates of primary productivity, respiration, export and import of materials, nutrient turnover rates, ratio of productivity and biomass, pyramids of biomass, energy, population etc though not provided in most EIA, these parameters may provide vital clue for assessment of the value of the ecosystem to be modified after the activity is put in place and should be included in the EIA.

xlvi EIA Decree, s. 64(1).

xlvii regulation 20(1)

xlviii Regulation 20(2).

xliv Regulation 15(1).

l Regulation 15(1).

li Regulation 15(2).

lii Regulation 15(3).

liii Regulation 15(4).

liv Schedule 3 to the Regulation.

lv Schedule 3.

lvi Regulation 1s 14(2)(e) & (f).

lvii Regulations 14(2)(c).

lviii Regulation 5(1) and 23(1).

lix Regulation 1.

lx Regulation 23(1)

lxi Regulation 23(2)

lxii Traditional knowledge includes a broad range of knowledge that is most united in having the common characteristic of not being protected under existing intellectual property frameworks. A wide range of cultural knowledge falls within its rubric, including biological and other materials for medical treatment and agriculture, production processes, designs, and literature, music, rituals and other techniques and arts.

Ixiii P. Kuruk, "Goading a Reluctant Dinosaur: Mutual Recognition Agreements as a Policy Response to the Misappropriation of Foreign Traditional Knowledge in the United States" (2007) 34 *Pepperdine L. R.* 629.

Ixiv Section 1(1)(a), (b) and (4)

I xv Section 1(4)

Dr. Oludayo Gabriel Amokaye is a Senior Lecturer in Property and Environmental Law, University of Lagos.