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**REPORT ON THE LEGAL STATUS OF GENETIC RESOURCES IN NATIONAL LAW,
INCLUDING PROPERTY LAW, WHERE APPLICABLE, IN A SELECTION OF COUNTRIES**

Note by the Executive Secretary

INTRODUCTION

1. In decision VIII/4 A, paragraph 10, the Conference of the Parties invited “Parties to submit to the Executive Secretary information on the legal status of genetic resources in their national law, including their property law where applicable”, and requested the Executive Secretary “to submit a report to the fifth meeting of the Working Group.”
2. Following the eighth meeting of the Conference of the Parties, a Notification dated 25 May 2006, was sent out to Parties inviting them to provide information to the Executive Secretary in relation to the above. In response to this notification, contributions were received from 9 Parties. These have been compiled and are available in document UNEP/CBD/WG-ABS/5/INF/1.
3. In addition, a consultant was commissioned by the Executive Secretary to carry out a study on the legal status of genetic resources in national law, in a selected number of countries. Thus, the attached study provides an overview of the status of genetic resources in the following: the Andean region, Australia, Brazil, Canada, Costa Rica, Ethiopia, India, Kenya, Norway, the Philippines and South Africa. The countries were selected taking into account the need to ensure geographical balance and to provide an initial overview of different systems in place related to the legal status of genetic resources. This study was produced thanks to financial resources provided by the United Nations Environment Programme (UNEP).

• UNEP/CBD/WG-ABS/5/1.

Annex

LEGAL STATUS OF GENETIC RESOURCES IN NATIONAL LAW

Kent Nnadozie

A. Introduction

1. This report responds to the Conference of the Parties' (COP) decision VIII/4 A: Access and benefit-sharing, and, more specifically, paragraph 10, inviting Parties to submit to the Executive Secretary information on the legal status of genetic resources in their national laws, including their property laws where applicable, and requesting the Executive Secretary to submit a report to the fifth meeting of the Working Group on Access and Benefit-sharing. As at the date of writing, submissions had been received from seven Parties. ^{1/}
2. This report provides an initial analysis of the legal status of genetic resources, using selected contracting parties as case-studies and is, therefore, not exhaustive. ^{2/}
3. It is largely based on the submissions of Parties and on an overview of the national and regional access and benefit-sharing measures available to the Secretariat, as well as information collected from diverse studies and published materials on how countries and regions define the status of genetic resources within their jurisdictions.
4. Since the entry into force of the Convention, access to genetic resources and the sharing of benefits from their utilization (ABS) is one of the areas that have witnessed significant attention and activity. Efforts at both national and international levels to develop legislative, administrative and policy measures for its implementation have increased significantly, culminating in the current process to negotiate an international regime on ABS. However, one of the main challenges in designing the needed ABS measures arises from the lack of clarity, in many jurisdictions, of the legal status of genetic resources. ^{3/} Although Article 15.1 of the Convention unequivocally recognizes the sovereign rights of States over their natural resources, and the authority of national governments to determine access to genetic resources, uncertainty appears to remain in many countries as to the legal status of genetic resources, in other words, how they are treated in law at national and sub-national levels. ^{4/} In particular, because a state's sovereign ^{5/} rights over its natural resources do not necessarily equate to state ownership of the resources, the rules governing ownership and other rights are often not very clear.

^{1/} Australia, Canada, Czech Republic, Ethiopia, Norway, Poland and Switzerland.

^{2/} The Parties presented here are chosen in order to present as wide a range of approaches as possible, and in accordance with available information. The regional grouping and countries covered in the present report include: The Andean Community, Australia, Canada, Costa Rica, Ethiopia, Kenya, Norway, Philippines, The Seychelles, and South Africa.

^{3/} This situation informed, in part, the request in the COP decision VIII/4, part A, at para. 10.

^{4/} Article 15.1 of the Convention on Biological Diversity provides that "Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation".

^{5/} Sovereignty is understood as "[t]he supreme, absolute and uncontrollable power by which any independent state is governed". Black et al., Black's Law Dictionary at 1396 (West Publishing, 1990). Sovereignty thus refers to the exclusive right to exercise supreme political (e.g. legislative, judicial, and/or executive) authority over a geographic region, group of people.

5. From previous studies of national, regional and international instruments and regimes on ABS, it is clear that there are varied approaches adopted by different countries regarding ABS. ^{6/} As a result, “it is difficult to draw general conclusions from the analysis of these measures because countries have adopted different approaches in terms of the types of measures adopted”. ^{7/} The approaches range from no or minimal state interference in genetic resources transactions to very detailed rules of access including, ostensibly, even private contracts. However, discussions about methods of regulating access to genetic resources have been complicated by a lack of clarity about who owns the resources in question.

6. Users of genetic resources need to be sure that a provider has the authority to provide such resources. Such authority does not, in many cases, rest only with the government but also with those who have private or other rights or tenure over the land or resources. Therefore, questions of ownership and tenure, invariably, have an important bearing on the practicalities of ABS and are important elements of national legislation and policy that governments can use to “determine access” to resources. ^{8/} As the Convention leaves the definition or clarification of ownership of genetic resources to the Contracting Parties, they need, therefore, to clarify the relationship between the ownership, tenure, and access regimes.

7. It is to be expected that because of differences in jurisdictions and legal systems, different countries or regions adopt diverse approaches and apply or interpret such fundamental concepts as “ownership” “property” and “control” differently. These differences are also reflected in how they define the ownership of genetic resources, ranging from express total state ownership, as in Costa Rica and Ethiopia; to the apparent recognition of outright private ownership in some cases, for example Canada and Australia; and to *res nullius*, i.e. not subject to ownership at all, for instance, the genetic resources, in some cases, of wild migratory species or those not within any defined national boundaries. The way in which these concepts are defined, inter-relate to, and interact with each other have implications on the status of genetic resources within a particular jurisdiction. In the final analysis, the approach that different countries take in regulating genetic resources is necessarily emblematic of their unique legal, institutional, economic and cultural orientations.

8. Another notable point is that a major misconception usually leads to equating the Convention’s recognition of national sovereignty over genetic resources with state ownership of these resources. This question is critical to the structure of ABS regimes and may often be affected by existing legal frameworks, such as constitutional rights to property and land and tenure laws. It is to be noted that national sovereignty under Article 15.1 of the Convention clearly refers to national rights to determine the ownership and control of genetic resources and not to any particular outcome of this determination.

9. A third notable point is the apparent lack of a clear distinction, in many existing ABS measures, between biological resources and genetic resources. Even in some countries that have enacted legislation on ABS, this key definitional issue is not clearly addressed. However, although Article 15.1 of the Convention specifically refers to genetic resources, it is clearly within national authority to define the scope of their laws as they deem fit and appropriate. There will, on the other hand, be difficult questions about the legal status of genetic resources that exist in more than one country or move between countries. Nevertheless, the development of a functional legal framework that, amongst other aspects, clarifies who

^{6/} For further details see UNEP/CBD/WG-ABS/5/4.

^{7/} Ibid. para 85.

^{8/} Luis Flores-Mimiça and Dominique Hervé-Espejo Chapter 10 Chile: Early Attempts to Develop Access and Benefit-Sharing Regulations; available in Carrizosa, Santiago, Stephen B. Brush, Brian D. Wright, and Patrick E. McGuire (eds.) 2004. *Assessing Biodiversity and Sharing the Benefits: Lessons from Implementation of the Convention on Biological Diversity*. IUCN, Gland, Switzerland and Cambridge, UK.
at p. 230

owns genetic resources requires a clear definition of its scope in regard to genetic resources vis-à-vis biological resources.

B. Defining the concepts of ownership and property

10. “Ownership” is the state or fact of exclusive possession or control of property, which may be an object, land/real estate, intellectual property or some other kind of property and may be absolute or qualified. A right of ownership is associated with an interest in property that establishes the good as being “one’s own thing” to the exclusion of other individuals or groups. This interest assures the owner the right to enjoy and to dispose of the property in a manner he or she sees fit, whether to use or not use, exclude others from using, or to transfer ownership, provided he or she makes no use of them prohibited by law.

11. As stated above, ownership laws vary widely among countries depending on the nature of the subject matter. Generally, “ownership” implies property rights and vice versa, and both embody certain rights to control, sometimes limited either by law or by the nature of the subject matter of the rights. “Property” designates those things that are commonly recognized as being the possessions of a person or group. Important types of property include real property (land), personal property (other physical possessions), intellectual property (rights over artistic creations, inventions, etc.) and “public property” (ownership by a public or governmental body such as the federal, state, local governments or their agencies).

12. Property and ownership is usually seen in terms of a bundle of rights as defined and protected by the sovereign authority. Traditionally, that bundle of rights includes:

- control of the use of the property;
- a right to exclude others from the property;
- the right to any benefit from the property; and
- a right to dispose of, transfer or sell the property.

13. In other words, “sovereignty” in the purview of the Convention, especially in regard to ABS, is not synonymous with ownership, but means the power of the state to determine rights of ownership and control, which includes the power to determine the conditions under which access to genetic resources is granted and how benefits are shared within the territory of the sovereign state.⁹

C. Ownership of biological resources and ownership of Genetic Resources

14. In general, the constitutions of countries define the ownership of land and natural resources (whether mineral or biological). However, the concept of ownership of genetic resources is novel and constitutions, with few exceptions, have not made reference to them although, in some cases, ABS laws have made the connection between ownership and genetic resources.

15. In the absence of any confusion in terms of definition, ownership of biological resources (as natural resources) is, by and large, easily determinable in most jurisdictions since what is “owned” is the physical material that is embodied in, say seeds, plants or animals. Based on existing national laws, any of these can be State, private, or communal property. However, in the case of genetic resources, because the subject matter is quite often intangible in nature, as in information or associated knowledge, difficulties arise. Often, it is the information component of genetic resources is the most valuable for users and ownership is not as clear-cut as the physical object that contains such information.

^{9/} Kent Nnadozie and R. J. L. Lettington *International Treaties of Relevance to Plant Genetic Resources for Food and Agriculture*. Meridian Institute, Washington DC. Online: http://www2.merid.org/bellagio/Intl_Treaties_Paper_FINAL.pdf

16. It is evident that countries have had difficulties in developing workable legal frameworks for ABS that clarifies ownership of genetic resources. It is noted that because their definition of ‘genetic resources’ is sometimes ambiguous, it has been hard to legislatively determine who has rights to dispose of, give access to, or receive benefits from such resources. As a result, many countries apparently rely on the physical entity (i.e., organism, its parts or land where it is found) to define the legal status of their genetic (and biochemical) resources. In countries where there is overlapping legal systems, for instance, where customary laws apply at the community level involving indigenous peoples or local communities, on one hand, and the statutory, civil or common law of the state on the other, the situation is even more fraught.¹⁰

17. Furthermore, there are typically no problems with certain categories of biological and genetic resources, especially those found in certain public areas – *ex situ* collections, national parks or reserves, and protected or conservation areas. These are usually held by the State or public authority on behalf of the constituents, usually citizens of that state. Authority to control and grant access is usually vested in a specific authority or agency, which also receives benefits on behalf of the people. But the questions arise in regard to genetic resources found or located in private property, including microbes, plants and animals.

18. Many legal systems recognize and protect private ownership of biological resources – plants and animals – but what is not clear is the extent of ownership of genetic resources. In most jurisdictions, including common law and civil code, the ownership of, and rights to, natural resources follow the land on which they are found. This conception is often reinforced, primarily by implication, through the constitutional assurance of the right to ownership of private property. In this case, in the absence of specific legislation to the contrary, ownership of the biological material would, plausibly, connote ownership of the genetic components. Precedence is given to private or communal ownership of land or natural resources and the private or communal owner may or may not need the State’s approval to market his, her or their biological or genetic resources. However, in some countries, the Andean Community for instance, all genetic resources are stated to be in the public domain and as such are regulated by the State, even where private ownership of biological resources is recognized. In this case, a distinction is made between genetic resources (in the public domain) and biological resources (owned by private parties) which contain the genetic resources or components. ^{11/}

D. Genetic resources under the International Treaty on Plant Genetic Resources for Food and Agriculture

19. The International Treaty on Plant Genetic Resources for Food and Agriculture (IT or the Treaty) was adopted on 3 November 2001 by the Thirty-first Session of the FAO Conference. The Treaty provides, in harmony with the Convention, for the special needs of plant genetic resources for food and agriculture. ^{12/}

20. The Treaty is silent as to the physical ownership over plant genetic resources for food and agriculture, and Contracting Parties have no obligations to review their legislation in this regard.

^{10/} Chishakwe, N. and Young, T.R. 2003. *Access to Genetic Resources, and Sharing the Benefits of their Use: International and Sub-Regional Issues*, IUCN. Available online at: http://www.iucn.org/themes/law/absdocuments/eng_SADC.pdf.

^{11/} Jorge Cabrera Medaglia And Christian Lopez Silva (2006) *Addressing the Problems of Access: Protecting Sources, While Giving Users Certainty*. IUCN, Bonn. According to the authors, “the distinction lies in the intended use on the part of the applicant at the time of access, for example, whether access to the materials is sought for conventional purposes or with the intention of utilising them for their genetic or biochemical characteristics”. The term ‘genetic resource’ refers to genetic information, independent of physical access to it. Genetic resources should be understood as the “right to use genetic information”.

^{12/} Article 1, International Treaty on Plant Genetic Resources for Food and Agriculture.

21. Contracting Parties, in the exercise of their sovereignty over their resources, agree, to establish a multilateral system, which is efficient, effective, and transparent, both to facilitate access to plant genetic resources for food and agriculture, and to share, in a fair and equitable way, the benefits arising from the utilization of these resources, on a complementary and mutually reinforcing basis. ^{13/}
22. Various plant genetic resources for food and agriculture will be included in the Multilateral System. ^{14/} Contracting Parties will include all plant genetic resources for food and agriculture of a set of crops and forages listed in *Annex I* to the Treaty that are under their management and control. They will invite all other holders of such resources to include them in the Multilateral System, and agree to take appropriate measures to encourage natural and legal persons within their jurisdiction who hold such resources for food and agriculture to do so. International institutions holding *ex situ* collections of plant genetic resources for food and agriculture will also bring their *Annex I* materials into the Multilateral System, and will apply similar access and benefit-sharing provisions to their other materials.^{15/}
23. Holders of plant genetic resources for food and agriculture within the Multilateral System retain ownership of their materials, but must provide access to them on request, and in supplying them, use a Standard Material Transfer Agreement established by the Treaty's Governing Body to regulate the conditions of use, and their obligations as provider, as well as the obligations of the recipient. ^{16/} The Standard Material Transfer Agreement is a contract under private law. Further transfer of that same material in an undeveloped state must be made under the same Standard Material Transfer Agreement, ^{17/} so as to create a chain of rights and obligations in regard to these materials, including the obligation to share monetary benefits under certain conditions.
24. The Standard Material Transfer Agreement recognizes the rights of a developer of "Plant Genetic Resources for Food and Agriculture under Development" defined as "material derived from the Material, and hence distinct from it, that is not yet ready for commercialization and which the developer intends to further develop or to transfer to another person or entity for further development. The period of development for the Plant Genetic Resources for Food and Agriculture under Development shall be deemed to have ceased when those resources are commercialized as a Product". ^{18/} A developer is not obliged to provide such resources on demand, but, if a decision is taken to do so, must do so under the terms and conditions of the Standard Material Transfer Agreement. The developer may also attach additional conditions, relating to further product development, including, as appropriate, the payment of monetary consideration: this provision makes possible the normal functions of commercial plant breeding, while maintaining obligations for commercial benefit-sharing over the final product. ^{19/}
25. As noted above, the Standard Material Transfer Agreement is a private contract between provider and recipient. The benefits, however, do not return to an individual provider, but are pooled for use by the Governing Body within the context of its funding strategy, for the ultimate benefit of developing countries. To manage such a pooled good, where the provider has no beneficial interest in taking legal enforcement action, the Standard Material Transfer Agreement provides two legal solutions. Firstly, it provides for a "third party beneficiary" to represent the interests of the Multilateral System as a whole,

^{13/} Article 10 of the Treaty.

^{14/} Article 11 of the Treaty.

^{15/} Article 15 of the Treaty.

^{16/} Article 12.4 of the Treaty.

^{17/} Available on the internet at <ftp://ftp.fao.org/ag/cgrfa/gbl/gblrepe.pdf>, in *Appendix G to the Report of the First Session of the Governing Body of the Treaty*.

^{18/} Standard Material Transfer Agreement, Article 2.

^{19/} Standard Material Transfer Agreement, Articles 6.5 and 6.6.

and vindicate its rights. ^{20/} FAO is requested to play this role. Secondly, it provides for possible disputes to be settled in the last instance through binding international arbitration. ^{21/} The applicable law shall be General Principles of Law, including the UNIDROIT Principles of International Commercial Contracts 2004, the objectives and the relevant provisions of the Treaty, and, when necessary for interpretation, the decisions of the Governing Body. ^{22/}

26. This set of legal instruments – a standard private contract establishing conditions of use, the provision for a third party beneficiary to vindicate the Treaty’s rights, and recourse to binding international arbitration – is an innovative approach to resolving the special characteristics of the food and agriculture sector, which is characterized by great interdependence of countries in respect of genetic resource for food and agriculture, and by the absolute moral imperative of ensuring their optional use of food security and poverty reduction.

27. At the national level, each Contracting Party “shall ensure the conformity of its laws, regulations and procedures with its obligations as provided in this Treaty”. ^{23/} Article 12.5 is of relevance to the Standard Material Transfer Agreement, and requires that Contracting Parties “shall ensure that an opportunity to seek recourse is available, consistent with applicable jurisdictional requirements, under their legal systems, in case of contractual disputes arising under such MTAs, recognizing that obligations arising under such MTAs rest exclusively with the parties to those MTAs”. ^{24/}

E. The Legal Status of Genetic Resources in selected jurisdictions

The Andean Community ^{25/}

28. Rules aimed at governing genetic resources and associated traditional knowledge within the Andean community are set out within the frameworks of Decision 391 Common Regime for Access to Genetic Resources, Decision 486 Common Intellectual Property Regime as well as Decision 523 Regional Biodiversity Strategy.

29. In 1996, the Andean Community of countries adopted the first regional initiative for a common access regime in the form of Decision 391, a Common Regime on Access to Genetic Resources. Decision 391 sets out general principles and rules for access to, and utilization of, genetic resources, providing a minimum set of rules for each Member State to implement. In consonance with the Convention, Decision 391 recognizes national sovereignty over genetic resources, the rights of indigenous communities to participate in decision-making and their authority over traditional knowledge and the importance of regional cooperation.

30. The Decision applies to (i) genetic resources of which member States are countries of origin; ^{26/} (ii) derivatives (derived products include molecules, combinations or mixtures of natural molecules including raw extracts of living or dead organisms (Article 1), i.e. biochemicals); and (iii) associated “intangible components” – any knowledge associated to the genetic resources or derivatives sought. It also applies to; (iv) the genetic resources of migratory species which by natural circumstances are found within and taken from the areas of jurisdiction of a member State.

^{20/} Standard Material Transfer Agreement, Articles 4.3 and 4.4.

^{21/} Standard Material Transfer Agreement, Article 8.

^{22/} Standard Material Transfer Agreement, Article 7.

^{23/} Article 4 of the Treaty.

^{24/} Article 12.5 of the Treaty.

^{25/} Bolivia, Colombia, Ecuador, Peru and Venezuela.

^{26/} The country of origin is the country which possesses genetic resources in *in situ* conditions, including those taken from *in-situ* sources and found *ex situ* (Article 1).

31. Decision 391 is unique because it is one of the few regimes that make a clear distinction between the legal status of genetic resources (under State domain) and the biological resources that contain them.^{27/} In other words, while biological resources which contain genetic components can be subject to private or collective property rights, genetic resources are deemed “inalienable, cannot be seized and have no deadlines, without prejudice to property regimes applicable to the biological resources which contain them, the land on which they are found, or the associated intangible component”. The Decision covers genetic resources in both *in situ* and *ex situ* biological resources. ^{28/}

32. Furthermore, the decision also makes a distinction between the “providers” of the respective resources. According to Article 1 definitions: the “Provider of the Biological Resource” is “a person empowered by this decision and complementary national legislation to supply the biological resource that contains the genetic resource or its derivatives”; while the “Provider of the Intangible Component” is “a person that, through an access contract and pursuant to this decision and to complementary national legislation, is empowered to supply the intangible component associated with the genetic resource or its derivatives”.

33. Effectively, therefore, the State has and retains property rights over genetic resources in all circumstances and such rights are independent from the legal regime applicable to biological resources which contain them. ^{29/}

34. The regime on ABS also has a bearing on the related intellectual property issues and processes. Article 75 of Decision 486 on a Common Industrial Property Regime provides that;

“Patents granted on inventions obtained or developed from genetic resources or traditional knowledge, of which any Member State is country of origin, without presentation of a copy of the proper access contract or license from the community shall be nullified.” ^{30/}

In addition, Decision 391 provides that:

“Complementary Provisions – Second: The Member Countries shall not acknowledge rights, including intellectual property rights, over genetic resources, derivatives or synthesized products and associated intangible components, that were obtained or developed through an access activity that does not comply with the provisions of this Decision”.

35. This provision is ostensibly included to address cases of misappropriation, ensure that prior informed consent of the relevant parties are obtained and that proper benefit-sharing arrangements have been made between the providers and users of the genetic resources. It also aims at ensuring that intellectual property rights are not improperly obtained on local genetic resources.

36. Decision 523 entitled “Regional Biodiversity Strategy for the Tropical Andean Countries” is based on national strategy documents from all Andean countries re-emphasizes regional cooperation on biodiversity conservation and sustainable use. It is, as such, important in forging a stronger regional approach in the governance of genetic resources including ABS.

Australia

^{27/} Article 6 of Decision 391 provides that “...genetic resources or their derived products of which Member States are countries of origin, are goods or patrimony of the Nation or State of each Member State...”

²⁸ See definition of “access” in Article 1.

^{29/} Manuel Ruiz Muller (2000). *Regulating bioprospecting and protecting indigenous peoples knowledge in the Andean Community: Decision 391 and its overall impacts in the Andean region*, UNCTAD, Geneva.

^{30/} Decision 486 of the Andean Community on a Common Industrial Property Regime, adopted on 14 September 2000.

37. Australia operates a federal system of government and, like other similar systems, shares powers and jurisdiction between different levels of government. ^{31/} The responsibility for managing natural resources is shared between the Territory, State and Commonwealth (Federal) Governments. This shared management responsibility, generally, makes it more challenging to define rights over, or common approaches or understanding nationwide.

38. In implementing the Convention's provisions, authorities in Australia take into account a number of legislative and administrative challenges arising out of a complex system of government with one federal government and eight state and territory governments, and the operation of existing laws relating to property rights in each jurisdiction. The complex system of property laws, as well as established Constitutional arrangements in Australia, has contributed to the need for each government to establish its own legislation. Access to genetic resources is controlled variously by a number of governments, private citizens, indigenous land holders, and lease holders.³²

39. The legal system of Australia is based on the common law tradition and, in the absence of express constitutional or legislative stipulation, it can be implied that the Commonwealth, the State governments and individuals own the genetic resources found on their respective lands in accordance to common law principles. ^{33/}

40. The constitution does not stipulate who owns genetic resources nor does any other national legislation. In 2000, a Commonwealth inquiry over access to biological resources advised upon a scheme with legal effect that could be implemented through section 301 of the Environment Protection and Biodiversity Conservation Act 1999. ^{34/} The Scheme provides for an access permit to native biological resources found in the Commonwealth Areas, which may be approved or refused by the relevant Government Agency or Landowner. The Act stipulates that "the decision of the traditional owners of biological owners to deny access to their resources is final". ^{35/}

41. Biodiscovery in Commonwealth areas is governed by the Environment Protection and Biodiversity Conservation Regulations 2000 (the Regulations). ^{36/} Part 8A provides for access to genetic and biochemical resources found in native species in Commonwealth areas. Under the Regulations, persons seeking access to biological resources must apply to the Department of the Environment and Water Resources for a permit.

42. Given the federal structure, and in order to achieve a coherent legal framework and allow the implementation of Convention's ABS obligations in harmony with the natural resource management decisions made in each jurisdiction, Australia decided to establish a nationally consistent approach. An overarching policy entitled Nationally Consistent Approach for Access to and Utilisation of Australia's

^{31/} Australia's federal system of government comprises the national government, six sovereign states and two self-governing territories.

^{32/} Submission of the Government of Australia to the Secretariat in response to Notification 2006-045 (Ref SCBD/SEL/VN/VP/54834).

^{33/} "At common law, ownership of land includes all the substrata below the surface. Natural things attached to land (or its substrata) or growing on (or in) it, whether cultivated or not, form part of the land and will be the property of the owner of the land. It would seem to follow that biological resources generally that are attached to or growing on or in land would be regarded as the property of the landowner. The common law rule would be subject to valid legislation or to any agreement (lease, licence, contract) to the contrary into which the landowner had entered." Voumard, John (2000) *Commonwealth Public Inquiry into Access to Biological Resources in Commonwealth Areas* Commonwealth of Australia, p 53.

^{34/} Commonwealth Public Inquiry into Access to Biological Resources in Commonwealth Areas, report available online: <http://www.environment.gov.au/biodiversity/science/access/inquiry/chapter3.html>.

^{35/} *Ibid.*

^{36/} Commonwealth areas are those lands and waters owned or managed by the Australian Government and those not managed by State and Territory governments.

Native Genetic and Biochemical Resources (NCA) was, adopted and endorsed by the 9 Australian governments on 11 October 2002. This strategy now stands as the basis for Australia's implementation of ABS regimes.

43. Prima facie, the intellectual property rights in any processes or products (i.e. patent rights) derived from or developed from ex situ collections of biological resources held by Commonwealth agencies will belong to the person responsible for developing those processes or products (the inventor).^{37/} This is regardless of the ownership of any resources from which those processes or products are derived, or where those resources may be held. However, it would be open to a Commonwealth agency to permit access only on the condition that intellectual property rights in any products derived from these resources are vested in a certain way, e.g. jointly in the inventor, the Commonwealth and a representative of the traditional owners.³⁸

44. Given the complexity of Australian legal arrangements, and the choices made by Australian governments, ABS legislation does not cover all access to native genetic resources in all circumstances (for example, biological resources on private land in Queensland, one of the constituent states). The Queensland Government's Biodiscovery Act 2004 sets out a framework regulating biodiscovery, with the purpose of facilitating sustainable access to Queensland's biodiversity and ensuring the fair and equitable sharing of any benefits derived from these activities with the State of Queensland. The Act applies to resources on land or waters in Queensland that are not owned or possessed privately. ^{39/}

45. In the Northern Territory "biodiscovery" is covered by the Biological Resources Act 2006. Under the Act, a person who wishes to engage in biodiscovery for scientific or commercial reasons in any part of the Northern Territory must obtain a permit. A permit will not be issued until the applicant has obtained written prior informed consent from the provider and a benefit-sharing agreement. Unlike in Queensland, this includes situations where the access provider is a private citizen. The Northern Territory government can also issue a certificate of provenance if requested. ^{40/}

Brazil

46. Article 225 of the Federal Constitution of Brazil affirms that the right to an environment that is well balanced ecologically constitutes a "common asset of the people essential for the healthy quality of life inherent in every collectivity and should be protected and preserved for present and future generations". ^{41/} While not expressly provided for in the Constitution or any other legislation, genetic resources have been described as the heritage and patrimony of the Federal Government by virtue of the provisions of Article 225 of the Federal Constitution and the special nature of the resources. ^{42/}

47. However, Brazil operates a federal system of government and, according to Jorge Cabrera, "the ownership [of genetic resources] depends basically on the rest of the legal system of Brazil at the Federal

^{37/} *Patents Act 1990* (Cth), s15(1)(a).

^{38/} Voumard, John (2000) *Commonwealth Public Inquiry into Access to Biological Resources in Commonwealth Areas* Commonwealth of Australia, at p 53.

^{39/} See note 20.

^{40/} See note 20.

^{41/} Article 225 of the Constitution of Brazil, text of the Constitution of Brazil is available online: International Constitutional Law Project, < http://www.servat.unibe.ch/law/icl/br00000_.html>.

^{42/} André Lima *Ownership of Genetic rights: from whom? For whom?* Online: <http://www.socioambiental.org/pib/english/rights/patrgeni.shtm>.

or State level. Some commentators consider that [genetic resources] are public goods of special use subject to special procedures in order to allow their utilization”. ^{43/}

48. Since Brazil’s ratification of the Convention, there have been several initiatives to regulate access to Brazilian genetic resources but no law has yet been enacted at the Federal level. So far, there are different proposals being evaluated by the Congress, but the States of Amapa and Acre have passed their own laws regulating access to genetic resources. In both states, genetic resources are considered the patrimony of the state and are distinguished from biological resources, which contain them and may be owned privately or communally. ^{44/}

49. However, in order to address rampant and unregulated bioprospecting activities, the federal government passed a Provisional Measure addressing elements involved in access to genetic resources.^{45/} The Measure establishes a Council for managing Brazilian genetic heritage, Conselho de Gestao do Patrimonio Genetico (CGEN). The Council’s main tasks are to implement national policies on access to genetic resources and traditional knowledge, and develop technical and administrative activities for providing or denying access.

50. Article 31 of the Provisional Measure requires that the origin of the genetic material and the associated traditional knowledge be specified when applying for IPRs for a process or product obtained using samples of components of the genetic heritage.

51. The Provisional Measure does not identify or define the ownership of the genetic patrimony. It is not clear whether the states have the right to regulate access to the genetic resources found within their borders, or whether only the federal government can decide on ABS policy. Genetic resources are not mentioned expressly in the Constitution as belonging to the Federal Union. The union, the states, and the federal district have the legislative right to regulate all questions concerning forests, hunting, fishing, fauna, nature conservation, preservation of the soil and natural resources, protection of the environment, and pollution control. It appears that the states may regulate access, at least until the passage of federal legislation. ^{46/}

52. However, Cabrera (p.65) states that it is possible to deduce that the States do not have the genetic patrimony ownership, because the States are not usually part of the ABS Contracts (Provisional Measure art. 24 and 27). He further notes that there is a PEC (Proposal for Constitutional Alteration) to include the Genetic Patrimony as a Union good, but so far it remains a proposal. In the project of law that was prepared, the genetic patrimony was considered a common good, as the Federal Constitution establishes in article 225 in regard to the environment.

53. According to Article 2 of one of the existing draft Bills on Access to Genetic Resources, “Genetic resources and derived products are considered public property of special use of the Brazilian Nation, and the contracts of access to them shall be carried out under the terms of this Act, without prejudice to material and immaterial property rights relating to:

^{43/} Jorge Cabrera Medaglia *A Comparative Analysis of Legislation and Practices on Access to Genetic Resources and Benefit-Sharing (ABS) Critical Aspects for Implementation and Interpretation* IUCN, Bonn. Available online: http://www.iucn.org/themes/law/absdocuments/eng_critical_aspects.pdf at 214.

⁴⁴ Jorge

^{45/} K. Garforth *et al.*, *Overview of the National and Regional Implementation of Measures on Access to Genetic Resources and Benefit-Sharing* (CISDL report for Environment Canada, December 2005). Available online: http://www.cisdl.org/pdf/ABS_ImpStudy_sm.pdf

^{46/} Miriam Dross and Franziska Wolff, *New Elements of the International Regime on Access and Benefit-Sharing of Genetic Resources - the Role of Certificates of Origin*. Available online: http://www.abs.biodiv-chm.de/en/data/BfN_Skript_127.pdf

- I the natural resources containing the genetic resource or derived product;
- II the lands traditionally inhabited by Indians and their exclusive enjoyment of the riches existing in such lands;
- III the private collection of genetic resources or derived products;
- IV the traditional knowledge possessed by indigenous populations and local communities, associated with genetic resources or derived products;
- V the domesticated and semi-domesticated crops in Brazil.”

54. The draft Bill further provides that “the owners and holders of goods and rights referred to in this article shall be ensured of the fair and equitable sharing of the benefits derived from the access to genetic resources, to the traditional knowledge possessed by indigenous populations and local communities associated with genetic resources and derived products, and to the domesticated and semi-domesticated crops in Brazil, under the terms of this Act”.

55. It is, therefore, obvious that there is an attempt, in the Bill, to highlight the difference between biological and genetic resources and to distinguish the ownership and control of respective categories. In that case, genetic resources will be a public good residing in the Union (or Federal Government), while the biological resources containing them may be owned or controlled by any other entity, whether private or public.

Canada

56. Canada operates a Federal System of government, comprising of provinces and territories with substantial powers and wide jurisdictions including over matters related to land, natural and genetic resources.

57. Since ratifying the Convention, Canada has not passed any laws or regulations regarding access or benefit-sharing. However, as in many other countries, there are existing laws and policies that have both direct and indirect implication on the status of genetic resources in the country at both the federal and provincial levels as well as within aboriginal communities.

58. Many of these laws and policies pertain to parks, ecological reserves, forestry, wildlife, fisheries, wild plants, endangered species and protected ecosystems such as wetlands. Some of these laws also establish property rights in some species by providing that certain animals or plants are the property of the Crown. Others indirectly control access to genetic resources by controlling access to habitats and species by requiring hunting licenses and research permits, for example. ^{47/}

59. However, these acts and policies do not provide answers to questions that might arise regarding the rights of either the owners or the potential users of genetic resources. The legislative provisions regarding research on provincial and federal lands were not drafted with access to genetic resources for commercial purposes in mind or with the contemplation of researchers’ potential interest in protecting the results of their research through intellectual property. ^{48/}

60. As there are no laws enacted specifically taking into account these questions, there are no explicit provisions as to who owns genetic resources although laws pertaining to plants animals and ownership of land, and laws pertaining to public lands and protected areas may be interpreted to include genetic resources. ^{49/} The presumption implicit in current federal policies is that private property owners are free to control access to the genetic resources on their property and to contract with those seeking

^{47/} Karen Clark and Ian Attridge *Protecting the Biodiversity of the Americas Legal and Policy Mechanisms Concerning Genetic Resources in Canada*. The Canadian Institute for Environmental Law and Policy January, 1997

^{48/} Ibid.

^{49/} Ibid.

access to them to share in the benefits. ^{50/} However, in regard to *ex situ* genetic resources in Canadian gene banks, the expressed policy of the Federal Government of Canada is that access will be unrestricted to bona fide researchers and breeders anywhere in the world, for the purposes of research and breeding. ^{51/}

61. It would seem, relying on the common law, that anyone who owns land, an animal or plant owns everything on or in it, including its genetic resources. With respect to genetic resources found in parks, reserves or protected areas, custody or management will be under the relevant government department or agency on behalf of the Crown or province or territory (in other words, Canadian people).

Costa Rica

62. The Costa Rica biodiversity law (Law 7788 of May 1998) establishes general provisions, such as objectives, the scope of application of the law, guiding principles, and the ownership regime for biological diversity. The law states, in article 2, that the State has complete and exclusive sovereignty over the genetic components of biodiversity.

63. The law of Costa Rica further stipulates that genetic resources are part of the public domain. Under Article 6, “the biochemical and genetic properties of the components of biodiversity, wild or domesticated, belong to the public domain”. This ostensibly means that ownership of genetic resources is vested in the state. ^{52/} Article 6 further states that the State will authorize the exploration, the investigation, the bioprospecting, and the use of components of biodiversity that constitute public properties, as well as the use of all the genetic and biochemical resources.

64. The Biodiversity Law concurrently recognizes that private land owners, owners of biological resources, the Director of a conservation area and the Indigenous People territories can be granted ownership entitlements over biological resources. ^{53/} The Law thus recognizes separate rights over biological resources. Article 63, which contains the requirements for access to genetic resources requires, *inter alia*:

1. *The Prior informed consent of the representatives of the place where the access will occur, be they the regional councils of Conservation Areas, the owners of farms or the indigenous authorities, when it is in their territories;*
2. *The approval of the prior informed consent by the Technical Office of the Commission;*
3. *The stipulation of the terms of technology transfer and equitable distribution of benefits, if any, as agreed in the permits, agreements and concessions, as well as the type of protection of associated knowledge demanded by the representatives of the place where the access will occur. ^{54/}*

65. Intellectual property and protection of traditional knowledge Costa Rica’s Patent Law (Law 6867 of 1983 – revised in 2000) provides that biotechnological inventions may be patented. Plant varieties will be protected by a special law. The Biodiversity Law provides that intellectual property rights shall be

^{50/} Susan P. Bass and Manuel Ruiz Muller (eds.) 1999. *Protecting Biodiversity: National Laws Regulating Access to Genetic Resources in the Americas*. IDRC, Ottawa.

^{51/} See note 35.

^{52/} It would appear that “public domain” in this context means state custodianship of the resources rather than the connotation that is given the concept in some other jurisdictions (especially under common law) to mean “not owned by any one”, in particular in the sense that no one can be legitimately excluded.

^{53/} Article 9 of Biodiversity Law Costa Rica. See also Jorge Cabrera Medaglia. *A Comparative Analysis of Legislation and Practices on Access to Genetic Resources and Benefit-Sharing (ABS) Critical Aspects for Implementation and Interpretation* IUCN, Bonn. Available online: http://www.iucn.org/themes/law/absdocuments/eng_critical_aspects.pdf

^{54/} Article 63 Biodiversity Law Costa Rica.

consistent with the objectives of the Law. It excludes from any form of protection: DNA sequences, plants and animals, microorganisms that are not genetically modified, essential biological procedures for the production of plants and animals, natural cycles or processes, inventions derived from related knowledge, traditional or cultural biological practices in the public domain, and inventions that if exported commercially as a monopoly might affect agricultural products or processes that are critical for the health and food of Costa Rican citizens. It also provides that the relevant authorities should consult the Technical Office of the National Biodiversity Administration Committee (CONAGEBIO) before granting intellectual or industrial property rights related innovations that involve biodiversity elements.

Ethiopia

66. The Constitution of the Federal Democratic Republic of Ethiopia, Proclamation No. 1 of 1995, provides, under Article 40, for the right to property. Paragraph 1 stipulates the right of each citizen to the ownership of private property. However, paragraph 3 of Article 40 provides for the exclusive ownership of land and all natural resources by the State and the peoples of Ethiopia. 55/

67. The Constitution also provides that the government and all Ethiopian citizens have the duty to protect the country's natural resources; that development programs and projects shall not be undertaken in a way that will damage the environment; and that the public has the right to be consulted and express their views in the planning and implementation of environmental policies and projects that affect them. Article 89 provides that citizens have the right to benefit from the country's legacy of natural resources and with the right to participate in the formulation of national development policies and programmes.

68. In February 2006, the Federal Government issued the Ethiopian ABS law entitled A Proclamation to Provide for Access to Genetic Resources and Community Knowledge and Community Rights. 56/ The law draws a distinction between biological and genetic resources. The definitions section largely adopts the definitions of 'biological resource' and 'genetic resource' from the Convention on Biological Diversity although, significantly, it states that 'genetic resource' includes derivatives. 57/

69. Section 5 of the Proclamation specifically addresses the issue of ownership of genetic resources and community knowledge. This is particularly remarkable in the sense that most ABS measures currently in force do not explicitly address the issue of ownership. Section 5 of the Proclamation states that:

1. *The ownership of genetic resources shall be vested in the state and the Ethiopian people.*
2. *The ownership of community knowledge shall be vested in the concerned local community.*

70. The law thus draws a distinction between genetic resources, which vests in the state, and associated "community knowledge", which is owned by the relevant community holding it. "Community knowledge" is defined as the "knowledge, practices, innovations or technologies created or developed over generations by local communities on the conservation and use of genetic resources". 58/ By virtue of this ownership, the law specifically recognizes the right of local communities "to regulate the access to

55/ Worku, Damena. 2001. Access to Genetic Resources in Ethiopia. Chapter 9 available in: Kent Nnadozie, Robert Lettington, Carl Bruch, Susan Bass, Sarah King (eds), *African Perspectives on Genetic Resources – A Handbook on Laws, Policies and Institutions*, Environmental Law Institute, 2003.

56/ Proclamation No. 482/2006.

57/ Article 2.6, "Genetic resource" means any genetic material containing genetic information of actual or potential value, including derivatives.

Article 2.3, "derivative" means product extracted or developed from biological resource this may include products such as plant varieties, oils, resins, gums, chemicals and proteins.

58/ Article 2.14, Proclamation No. 482/2006.

their community knowledge”, their “inalienable right to use their genetic resources and community knowledge”, and “the right to share from the benefit arising out of the utilization of their genetic resources and community knowledge”. ^{59/}

71. These provisions are in consonance with the Convention and consistent with the reference to “traditional knowledge” in the context of Article 8(j) of the Convention, which provides for the respect, preservation and maintenance of “knowledge, innovations and practices of indigenous and local communities...” and for the “the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices”.

72. The Proclamation does not draw any distinctions between different categories of genetic resources, but Article 15(2) of the Proclamation also provides that:

An access to genetic resources under a multilateral system of access to which Ethiopia is a party shall be made in accordance with the conditions and procedure specified thereof. The condition and procedure in accordance with which access to genetic resources under multilateral systems shall be implemented shall be determined by regulations.

73. Although the Proclamation, in this article, ostensibly provides for the implementation of the Multilateral System of Access and Benefit-sharing (MLS) under the International Treaty on Plant Genetic Resources for Food and Agriculture, the provision does not appear to be restricted to the Treaty’s MLS alone. It is rather broad in construction and could, therefore, be construed as making allowance for the accommodation of any further multilateral agreements or arrangements on access covering any other categories of genetic resources. The provision also commits the country to implementation of any such system by regulations. ^{60/}

India

74. The Indian Biodiversity Act is the law that governs ABS in India. The Act primarily aims at regulating access to biological resources and associated TK so as to ensure equitable sharing of benefits arising out of their use, in accordance with the provision of Article 15 of the Convention on Biological Diversity. There are no specific provisions in the Biodiversity Law addressing the issue of ownership of genetic resources nor is there any direct reference to the ownership or legal status of the genetic resources in the constitution or any other law.

75. India being a federal republic, authority over biological diversity is shared between the national government and the different constituent states and territories. The Act, therefore, envisages a three-tiered structure for its implementation – national, state and local. The Biodiversity Act provides that prior approval of the competent national authority, the National Biodiversity Authority (NBA), or the State must be obtained before applying for intellectual property rights for an invention based on a biological resource obtained from India. ^{61/} There is, however, no reference to the rights of ownership over the biological resources or land which may contain the genetic resources.

76. The Patents Act of 1970, amended in 1999 and 2002, does not allow the grant of patents over any process or product which was already available to the public through use, written description, or any other means, in any manner, in any country. The Patents Act also prohibits the granting of patents for materials or techniques used by local and Indigenous communities prior to the filing date of the patent application. This recently amended patent law also contains provisions for mandatory disclosure of the

^{59/} Article 6, Proclamation No. 482/2006.

^{60/} This stipulation to implement any multilateral system by regulation is especially noteworthy, in that it obviates the need to go through the rigorous process of enacting new laws to implement any existing or future multilateral agreements on access to genetic resources.

^{61/} See section 6(1) and 19(2) of the Indian Biological Diversity Act, 2002.

source and geographical origin of the biological material used in the ‘invention’ being patented. Provisions have also been incorporated which include non-disclosure or wrongful disclosure as grounds for refusal of the patent application or revocation of a patent already granted. ^{62/}

Kenya

77. Kenya, like many other states, has yet to address the legal status of genetic resources. However, it approaches the concept of property based on the English common law system, except for the instances where this is superseded by the Constitution or statute. The understanding of real property includes land and whatever is erected or growing upon or affixed to land to the extent that it is considered immovable by law. ^{63/}

78. The provisions of the 1992 Constitution of Kenya addressing property are introduced by the umbrella provisions of section 70, which provides every citizen with “protection for the privacy of his home and other property and from deprivation of property without compensation.” The question as to whether private landowners also have ownership and control of the genetic resources found on their property is however not expressly or clearly established. Kenya inherited the Anglo-Saxon common law tradition pursuant to which ownership is said to extend to everything that is found beneath and above someone’s private property. ^{64/}

79. Given its common law tradition, it is arguable that genetic resources constitute part of the rights that make up real property, in that they invariably are growing upon or are affixed to land in some manner. This approach is supported by a decision of the High Court, which held “that according to common law and/or customary law of the inhabitants of this country, those entitled to the use of land are also entitled to the fruits thereof which include the fauna and flora unless this has been negated by law.”^{65/}

80. The 1992 Constitution of Kenya refers to the environment only in the context of governmental powers for the purposes of conservation. Consequently, it does not directly refer to the ownership of, access to, or benefit sharing of genetic resources. However, certain provisions can have direct impacts on these questions. In particular, the Constitution’s provisions regarding personal property and trust land may be relevant.

81. Some of the provisions of the Constitution of Kenya most relevant to genetic resources are contained in chapter IX, dealing with the status of trust land in the country. Section 115 places the principal responsibility for trust land in county councils. Subsection (2) of section 115 obliges county councils to hold trust land for the benefit of the ordinary residents of the land and to “give effect to such rights, interests or other benefits in respect of the land as may, under the African customary law for the time being in force and applicable thereto, be vested in any tribe, group, family or individual.”

82. The Environment Management and Co-ordination Act (1999) ^{66/} is Kenya’s framework legislation coordinating all environmental management activities in the country. As such, it constitutes

^{62/} C.R Bijoy. *Access and Benefit Sharing in Kerala and Tamilnadu, India: An Examination of TBGRI-Kani ‘Model’ and Emerging Issues from the Indigenous Peoples’ Perspective*. Available online: <http://www.international-alliance.org/documents/ABS%20-%20India.pdf>

^{63/} Lettington, Robert. 2001. Access to Genetic Resources in Kenya. Chapter 11. In: *African Perspectives on Genetic Resources. A Handbook on Laws, Policies and Institutions*. Edited by Nnadozie, K., Lettington, R., Bruch, C., Bass, S., and King, S. Environmental Law Institute, Washington.

^{64/} Ibid.

^{65/} Abdikadir Sheikh Hassan and 4 Others v. Kenya Wildlife Service, Civil Case No. 2959 (High Ct. of Kenya, 1996). Cited in Lettington, Robert, Ibid

^{66/} *Environment Management and Coordination Act (1999)*, no. 8 of 1999, entered into force 14 January 2000.

the primary implementing legislation for the Convention on Biological Diversity. A number of the provisions of the Act have either direct or indirect potential impacts on the issue of access to genetic resources. The most obvious of these is section 53, “access to genetic resources of Kenya.”

83. Section 53 mandates the National Environment Management Authority (NEMA) to “issue guidelines and prescribe measures for the sustainable management and utilisation of genetic resources of Kenya for the benefit of the people of Kenya.” Accordingly, the provisions of any guidelines issued or measures prescribed, shall include –

- a) appropriate arrangements for access to genetic resources of Kenya including the issue of licenses and fees to be paid for that access;*
- b) measures for regulating the import or export of germplasm;*
- c) the sharing of benefits derived from genetic resources of Kenya; and,*
- f) any other matter that the Authority considers necessary for the better management of the genetic resources of Kenya.*

84. Pursuant to these provisions, the NEMA has issued the relevant regulations, namely the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations 2006. The scope of the regulations is fairly broad. Except for a list of things that they do not apply to, all access to and use of genetic resources is covered by the regulations. All bioprospectors will be required to obtain a research clearance certificate, prior informed consent from the community and/or property owners, and enter into a material transfer agreement that includes the sharing of monetary and non-monetary benefits.

85. What this implies, in effect, is that although genetic resources may be privately owned by virtue of common law principles or constitutional rights, all access to genetic resources as defined must be granted only with the permission of the relevant state authority.

86. Sub-section 50(f) of the Environment Management and Co-ordination Act provides that any measure for the conservation of biological diversity “shall . . . protect indigenous property rights of local communities in respect of biological diversity.” The term “indigenous property right of local communities” is not defined by the Act, but given Kenya’s historical recognition of customary law in various fields, it would seem, at a minimum, to indicate an intention to recognize customary rights over natural resources. Such an interpretation would seem to be consistent with other references to community rights in the Act.

87. Section 43 provides that “the Minister may, by notice in the Gazette, declare the traditional interests of local communities customarily resident within or around a lake shore, wetland, coastal zone or river bank or forest to be protected interests.” Sub-section 48.2 provides that the Director-General of NEMA “shall not take any action, in respect of any forest or mountain area, which is prejudicial to the traditional interests of the local communities customarily resident within or around such forest or mountain area”. There is, however, no definition of the term “traditional interests” in the Act and it may or may not include interests in genetic resources.

Norway

88. According to the submission by Norway to the Secretariat, the Draft Act on the protection of the natural environment, landscape and biological diversity, including draft regulation on access to and benefit-sharing of genetic resources, have been subject to a broad public hearing, and the government is in the process of preparing a proposal of law to be presented to Parliament. The Government had appointed a national Committee on biological diversity that drew up proposals for provisions dealing with access to genetic material.

89. The committee had considered genetic material primarily as a common resource, which through research and development can be used to develop new knowledge and new inventions for the benefit of people and the environment. For this to be achieved, access to and utilization of genetic resources must be in accordance with the conservation targets of the draft Act, and traditional use by indigenous peoples and local communities must be respected. Accordingly, genetic material obtained from the natural environment entitles any person to explore for, extract and utilize genetic material within the framework provided by the draft Act and other relevant legislation.

90. The committee proposed a separate provision on access to genetic material in public collections in Norway. It is also proposed that any person who receives genetic material from such collections shall refrain from claiming intellectual property rights or other rights to the material that would limit its use for food or agriculture. Among other things, the latter requirement implements one of the provisions of the International Treaty on Plant Genetic Resources for Food and Agriculture

91. The committee also proposes further provisions to ensure that collection and utilization of genetic material from other countries is carried out in accordance with the provisions of the Convention on Biological Diversity. These include the provision that if genetic material is imported for utilization in Norway from a state that requires consent for collection or export of such material, the import may only be permitted if such consent has been given and in accordance with the conditions laid down for such consent.

92. A considerable part of the land in Norway is in private ownership. Private land owners are responsible for the management of their properties. Consequently, mechanisms to involve the private sector have been a central component of Norwegian policies and strategies on biodiversity management. There is, therefore, an implicit recognition that private owners of land also own the biological as well as the genetic resources attached to their land.

93. In 2003 (entered into force February 2004) the Norwegian Patents Act was amended to address disclosure of origin. A new para. 8 b) states that the patent application shall include information on the country from which the inventor collected or received the biological material (the providing country). If it follows from national law in the providing country that access to biological material shall be subject to prior consent, the application shall inform on whether such consent has been obtained.

94. If the providing country is not the same as the country of origin of the biological material, the application shall also inform on the country of origin. The country of origin means the country from which the material was collected from in-situ sources. If it follows from national law in the country of origin that access to biological material shall be subject to prior consent, the application shall inform on whether such consent has been obtained. If information dealt with under this subsection is not known, the applicant shall state this in the application.

95. Infringement of the duty to provide information is subject to penalty in accordance with the General Civil Penal Code. However, the duty to provide information is without prejudice to the processing of patent applications or the validity of granted patents.

Philippines

96. Shortly after its ratification of the Convention, the Philippines issued Executive Order 247 (EO 247), "Prescribing Guidelines and Establishing a Regulatory Framework for the Prospecting of Biological and Genetic Resources, their By-Products and Derivatives, for Scientific and Commercial Purposes, and for Other Purposes". ^{67/} Executive Order 247 entered into force on May 18, 1995. The

^{67/} Executive Order No. 247, *Prescribing Guidelines and Establishing a Regulatory Framework for*

Philippines' Executive Order 247 was remarkable as it is considered to be the first national legislation on ABS to be introduced pursuant to the Convention. In 1996, the Department of Environment and Natural Resources (DENR) issued Administrative Order No. 20 (DAO No. 96-20), the implementing rules and regulations for EO 247.⁶⁸

97. EO 247 established the legal framework for bioprospecting and regulation of access to biological resources in the Philippines. EO 247 "... covers prospecting of all biological and genetic resources in the public domain, including natural growths on private lands, which foreign and local individuals, entities, organizations whether government or private – intend to utilize." In its first section, EO 247 recognizes the clear framework for property rights to biological resources put forward in the Philippine constitution: the Philippine State owns all forests, wildlife, flora and fauna, and other natural resources (Section 2, Article XII).

98. The Constitution of the Philippines states that all lands of the public domain, waters, minerals, coal, petroleum, and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna, and other natural resources are owned by the State. The exploration, development, and utilization of natural resources shall be under the full control and supervision of the State. This provision of the Constitution is the basis for EO 247 as stated in its Preamble. Although it is not categorically stated in EO 247 that ownership of biological and genetic resources belongs to the State, it is implied in some of its provisions such as the collection of royalties for the use of these resources.^{69/}

99. EO 247 covers all collection of biodiversity, except for traditional use. However, the claim of State ownership over genetic resources is expressly stated in commercial and academic research agreements that have been subsequently developed. Therefore, it is reasonable to assume that when the Constitution says "natural resources", the term includes all that is part or portion of the resource (tissues, genes, molecules, etc), plant or animal, living or preserved. Thus, exploration and use of these resources is under the full control and supervision of the State.^{70/}

100. There is no reference to the disclosure/certificate of origin or to the restrictions to apply to patents on genetic or biological material accessed or limitations to patents on life forms. However, some information must be available, royalty free, to the Philippines. One of the conditions of the Research agreement according to the Administrative Order is that all discoveries of commercial products derived from Philippine biological and genetic resources shall be made available to the Philippine government and local communities concerned.

101. Similarly, where technologies are developed from the conduct of Research on Philippine endemic species, the developer (i.e., the individual or entity who holds the rights to the technology) shall make available to the Philippine government, through a designated Philippine institution, the use of such technology, commercially and locally without paying royalty to the Principal. Provided, however, that where appropriate and applicable, other agreements may be negotiated by the parties. In case of germplasm exchange, the technology shall be shared with the collaborating National Agricultural

the Prospecting of Biological and Genetic Resources, Their By-Products and Derivatives, for Scientific and Commercial Purposes, and for Other Purposes, 18 May 1995.

^{68/} Department of Environment and Natural Resources Administrative Order No. 20, *Implementing Rules and Regulations on the Prospecting of Biological and Genetic Resources*, 21 June 1996.

^{69/} Carrizosa, Santiago, Stephen B. Brush, Brian D. Wright, and Patrick E. McGuire (eds.) 2004. *Assessing Biodiversity and Sharing the Benefits: Lessons from Implementation of the Convention on Biological Diversity*. IUCN, Gland, Switzerland and Cambridge, UK.

^{70/} Carrizosa, *Ibid.* at p.13-14.

Research systems in line with the mission statement of such centre in accordance to the protocol under the International Law thereof.” ^{71/}

102. While EO 247 sets the legal framework and the DAO 96-20 lays down the administrative rules on implementing EO 247, the use of biological resources is also affected by a number of other laws, in particular the Indigenous Peoples’ Rights Act (IPRA), the National Integrated Protected Area System Act and the Wildlife Act. The Wildlife Resources Protection and Conservation Act now regulates access to genetic resources in Philippines. The Implementing Rules and Regulations (Joint DENR-DA-PCSD-NCIP Administrative Order No. 01 entitled Guidelines for Bioprospecting Activity in the Philippines approved on January 14, 2005) provides separate regulations for access for purposes of scientific research and commercial research. The Wildlife Act is effectively a codification of existing laws on the protection and conservation of wildlife resources but taking into account experiences acquired in the implementation of existing laws. It addresses, in particular, many of the concerns raised in regard to EO 247 in terms of application procedures and requirements but does not materially affect the definition of the status of genetic resources as derived from the Constitution.

103. The Indigenous Peoples’ Rights Act was enacted in 1997 to recognize, protect and promote the rights of indigenous cultural communities and indigenous peoples, which includes property rights on lands, inland waters, coastal areas, and also includes the natural resources therein in the land rights of indigenous peoples. According to Section 34 of the law, Indigenous Cultural Communities or Indigenous Peoples (ICCs/IPs) “are entitled to the recognition of the full ownership and control and protection of their cultural and intellectual rights”. Therefore, “access to biological and genetic resources and to indigenous knowledge related to the conservation, utilization and enhancement of these resources shall be allowed within ancestral domains of the ICCs/IPs only with a free and prior informed consent of such communities, obtained in accordance with customary laws of the concerned community.”^{72/}

The Seychelles ^{73/}

104. The Seychelles currently has no legislation or policies specifically addressing the issues of access and benefit sharing within the context of the Convention or specifically defining the status of genetic resources. However, there are a number of pieces of legislation designed to control access to and use of particular species, such as the Breadfruit and Other Trees (Protection) Act (1917) and the Cocode-Mer (Management) Decree (Declaration of Cocode-Mer Nut Notice 1995). ^{74/} The Seychelles also has finalized its draft legislation on access and benefit-sharing, which is currently in process to be enacted into law.

105. The Constitution of the Republic of Seychelles recognizes the right to private property and, by extension, the right to own both biological and genetic resources. The Seychelles’ draft Access and Benefit-sharing Bill, as a result, recognises the right to private ownership. However, section 6 asserts the power of the State to limit the right of ownership for the benefit of the public interest. The draft legislation provides as follows:

^{71/} Jorge Cabrera Medaglia *A Comparative Analysis of Legislation and Practices on Access to Genetic Resources and Benefit-Sharing (ABS) Critical Aspects for Implementation and Interpretation* IUCN, Bonn. Available online: http://www.iucn.org/themes/law/absdocuments/eng_critical_aspects.pdf at p. 229.

^{72/} Section 35, *Indigenous Peoples’ Rights Act*.

^{73/} Based significantly on, Lewis-Lettington RJ and Dogley D. 2006. *Commentary on the Development of the Republic of Seychelles Access to Genetic Resources and Benefit Sharing Bill (2005)*. International Plant Genetic Resources Institute, Rome, Italy.

^{74/} Rolph A. Payet & Robert J.L. Lettington “Access to Genetic Resources in the Seychelles” available in Chapter 15 available in Kent Nnadozie, Robert Lettington, Carl Bruch, Susan Bass, Sarah King (eds), *African Perspectives on Genetic Resources – A Handbook on Laws, Policies and Institutions*, Environmental Law Institute, 2003.

5. Pursuant to Article 26.1 of the Constitution of the Republic of Seychelles, ownership of genetic resources is recognised as vested in the registered proprietor of the land, the lessee of the land, the agent or trustee of the land or their agent, transferee or assignee, on, below or above which such genetic resources are found.

6. Pursuant to Article 26.2(a) of the Constitution of the Republic of Seychelles, the right to determine, control and regulate access to genetic resources found in the Republic of Seychelles is vested in the Government for the benefit of the public interest and shall be exercised in accordance with the provisions of this Act.

106. Under the draft law, ownership of genetic resources is vested in the land or property owner but the State retains the authority to determine the rules of access to the resources. In other words, while individuals and private entities can deal with biological resources on their land as they see fit (subject to other laws), in the case of genetic resources, it was considered that it would be an appropriate case for government intervention. The main justification is that the most effective way to maximise the value of genetic resources is to regulate access to them collectively, i.e. through the Government. ^{75/} In effect, therefore, where resources are collected on private land, private landowners may have the right to claim a share of any resulting benefits but it is the State that has right to determine the parameters of access and to negotiate what the level of any benefits should be.

107. Seychelles is one of the few countries that have, so far, made the distinction of genetic and biological resources in the text of their existing or draft legislation. As discussed by Nnadozie et al, ^{76/} the approach taken in Seychelles is based on the same basic structure that can be found in the Convention. In the draft Bill, “Biological resources” includes organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity; while “Genetic resources” means biological resources, including parts and components, with the exception of:

- (a) any biological resource for which the intended purpose does not involve cultivation or reproduction by means of any natural or artificial technique, including biological resources for conventional uses, and
- (b) any other biological resource or use of such resource the Minister may prescribe in regulations.

108. Section 17 of the draft bill follows Article 15.5 of the Convention on Biological Diversity by requiring the prior informed consent of the relevant authority, as a representative of the State, and, in addition, requiring the prior informed consent of any holder of private rights relating to the genetic resource in question, or relating to any other aspect of access. ^{77/}

109. While there is the conscious or deliberate distinction in the draft law between genetic and biological resources, there is, also, a clear division between plant genetic resources for food and agriculture and other genetic resources and the reason appears to be twofold. One, Seychelles’ almost total dependence on exotic material for its agricultural sector has led to the recognition that there are very different dynamics prevailing in different genetic resource sectors. Second, having ratified the ITPGRFA, it is recognized that there will be a need to implement mechanisms that are very specific to that framework, such as the internationally agreed standard material transfer agreement.

^{75/} This approach has strong precedents in Seychelles. The most prominent of these is coco de mer, where private ownership is recognised but the right to sell, licence private sellers and to set the price is reserved to the Government.

^{76/} Kent Nnadozie, Robert Lettington, Carl Bruch, Susan Bass, Sarah King (eds), *African Perspectives on Genetic Resources – A Handbook on Laws, Policies and Institutions*, Environmental Law Institute, 2003.

^{77/} R.J. Lewis-Lettington and D. Dogley. *Commentary on the Development of the Republic of Seychelles Access to Genetic Resources and Benefit Sharing Bill (2005)*. International Plant Genetic Resources Institute, Rome, Italy 2006.

110. Section 25 of the draft law provides that “any grantee of rights to the utilization of genetic resources shall notify the Coordinating Agency of any intention to apply for, assert or otherwise claim any form of intellectual property rights relating to such utilization”. While this provision may have been included for the purposes of monitoring utilization, there is no domestic legislation on IPRs. This means that, in theory, the British standards apply since the Seychelles continue to apply British laws in regard to Patents. Although the Seychelles is not a member of the World Trade Organization yet and, therefore, not bound by the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs), the British standards broadly reflect the standards of TRIPs and allow for the patenting of most genetic resources.⁷⁸

South Africa ^{79/}

111. South Africa’s Constitution (Act 108 of 1996) provides a central framework for the governance of biodiversity and status of genetic resources in South Africa. Although, genetic resources and their ownership are not explicitly considered by the Constitution, of particular importance are the respective powers of national, provincial and local spheres of government. Through the Constitution, national government and the nine provinces are accorded concurrent legislative competence in terms of most functions of relevance to biodiversity conservation. ^{80/} The Constitution also demarcates several relevant areas as being of exclusive national competence, such as national parks, botanical gardens, and marine resources; of exclusive provincial jurisdiction, such as provincial planning; and provides for the administration of certain functions at the local government level, such as beaches and municipal parks.

112. Section 24 of the Constitution provides that everyone has the right

- (a) to an environment that is not harmful to their health or well-being; and*
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
 - (i) prevent pollution and ecological degradation;*
 - (ii) promote conservation; and*
 - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*

113. The property clause in the Constitution’s Bill of Rights is also relevant, more especially because much of South Africa’s biodiversity falls within private ownership. The clause provides that no one may be deprived of property unless this is in terms of a law of general application, and is not arbitrary.^{81/} Property may be expropriated only for a public purpose, or in the public interest, and is subject to compensation. Under South African common law, a landowner owns everything beneath and above the land. This includes plants but excludes wild animals which are considered *res nullius* (owned by nobody).

114. Wynberg notes that there are several categories of land ownership exist in South Africa, characterized by a broad division between freehold or Western notions of ownership, and customary approaches to land ownership. ^{82/} Most state land and commercial agricultural land is held under freehold, while land under customary tenure falls within the so-called ex-homelands. While statutory laws apply in both circumstances, in communal areas a layer of customary law also applies, and this is frequently the system best understood and implemented by communities living in the area. Although

^{78/} R.J. Lettington and R. Payet, see note... above at p.225.

^{79/} For a more detailed discussion on South African ABS regime and processes, see generally, Rachel Wynberg: *Bioprospecting and ABS in South Africa* available online:

http://www.environment.gov.za/ProjProg/ProjProg/2004Jun10/stocktaking/NBSAP%20stocktaking_Access%20and%20Benefit%20Sharing_%20May%2004.doc

^{80/} Schedules 4 and 5 respectively.

^{81/} Section 25(1)

^{82/} Rachel Wynberg: see note 57 above.

certain resources are accorded different levels of protection, no distinction is made between genetic resources and natural resources.

115. Section 1 of the National Environmental Management: Biodiversity Act (Biodiversity Act), promulgated in 2004, defines “genetic resources” as including, any genetic material or the genetic potential or characteristics of any species. ^{83/} This definition is further articulated in Section 3 of the Act dealing with the state’s trusteeship of biological diversity, which states:

In fulfilling the rights contained in Section 24 of the Constitution, the state through its organs that implement legislation applicable to biodiversity, must:

- a) manage, conserve and sustain South Africa’s biodiversity and its components and genetic resources; and*
- b) implement this Act to achieve the progressive realization of these rights. ^{84/}*

116. Chapter 6 of the Biodiversity Act, entitled “Bioprospecting, Access and Benefit-Sharing”, sets out the framework for the regulation of ABS in South Africa and provides greater guidance as to the scope of the legislation. Section 80 provides that the purpose of this chapter is to:

- a) regulate bioprospecting involving indigenous biological resources;*
- b) regulate the export from the Republic of indigenous biological resources for the purposes of bioprospecting or any other kind of research; and*
- c) provide for a fair and equitable sharing by stakeholders in benefits arising from bioprospecting involving indigenous biological resources.*

117. For indigenous biological resources, a Material Transfer Agreement is required between the applicant and ‘stakeholder’, ^{85/} as well as a benefit-sharing agreement, prior to permit issuance. For holders of knowledge, a benefit-sharing agreement is required. Ministerial approval of all benefit-sharing or material transfer agreements is required. Those issuing permits may facilitate negotiations between the applicant and ‘stakeholder’ to ensure these are on an equal footing, or may be required by the Minister to ensure the arrangement is fair and equitable. ^{86/}

118. The Biodiversity Act in effect recognizes private ownership of genetic resources, for instance, where they are found or located in private property or land. The permitting process envisaged by the Act requires that negotiations be carried out, and an agreement reached between a “stakeholder” and an applicant before the state can issue necessary permit. ^{87/} State intervention is only at the permit level and to ensure the equitable benefit-sharing arrangements have been made, vis-à-vis the stakeholder, and receiving and disbursing financial benefits from the benefit-sharing fund set up for that purpose.

119. Under section 3 of the South African Patents Amendment Act, 2005, the Registrar of Patents is required to call upon the applicant to furnish proof in the prescribed manner as to his or her title or authority to make use of the indigenous biological resource, genetic resource, or of the traditional knowledge or use if an applicant lodges a statement that acknowledges that the invention for which protection is claimed is based on or derived from an indigenous biological resource, genetic resource, or traditional knowledge or use.

F. Conclusions

^{83/} National Environmental Management: Biodiversity Act, 2004, No. 10 of 2004.

^{84/} *Ibid.* ch.6

^{85/} “stakeholder” means — (a) a person, an organ of state or a community contemplated in section 82(1)(a); or (b) an indigenous community contemplated in section 82(1)(b)

^{86/} Section 82(4)(b) and (4)(c).

^{87/} Section 82 (1) on “Certain interests to be protected before permits are issued”.

120. As has been seen from the examples, most national constitutions only define ownership of natural resources and, in some cases, biodiversity components in general but not specifically genetic resources. This situation is basically due to the fact that the concept of ownership of genetic resources is still novel and is thus not expressly articulated in national constitutions.

121. While some countries, like Costa Rica, Ethiopia and the Andean Community of Nations have specifically addressed the issue of ownership of genetic resources, drawing clear distinctions between biological and genetic resources, most other countries apply their general rules of law regarding property, for instance common law or civil law principles, or otherwise utilize their regular land and wildlife laws to define ownership. In the later cases, ownership of genetic resources is, by extension, derived from the ownership of land or biological resources. Even in common law countries it is recognized that the general principle that what is on the land follows the land may be moderated or modified by legislation as is inherent in the sovereign status of each state so to do.

122. According to Ruiz Muller, all Central America countries recognize that genetic resources (through a reference to natural resources) are patrimony of the nation, and that the State exercises rights over them. At the same time, they recognize private property (or community property) rights over certain biodiversity components. This calls for a conceptually (and maybe legally) necessary – but in practice complicated – distinction between a set of rules and rights governing genetic resources and a set governing access to and the use of biological resources, which may contain them. ^{88/}

123. One of the practical challenges that may arise if genetic resources are defined as state owned is that it precludes, unless otherwise provided for in law, private contracts or transactions where a landowner can enter into private transactions with a bioprospector. While individuals can deal with their property as they see fit, but if the use of biological material fall into the category of genetic resources, however defined, then state-stipulated procedures will kick in and have to be observed.

124. For countries that operate the federal system of government, there is an additional jurisdiction challenge where powers and legislative competence overlap significantly between the different tiers of government on issues related to biological diversity. However, it is recognized that in some, there are constitutional mechanisms for dealing with or resolving issues of conflicts in overlapping jurisdiction, for instance stipulating that Federal law takes precedence as in Brazil.

125. While ownership rights over in situ genetic, biological, and biochemical resources is relatively clear in many countries reviewed in this report, these rights still need to be clarified for resources found in ex situ conditions not covered by the International Treaty on Plant Genetic Resources for Food and Agriculture.

126. The clarification of the legal status of genetic resources is crucial to the implementation of Article 15 of the Convention, it being essential in defining access requirements, procedures, rules and rights over these resources. However, it is evident that countries have diverse ways of defining ownership over biological and/or genetic resources. A distinction between ownership over genetic resources and ownership over biological resources is not always clearly articulated in national legal systems.

^{88/} Manuel Ruiz Muller. "Central America: Costa Rica, Guatemala, El Salvador, Nicaragua and Panama" in Lewis-Lettington RJ and Mwanyiki S (editors). 2006. *Case Studies on Access and Benefit-sharing*. International Plant Genetic Resources Institute, Rome, Italy at p.30.