Emerging Rights Language and Community Knowledge Discourse in Africa's Biodiversity Protection Regime

A Case Study of OAU's Model Law

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In memory of my uncle, Tebebu Negash, who passed away in 1999. He was 31 and is greatly missed by family and friends

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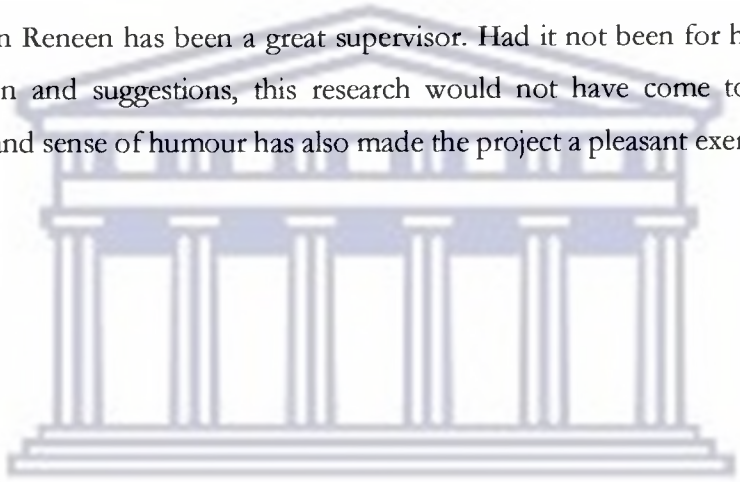

Acronyms

ACHPR	The African Commission on Human and Peoples' Rights
ARIPO	The African Regional Industrial Property Organization
BTFP	Bio-Trade Facilitation Program
CBD	Convention on Biological Diversity
COP	Conference of parties to the CBD
ECOSOC	United Nations Economic and Social Council
FAO	Food and Agriculture Organization
GATT	General Agreement on Trade and Tariff
GIPID	Global Intellectual Property Issue Division
GMOs	Genetically Modified Organisms
ILO	International Labor Organization
IPR	Intellectual Property Rights
IU	International Undertaking on Genetic Plants for Food and Agriculture
NCA	National Competent Authority
OAIP.	African Intellectual Property Organization
OAU	Organization of African Unity
STRC	Scientific, Technical and Research Commission of the OAU
PIC	Prior Informed Consent
SANProTA	Southern Africa Natural Product Trade Association
TRIPS	Trade Related Intellectual Property Rights
UN	United Nations
UNCTAD	United Nation Conference on Trade and Development
UNEP	United Nation Environmental People
UPOV	The International Convention for the Protection of New Varieties of Plants
WED	Women in Environment and Development
WIPO	World Intellectual Property Rights Organization
WTO	Word Trade Organization
WTO-CTE	Committee on Trade and Environment of the WTO

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CHAPTER ONE

INTRODUCTION

1.1. General background

Africa possesses huge amounts of genetic resources and traditional knowledge that sustain diverse small economies and local livelihood. The integrity of this natural wealth and cultural pattern, however, is being seriously undermined by heightened encroachment. Absence of over-sight structures and IPRs' failure to afford adequate recognition and protection to genetic resources and traditional knowledge condoned such encroachment. IPRs often encourage intense commercialisation of life forms and the latter's protection through patent which not only disadvantage local communities but also create enormous strain on existing ecological balance. Examples abound that show how Western research institutions and pharmaceuticals collected, developed and commercialised African biodiversity without due recognition to local communities' contributions. This has become even more evident as increased investment on herbal health care, life science and related pharmaceutical developments significantly increased the value and market demand of genetic resources.

One of the harshest outcomes of existing IPR system is what is referred to as 'the consequence of monoculture' where both the method and agent of local production is universalised and made uniform. GMOs offer a typical example of this uniformity saga. Through biological engineering of genes, handful Western multinationals are increasingly tightening their grip on one of the most prized possessions of local farmers and communities in Africa—seed. The reality of this problem is strikingly manifest at this particular period where Western governments and multinationals are presenting GMOs as saviour of Africa from famine and hunger. The introduction of GMOs, however, solidifies the structural basis for the gradual dependence and vulnerability of African local farmers and communities. These scientifically developed seeds are protected by monopolistic patent entitlements and are designed in such a way that their users are made continuous customers of the breeders. Patent over GMOs criminalizes the use of these varieties by farmers without permission by breeders. Moreover the environmental and health consequence of GMO's is unknown; an uncertainty which resulted in the development of the precautionary principle and the adoption of the *Cartegena* Biosafety Protocol.

Such a precarious position of local communities and farmers in Africa calls for rights based analysis and campaign. This indeed led to the emergence of principles relating to access to genetic resources, cultural protection, right to food and food sovereignty and the right to the environment as new frontiers within the human rights discourse. In this regard the 1992 World Summit on Sustainable Development, which has resulted in the CBD, is a landmark international development. For the first time it acknowledges the role of local communities in the biodiversity conservation and protection and their rights to share benefits accruing from the commercialisation of their resources and knowledge. TRIPS, UPOV and other international

instruments however have sadly chequered this remarkable development by neglecting and thereby obliterating traditional knowledge and community entitlements.

Many countries in Africa have no bio-diversity focused coherent environmental policy. Existing regimes are skewed and uninformed with current developments. Looking at this unflattering situation, the OAU had developed a *Model Law* to stimulate and support the enactment of domestic legislations and regulations. The African head of states and government endorsed the Model Law in 1998.

1.2. Aims of the research

The principal aim of this research is a critical examination of the OAU's Model Law within the context of the existing discourse on biodiversity. It specifically seeks, among others, to:

i) Highlight the relevance of the conservation, protection and equitable management of African biodiversity as a means of ensuring sustainable development;

ii) Examine the implications of the production and marketing of GMOs on biodiversity and traditional knowledge in Africa;

iii) Show that lack of national and regional oversight mechanisms exposed Africa's biodiversity products for illegal appropriation and mismanagement by jeopardizing local livelihood and security;

iv) Analyse the implications of IPRs such as TRIPS for Africa's bio-diversity resources and knowledge of local communities, and show the lack of recognition of the role and entitlements of local communities in the context of trade in biological substances. Attempt will also be made clarifying the contradiction existing between IPR systems and other widely accepted international instrument such as the CBD;

v) Discuss how the growing recognition of the rights of indigenous people under international law reinforces the entitlements of local communities to the protection of their ecosystem and traditional knowledge;

vi) Investigate how institutions and structures at the international level react to Africa's particular ecological needs and discuss how biodiversity has become an epicenter of Africa's international relations and negotiation with the developed world;

vii) Review the values and premises underwriting OAU's Model Law and identify its strengths and weaknesses;

viii) Review experiences and practices of selected African domestic biodiversity protection regime and discuss their convergence and variance with principles embedded in African Model laws.

1.3. Methodology

The primary source for this research will be literature. Such relevant primary resources as international conventions, regional instruments, national legislations and model laws will be extensively used. Minutes, reports, agenda items and other official materials of relevant organization will also be consulted.

1.4. Structure of the research

The Second Chapter aims to clarify some of the concepts employed in the research. Concepts such as communities, traditional knowledge, development and biodiversity conservation had been for long embedded in the social sciences and development practice. An attempt will be made to show how these erstwhile development norms made their entry into the legal arena and human rights discourse. Despite remarkable gains in international law which increasingly gave protection to biodiversity and the interest of local traditional knowledge holders, Africa's biodiversity is faced with a heightened threat ever. Unhelpful ideologically driven polemics overshadow the discussion on the extent of 'bio-piracy' in Africa. Therefore the author profiles the severity of illegal appropriation of genetic resources by highlighting selected cases. GMOs, which encourage the conversion of diverse biological base into uniform variety and contaminate local genetic resources, are also identified as a serious threat for African biodiversity. The Chapter's final section is a plea for an adequate recognition of the role and rights of local custodians of biodiversity.

The third Chapter seeks to unpack the essential features of international institutions and norms for the protection and conservation of biodiversity thereby giving an adequate international law and policy context for the treatment of the Model Law. Indigenous peoples' rights have been instrumental in making local communities and groups visible. A more concrete platform for communities and their role in biodiversity is also created by the CBD. However these positive developments are besieged by IPR systems such as TRIPS and UPOV which do not accord sufficient recognition to traditional knowledge and community rights. As this Chapter will show, there has been encouraging development within the UN organ and other institutions where an increased emphasis is being given to the role of traditional knowledge holders in biodiversity conservation.

The fourth Chapter introduces the various initiatives which led to the adoption of the Model Law. By discussing some of its underpinning principles, the Chapter will show how the Model Law is not just a mere benefits sharing guideline but a broad instrument encompassing issues bordering on human rights, ethics, social justice and development. The author will also discuss the various national institutional arrangements the Model Law creates for the implementation of the various provisions at the national level.

The fifth Chapter forms an important component of the research where the author attempts to critically evaluate the substantive provisions of the Model Law and the principle that underpin them. Existing national legislations and experiences with benefit sharing will be highlighted to identify some of the problems that may

arise both before and after the domestic enforcement of the Model Law. In the last Chapter a summary of arguments and recommendation regarding problems is identified and presented.

CHAPTER TWO

HUMAN RIGHTS PERSPECTIVES ON TRADE, DEVELOPMENT AND BODIVERSITY

2.1. Definitions: communities, traditional knowledge, development and biodiversity

This section attempts to clarify some of the concepts employed to address the central theme of the paper, which is to argue for effective legal protection of local biodiversity and traditional knowledge. Some of these concepts had been well established within social science fields and developments practice before they began to make inroads into the legal arena.[1] Hence it is perhaps not surprising if the search for workable definitions takes one into a realm of multi-disciplinary approach.

2.1.1. Communities

The role of local communities as gatekeepers of biodiversity has lately become a subject of extensive study and development policy discourse. The concept of 'communities' has for long been deeply engrained in Western social science where it is defined as a social system with a coherent internal social, economic and political dynamics where a group of individuals engage in collective self-identification and belongingness.[2] Within the context of conservation practice, the word 'community' refers to the inhabitants of a certain area who share similar cultural norms and even resources.[3] Nonetheless this 'harmonious model of community' was later abandoned as it failed to show the power relations and inequalities underpinning both inter and intra community relationships.[4] As group identification either excludes or includes individuals into group entitlements and benefits, it often becomes a remarkably contested issue. Escobar questions whether the inclusion of new beneficiaries, i.e. peasants and women, within the new development discourse advances new visibility and alternative cultural possibilities.[5] There is a shift towards localized community discourse where local groups are both recognized and created, and the participation and demands of both groups and individuals are accommodated[6]. Under current conservation policies and practices, communities are well-defined entities with specific mandates, i.e. negotiating with outside actors on behalf of the community, promoting community participation in environmental decision-making, promoting user community property rights and resolving community-wild-life conflicts.[7]

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[1] In 1988 the First International Conference of Ethnobiologists was held in Belem, Brazil where the *Balem Declaration* calling for appropriate legal protection of traditional knowledge.
[2] B Furze *et al* (1996) 9.
[3] J Watkin (1998) 4.
[4] B Furze *et al* (1996) 9.
[5] E Escobar (1996)155.
[6] B Furze *et al* (1996.
[7] See the section on gender.

For the purpose of this study 'indigenous peoples', 'ethnic groups' and 'peoples' refer to a group of people who share similar psychological makeup, culture, language, religion and other commonalities.[8] There is, however, an ongoing debate on the normative content of the rights of these categories of peoples under international law.[9] For example, the 1989 ILO Convention on Tribal and Indigenous Peoples states that the word "indigenous" shall not refer to 'peoples' who are often associated with political self-determination.[10] In African regional human rights system, 'peoples' has been given a loose political meaning as referring to a *multi ethnic, multi religious* collection of groups. Despite these differences, however, communities can benefit from the normative content of rights of indigenous peoples. The CBD renders such distinction irrelevant by making reference to both 'indigenous peoples' and 'local communities'.[11]

2.1.2. Traditional knowledge

Traditional knowledge refers to a cultural practice involving a set of tools used by local communities to manage their resources.[12] Communities have always been using plant varieties for farming, nutrition, health and other purposes. Local property regimes are such that no individual has monopoly over benefits accruing from the distribution of such plants. Community members freely exchange seeds through elaborate local networks, seed banks and markets. Farmers are focal points for seed control, development and exchange. By using traditional breeding techniques, they develop better quality seeds and use crop varieties as an insurance against crop failure or drought. Traditional healers are also the breeders, selectors and preservers of medicinal plants and herbs.

2.1.3. Rights based development

Various international and regional legal instruments have incorporated the right to development. In 1986 the UN General Assembly adopted the Declaration on the Right to Development as Resolution No. 41/128. Principle 3 of the Rio Declaration on Sustainable Development affirms sustainability principle by stating that the right to development shall be realized "so as to equitably meet developmental and environmental needs of the present and future generations".[13] The 1993 Vienna Declaration on Human Rights, by recognizing the 'universal, indivisible and interdependent and interrelated' nature of all forms of human rights places the right to development in the mainstream human rights discourse. At the regional level, article 20 of the African Charter states, "All people shall…freely determine their political status and *shall pursue their economic and social development according to the policy they have freely chosen*"(*emphasis mine*). Right to development is hence articulated not only as local peoples' participation and involvement in the formulation and implementation of

[8] See Art 1(a) of the 1989 ILO Convention on Tribal and Indigenous Peoples.
[9] J Anaya(1996) 48-49.
[10] *Ibid.*
[11] Art 8(j).
[12] B. Eyzaguirr(2001) 9*Indigenous Knowledge and Development Monitor* 2 44.
[13] A. Birnie and P.Boyle (eds.)(2001) 11.

development policies, but also the preservation of the latter's connectedness to local identity and cultural context.[14]

Past developmental paradigms in Africa were biased toward western values and priorities. Colonial policies promoted the exploitation of local African resources at the destruction of traditional knowledge. Forestry reserves were created to cultivate exportable wood and other products.[15] Natural reserves were established for the sole purpose of 'stocking adjacent hunting areas' for colonial hunters.[16] These 'fortress' conservation policies were premised on the isolation of local people from conservation areas. Through colonial legislations, centuries old gatekeepers abruptly became 'enemies of nature' whose breach of new environmental rules should be dealt with strict law enforcement measures. This indeed resulted in numerous human rights atrocities against local people. In post-independence milieu 'fortress conservation' continued unabated. In most cases land was nationalized resulting in the forceful displacement of local people and loss of traditional knowledge.[17] The most disturbing finding, however, is that these conservation policies and practices were not necessarily followed because they were effective, viable or right. Often the longevity and influence of conservation strategies depended on a complex web of interests of actors whose activities and mandate cannot be properly monitored.[18] This is also the case at the discourse level where for example despite the fact that the 'tragedy of commons' theory was unquestionably debunked, the metaphor still influences development policies that regard traditional resource management as a part of the problem rather than the solution.[19]

Misguided economic and trade policies also accelerated the expansion of agro-investments thereby encouraging external encroachment on indigenous systems and displacement of local communities. They resulted in the replacement of diverse subsistence farming systems with monoculture agricultural practices.[20] Promotion of cash crop brought heightened conversion of natural habitat into agricultural farms with skewed biodiversity base.[21] In Africa between 1960 and 1980 alone, 161 million hectares of natural habitat was converted into cropland severely narrowing the biodiversity base.[22] In this process, peasants were simply taken as a 'bothersome and undifferentiated mass' who would be extinguished through the influence of a blooming urban economy.[23] Pastoralists' right to livelihood and grazing land was also considered 'transitory' that will fade as a result of 'civilizing' and assimilationist state policies.[24] The unhealthy link between local

[14] Art 22(1).
[15] See J Monson (eds.)(1996).
[16] J Mackenzie (1991) in Kaersham (ed.) *Cultural Struggle and Development in South Africa* 22.
[17] Nationalization of land restricted entitlements in natural resources. EEgbe (2001) 45 *Journal of African law* 1 27.
[18] See A. Hoben (1995) in R. Means(ed) *The Lie of the Land: Challenging Received Wisdom on African Environment.*
[19] J Kurien (1992) in Ghai and Vivian(Eds.) *Grassroots: Environmental Action: People's Participation in sustainable development* 222.
[20] *Ibid* 48.
[21] T. Swanson (1995) 45.
[22] *Ibid.*
[23] A Escobar (1995) 168 157.
[24] See K Arhem(1984) in Asbjorn Eide *et al* (ed.) *Food as a Human Right 89*-101.

livelihood and the international market has often created social unrest as exemplified by Shell's crisis in Ogoni in Nigeria.[25] This incompatibility of local livelihoods and the global market was masterfully described as follows:

> "The livelihood economy is not ruled by the rationality laws of the market system. Peasants, for instance keep accounts of only those activities which are fully monotised. They continually innovate and attune their practices through trial and error, in a manner more akin to art than rationality, even if the transformation of the former into the latter is taking place steadily, driven by the acquisition economy. Although profit slowly is becoming a cultural category for peasants, economizing and thrift continue to be central values. The house economy is fueled not by acquisition but by material activities the central principle of which is to care for the base. Included in the base are not only natural resources and material things but also culturally known ways of doing, people, habits, and habitats."[26]

The discourse on sustainable development establishes the intimate link between development and environment.[27] It makes new development beneficiaries such as women and other local groups visible.[28] As such it helps to cleanse 'the developmental gaze' where local actors, the environment and development are clearly connected and linked.[29] The role of traditional institutions and knowledge systems in the articulation of development discourse is emphasized.[30]

2.1.4. Biodiversity

The CBD defines biodiversity as "the variability among living organisms from all resources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".[31] Accordingly, biodiversity exists at three levels; genes, species, and ecosystems.

2.2. Appropriation of Africa's biodiversity and the threat of bio-piracy

Currently there is increased trade in biogenetic resources which are often referred as 'seeds of future capital'—*the fourth resource.* They are no longer common and localized properties but 'global commodities'; a view which lies at the opposite end of the now defunct 'common heritage' principle. This 'enclosure of the commons' underscores the emerging visibility and importance of these once local and invisible resources at the international market where they are privatized, patented and traded. [32]

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[25] *Independent* 7th March.
[26] A Escobar (1995) 68.
[27] Principle 23 of the Rio Declaration. Birnie and Boyle (eds.) 2001 14.
[28] Principle 15 and 20. *Ibid* 13.
[29] A Escobar(1995) 155.
[30] M Warren (1992)7.
[31] Art 2.
[32] V Shiva (1994)45.

A remarkable technological innovation within the pharmaceutical industry, herbal health care and biotechnology has transformed genetic resources' value in an unprecedented scale. It is said, "ninety four percent of the top selling plant-derived drugs contain at least one compound that has a demonstrated use in traditional medicine related to therapeutic use."[33] This creates enormous strain on the local herbs and traditional medicinal plants on which local communities have relied for a very long period.[34] Ensuing over-production and mass harvesting of specific types of export plant varieties unrelated to the needs of local people resulted in a serious threat to biodiversity.[35] For example, the bark of *khaya senegalense* is now threatened with extinction because of high demand for both gum and herbal medicine.[36] *Pygenum africanus* in Cameroon, traditionally used for treating urinary complications is also in demand in quantities local ecosystems will never be able to meet. The same is true for Rwandan herb, *tetradeni a riparia* that has been used locally to treat a wide array of diseases including malaria, coughs, diarrhea, fever, mussel ache and headache.[37]

Commercialization of genetic products and associated traditional knowledge operates through intellectual property rights. This results in an intensive appropriation of traditional knowledge by Western companies.[38] The US-based University of Toledo acquired patent rights over an Ethiopian plant, *Endod*, used for controlling Zebra mussels. Some of the varieties of Ethiopian fine cereal *teff* (*Regrets teff*) rich in micronutrients have also been patented.[39] Plants such as *Maytenus buchnani* from the Shimba Hills of Kenya and *Ancistrocladus korrupensis* from Cameroon have been harvested for cancer and HIV medicine development by the US National Cancer Institute without proper recognition of the role of local communities and the sharing of benefits.

These are acts of *biopiracy* where Western life science institutions use "intellectual property rights systems to legitimize the exclusive ownership and control over biological resources and biological products and processes that have been used over centuries in non-industrialized cultures."[40] The existing IPRs neither recognize non-western knowledge systems as *prior art* nor protect them.[41] While some of the scientific applications on life forms involve no novelty, patents are invariably granted without the consultation of traditional knowledge-holders. Such exclusion of traditional knowledge and its holders is underpinned by

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[33] *Ibid.*
[34] T Katrina (1995) in Timothy M. Swanson (ed.) *Intellectual Property Rights and biodiversity conservation an interdisciplinary analysis of the value of medicinal plants* 265.
[35] M Khalil(1995) in M. Swanson(ed.) *Intellectual Property Rights and biodiversity conservation an interdisciplinary analysis of the value of medicinal plants* 236.
[36] E Rukangira (2000) *Erboristeria Domani August 43.*
[37] *Ibid.*
[38] ' Patent Appropriation of Ethiopian plant for new use' < http://www.sunsonline. org/trade /areas /intellec/ 040 10 0 9 3 .htm>, (access on 3 August 2002).
[39] ' Focus on Bio-piracy in Africa' *Science in Africa* September 2002. South African based online magazine available at, <http://www.scienceinafrica.co.za/2002/september/biopiracy.htm>, (accessed on 2 September 2002).
[40] V Shiva (2001) 49.
[41] *Ibid.*

deeper 'epistemological foundations' where non-Western cultures are defined as *terra nullius*, inferior and unsystematic.[42] The clash of knowledge systems and the subtlety with which Western actors have manipulated the Western-bias of the current patent system is tellingly captured by the case of the Indian plant called *Phyllanthus niruri* for which Fox Chase Cancer Center of Philadelphia (USA) secured patent. Some communities treat Jaundice as a part of a problem associated with liver dysfunction by using the plant to help the regeneration of liver tissue. The patent application of Fox Chase, however, isolated the application of *phyllanthus niruri* for the treatment of one strain of hepatetis-hepatetis B.[43]

Bio-piracy was common in colonial Africa. One commentator opines, " Indigenous cultural knowledge has always been an open treasure box for the unfettered appropriation of items of value to Western Civilization."[44] Ironically, however, Local knowledge systems were also being denigrated as 'unscientific', 'primitive' and 'backward'.[45] This lead to the alienation of African biogenetic resources into many Western *ex situ* sites and biogenetic gardens.[46]

The impact of patenting of life forms and traditional knowledge on local livelihoods cannot be exaggerated. Monopoly right by *Nestle* over coffee varieties disenfranchises millions of rural Africans who rely on the export of coffee for a living.[47] This is even more blatant in the case of medicinal plants whose marketing benefits will exclusively be owned by the 'inventor'. With a secured patent over all derivative products, local communities will finally lose all access to what had once been their own. The complexity and cost involved in IPR procedures discourage local communities from challenging flawed patent applications.

2.3. The 'promises and problems' of genetically modified organisms ("GMO")

Biotechnology, scientific manipulation of microorganisms to process products of industrial, agricultural and commercial interest, holds both promises and risks for Africa. By enhancing food production, it can feed millions of hungry Africans.[48] Tissue culture and micro-propagation have been used to produce enhanced quality crops such as maize, coffee and beans.[49] Nonetheless new trends in biotechnology raise concerns regarding their impacts on environments and local biodiversity. This is particularly the case in relation to the production and distribution of GMOs. Genetic engineering is a biotechnological method of breeding plants and animals with useful agronomic traits such as resistance to pesticide or increased yield. GMOs have been

[42] *Ibid.*
[43] *Ibid* 55-56.
[44] J Mugabe (1999) 4.
[45] MWarren (1989) 25.
[46] E Rukangira (2000) 235.
[47] *Independent* May 7th 2002.
[48] See WARDA (2000).
[49] T Egwag(2001) *EJB Electronic Journal of Biotechnology* 3.

produced and marketed in the US, Canada, Argentina, China, Thailand and other countries. Currently South Africa is the only producer and marketer of GMOs in Africa.[50]

The absence of certainty on their health and environmental impact puts GMOs at the center of fierce controversy.[51] Reacting to consumers' concern about 'mad cow' and other diseases, the EU introduced strict approval, verification and labeling requirements on GMOs.[52] Soon the uncertainty over GMO outgrew the European frontier and became a subject of a new negotiation on biosafety resulting in the 2000 Cartegena Protocol. During the negotiation of this Protocol, Africa and other developing countries exercised maximum pressure on the developed world particularly on the US on its policy on GMOs.[53] Africa's common position on biosafety which was proposed by Ethiopia and was later adopted by African governments calls for a moratorium on GMOs and the adoption of precautionary principle. This was later incorporated in the final Protocol.

A strict application of patent on GMOs undermines the traditional 'free-exchange' of seeds among local farmers.[54] Farmers cannot freely save patented GMOs. By replacing the traditional breeding methods, it disowns local breeders and transfers their seed wealth to big firms.[55] By defining the center of seed ownership and control, they impact on long-term food security and local livelihoods.[56] In Mexico, GMO food crops from the United States that local farmers unknowingly sow on their farms were genetically mixed with local varieties creating new hazardous pollens.[57] Such hazard has been one of the most important reasons behind the recent rejection of USAID's GMO food crop by a number of Southern African governments.[58] More over GMO research so far has been biased towards commercial crops thereby undermining variety-farming system which traditionally has been used as a risk management strategy at a subsistence level.[59] By globalising the food supply system and creating nutrition patterns, it narrows the variety of indigenous plants used as food substances.[60] As the cost of certifying organic food substances is imposed on consumers, the price of food substances may go up.[61] Perhaps one of the most severe trade implications of GMOs is that it may

[50] Mariam Mayet 'Analysis of South Africa's GMO Act of 1997', < http://www.biowatch.org.za >(accessed on 2 August 2002).
[51] Many of the genetically engineered food substances did not pass through serious health hazard tests before they were released to the market. *New York Times* 21 May 2001.
[52] *New York Times* 15 February 2001. Some argue that such requirements makes it harder for African farmers to penetrate European markets even if the latter declare themselves exclusively organic food producers. Danish Research Institute of Food Economics (2002) 1.
[53] *New Scientist* 15 January 2000.
[54] *Washingtonpost* 31July, 2002.
[55] Increasing merger moves brought the world seed industry into handful of firms.
[56] See Chapter 5 'Engineering Life: Agri-biotechnologies and the food system' in Goodman and Radcliff (Eds.)(1984) 167-200
[57] G Conway (2000) 4 *Conservation Ecology*1 2.
[58] 'Zambia turns down GM Aid' BBC, <http://news.bbc.co.uk/2/hi/africa/2199189.stm> (Accessed on 2 August 2002).
[59] Fakir (2000) *Third World Network* 5.
[60]Schatan and Gussow (1984) in Asbjorn Eide *et al* (1984) *Food as a Human Right* 16.
[61] *Mail & Guardian* May 3 2002.

displace developing countries' organic export commodities thereby significantly diminishing their global competitiveness.[62]

2.4. The gender dilemma of community discourse

Women have always played an important role as food producers and providers.[63] According to FAO, women produce about 50 percent of the world's consumption food.[64] The majority of small landholders are female farmers who grow multiple varieties of plants in their small plots of land. Plant varieties such as "*njahe*" bean (*Dolichos lablab*) among Kikuyu Kenyans, sorghum in the Sudan, and indigenous fruits and leaves (baobab tree -*Adansonia digitata*; red sorrel leaves -*Hibiscus saddarifa*; kapok leaves-*Ceiba pentandra*) and tigernut tubers *(Cyperus esculentus L)* in Burkina Faso have been preserved by women.[65] The gender division of labour underpinning Africa's agriculture is such that women carry the primarily responsibility for the selection, storage and exchange of seeds. Studies have shown that women's seed selection rationale is more varied than those of men who normally opt for commercially profitable crops. In home gardens women try out new varieties. They also act as traditional healers; a responsibility which gives them special access to varieties of medicinal plants.[66] Women are also both collectors and consumers of fuel. This stewardship role places women as guardians of local plants and animal varieties, and associated traditional knowledge.[67] This understanding was both shaped and had shaped well-known pioneer projects such as the Green Belt in Kenya and Chipko in India in the 1980s where women were involved in community forestry programme.[68]

The valorization of women as privileged managers of biodiversity within Women in Environment and Development ("WED") literature was an ideological construct formulated by women writers in resistance to the preoccupation of existing theories with how women were victimized by environmental degradation and how they played and continue to play important roles particularly in forestry protection by managing and controlling fuel wood collection and consumption.[69] Such discourse underlines the social construction of a much broader environmental role of women based on equally socially constructed knowledge system. As one researcher puts it, women in Kenya, for example, have always retained advanced know-how about wild food and medicinal plants that they have preserved for long against major social changes resulting from urbanization, schooling and other forms of modernization.[70] In the rural Colombia the role of women, adept in diversified subsistence farming that combined cash crops and subsistence local crops, in resisting state's

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[62] V Shiva (1993) *117.*

[63] 'Seed of life: women and agro-biodiversity in Africa' *IK Notes* (World Bank's publication) No 23, 2000 1

[64] See *Women and Sustainable Food Security*, World Food Program Sustainable Development Working Papers, Novemeber1996 Available at < http://www.fao.org/sd/FSdirect/FBdirect/FSP001.htm>(accessed on 2 August 2002).

[65] *IK Notes* 1.

[66] See M Fernandez(1994) 2 *Indigenous knowledge and Development Monitor.*

[67] "Women: Users, Preservers and Managers of Agriculture"<-biodiversity'http://www.fao. org/ FOCUS/E /Women/Biodiv-e.htm> (accessed on 12 August 2002).

[68] R Braidotti et al (1994) 86.

[69] *Ibid.*

[70] D Rocheleau(1995) 1 *IDS bulletin* 26 13.

interventions that encouraged cash crop monoculture showed how women become formidable local voices for the integrity of biodiversity.[71] This understanding has created a remarkable enthusiasm among many feminist developmental theorists and practitioners who argued for alternative developmental models which promote the distinctive and nouanced role and participation of women in biodiversity protection.[72] It also encouraged development institutions to be more sensitive to the role of women in the selection of seed, management of small livestock herds and conservation and sustainable use of plant and animal varieties. The preamble of the CBD that recognizes 'the vital role that women play in the conservation and sustainable use of biological diversity' entrenches such understanding and elevates it further by calling for 'the full participation of women at all levels of policy making and implementation for biological diversity conservation'. [73]

If community rights narratives are to be accepted as equitable and just, some of their potential inadequacies in addressing the role and status of women in rural context need to be problematised. There is no guarantee that community conservation policies are always liberating for women. In fact there is a great danger that they may reinforce traditional male biased norms. Often men are well placed and more empowered than women to take advantage of new community conservation agendas. Local community networks and interlocutors are susceptible to men's manipulations. Many local communities in Africa have customary land tenures, which disenfranchise women and hinder their full participation. Gender based power-relation cautions us not to naively assume that community benefits are equally shared by all members. It becomes important then to articulate community rights discourse in such a way that it makes the particular vulnerability of women in local context visible and that it embraces methods of empowering them for enhanced participation and benefit sharing.[74] Group protection regimes under international law are introduced to ensure better protection for individuals.[75]

2.5. Conclusion

A definition for 'communities' need to be inclusive and take into account interests of the various groups within a certain community and promote their distinctive roles and contributions to biodiversity protection. Dominant IPRs, whose epistemological assumptions and language effectively denied non-Western knowledge forms recognition and protection, encourage biopiracy. This exclusion created an international regime that is essentially resistant to diversity both at the biological or cultural level. The combined forces of Western rationalism and the logic of the market triggered the emergence of GMOs and patenting of life forms which have severe ramifications on the diversified life world of local communities. The community rights language hence emerges as a counter-narrative that resists the influence of such market oriented international economic

[71] V Shiva (1993) 24.
[72] See for example Vandana Shiva's much acclaimed book *Staying Alive, Women, Ecology, and Development (1989).*
[73] The preamble of the CBD.
[74] See M Schmink(1999) .
[75] R Rich (1992) in J Crawford(ed.) *The Rights of Peoples* 3-4.

norms. Informing such dialogue with international human rights principles ensure that its benefits are equitably shared among various groups.

CHAPTER THREE

MAPPING THE INTERNATIONAL LEGAL REGIMES AFFECTING AFRICA'S BIODIVERSITY

3.1. Introduction

This Chapter seeks to unpack the existing international arrangements for the protection of genetic resources. Many African countries are members of different international instruments whose relationship is often vexed, unclear and even murkier. It is therefore imperative to identify how states' varied international commitments are inter-connected. The continuous regeneration of norms resulting from ongoing negotiations presents a formidable challenge both to an easy comprehension and simplified presentation.

There are many actors shaping the emerging debate on environment and trade. However the author have picked only those, which are placed prominently in the development of international norms regarding the protection of biological and cultural diversity. Emerging international jurisprudence on indigenous peoples' rights provides a suitable entry point for the discussion. This will help conceptualising community entitlements within a background of well-settled discourse on indigenous peoples' rights discourse.

3.2. Indigenous peoples' rights

Indigenous peoples' rights gained prominence during the decolonisation period where power was transferred from colonialists to dominant local groups.[76] They are primarily designed to protect vulnerable groups from post-colonial excesses.[77] In 1957 the ILO adopted a Convention relating to indigenous workers that was later revised in 1989.[78] The UN appointed a Special Rapporteur on the Problem of Discrimination against Indigenous Peoples in 1972 and established the Working Group on Indigenous Peoples in 1985. The Working Group prepared a Draft Declaration on the Rights of Indigenous Peoples in 1989. The ECOSOC, in its Decision 2000/22, set up the Permanent Forum on Indigenous Issues as a subsidiary organ. The General Assembly, in its Resolution 48/163 of 21 December 1993, proclaimed the International Decade of the World's Indigenous Peoples (1995-2004).[79]

[76] I Brownlie(1992) 56.
[77] *Ibid.*
[78] *Convention (No. 169) Concerning Indigenous and Tribal Peoples in Independent Countries*, adopted on 27 June 1989 by the General Conference of the ILO. It entered into force 5 September 1991.
[79] There is an expectation that before the close of this Indigenous Peoples Decade, the Draft Declaration will be transformed into a binding instrument.

The role of the UN in general and the Working Group in particular has been limited.[80] The 1989 ILO Convention remains the only multilateral instrument on indigenous peoples.[81] Brownlie categorically states, "general or customary laws do not present any rules or principles concerning indigenous peoples as such."[82] Anaya on the other hand argues that 'common core opinion' and human rights principles around the 1989 ILO Convention and the Draft Declaration, regardless of any treaty or formal act of assent, create obligations.[83] Some, however, question that indigenous entitlements in the international arena are ambiguously defined to protect narrowly defined groups. Brownlie notes that the Working Group's definition of indigenous peoples has laid much emphasis on historical antecedence, distinctive vulnerability and separateness of these categories of peoples from the dominant national culture[84]. The 1989 ILO Convention also states that it is applicable to tribal peoples in independent countries "whose social, cultural and economic condition distinguish them from other sections of the national community."[85]

Drawing the contours and content of indigenous peoples' entitlements is not less difficult either. So far the emphasis has been on the rights of indigenous peoples over land and natural resources.[86] Issues of intangible resources rarely arise. Nonetheless, there is now a trend to incorporate indigenous peoples' concerns within existing debates on IPRs.[87] The demands of indigenous peoples themselves and lobbying by social movements have largely influenced this development.[88]

Uncertainty on indigenous rights under international law and their restricted application to neatly defined groups have encouraged African post-independence diplomats to reject the language of indigenous peoples in its entirety.[89] Neither the OAU's Charter nor the African Charter on Human and Peoples Rights make any reference to indigenous rights. However, in his 1986 report, the Special Rapporteur for Indigenous Peoples Affairs, Martinez Cobo, notes, " certain group of population in several African countries should be considered as indigenous."[90] The current Special Rapporteur, Mr. Rodolf Steven Hagen, in his recent report submitted to the ECOSOC in February 2002, also reiterated this view.[91]

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[80] He states, "the fact remains that in the sphere of law-making and activity and the sponsorship of legally binding instruments, the United Nations has done nothing substantial to recognize the interests of indigenous peoples outside the agenda of normal human rights protection." I Brownlie(1992) 66-67.

[81] J Anaya (1996 63.

[82] *Idem* 62.

[83] *Idem 55.*

[84] *Idem* 60.

[85] Art 1(1).

[86] See L Baers(1998) 4.

[87] *World Trade Organization Activities Relating to Indigenous Peoples.*, Permanent forum on Indigenous Peoples E/CN.19/2002/2/Add.68 April 2002. WIPO held series of consultations and roundtable on the issue of indigenous peoples, traditional knowledge and property rights.

[88] Movements such as Indigenous Peoples Coalition against Biopiracy and Indigenous Peoples Council Against Biocolonialism are some few examples of these forces.

[89] Moringe Parkipuny(undated), *'Indigenous Peoples Rights Question in Africa'*, Statement to the UN Working Group on Indigenous Peoples. Available at, < http://www.cwis.org/fwdp/Africa/parkipny.txt>, (accessed on 23 August 2002).

[90] E/CN.4/Sub. 2/1986/7/Add.4.

[91] E/CN.4/2002/97.

Africa's traditional disenchantment with indigenous peoples rights is gradually changing.[92] This shift is marked by the recent decision of the ACHPR in its 28th session in Banjul, the Gambia, to establish an expert group on indigenous and ethnic groups in Africa.[93] Secondly, there has been well-organized activism around indigenous groups such as the San peoples of Kalahari desert, Amazigh in North Africa, Mubuti in former Zaire and Ogoni in Nigeria. The recent development of an anti-obesity drug based on a Kalahari desert cactus, which San people have used since time immemorial, and the ensuing controversy shows how the concept of indigeniety is emerging as a powerful tool to address the protection of the needs of local communities in Africa.[94] By doing so indigenous peoples' rights establishes an important international norm which diminishes the exclusive entitlement of states over their resources.[95] This is important to counter-balance the negative repercussions of the state sovereignty principle, which is strongly affirmed under the CBD.[96]

3.3. International norms, instruments and institutional arrangements

3.3.1. Trade Related Intellectual Property Rights ("TRIPS")

TRIPS agreement was included in the GATT in 1994's Uruguay Round. The three objectives of the agreement are;

i) Establishing minimum standards of *protection*;
ii) Clarifying general principles on domestic procedures and remedies for the enforcement of intellectual property rights, and;
iii) Facilitating dispute resolution mechanism under WTO.

TRIPS permits patent over life forms such as microorganisms and their processes.[97] Article 27(2), however, incorporates an exception clause which allows states' refusal on patenting of life forms on the basis of *ordre public* and *morality*. It, however, offers little clarity regarding the distinction between non-patentable plant and animal life, and essential biological process on the one hand and patentable microorganism and microbiological processes on the other.[98] Article 27(3)(b) obliges WTO members to protect plant breeders' rights either through patent or *sui genris* systems. It, however, does not offer any definition of such systems.[99]

[92] The Indigenous Peoples of Africa Coordinating Committee however is of the view that indigenous peoples in Africa refers to mainly hunters and gathers who are discriminated by dominant African ethnic groups. See 'Who is Indigenous in Africa' , < http://www.ipacc.org.za>{ accessed on 2 September 2002).
[93] Fifteenth Annual Activity Report of the African Commission on Human and Peoples Rights, Banjul, the Gambia, October 2002.
[94] BBC, 30 July 2002.
[95] Para 524 of the Report by the Sub-Commission on the 1983 Protection of Discrimination and the Protection of. Minority states ' ... no intermediary institution of any kind should be created or appointed to hold the lands of indigenous peoples on their behalf' Quoted in I Browneli(1992) 70.
[96] Art 3 of the CBD.
[97] Article 27.3(b) states: "Members may also exclude from patentability: plants and animals other than microorganisms, and essentially biological processes for the production of plants or animals other than non-biological and miro-biological processes. However, members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination therof.".
[98] C Juma (1999) 9.
[99] See *Genetic Resource Action International* March 2000 4.

African WTO members see *sui genris* system as weaker, non-patent regime where group entitlements are emphasized while developed countries tend to consider it as a stringent, patent like and individualistic system.[100]

TRIPS is essentially a private rights regime.[101] It does not make any reference to traditional knowledge which is primary communitarian.[102] Views on the efficacy and equitability of using patents or other IPR systems to protect genetic resources and associated traditional knowledge are divided. Some suggest that article 1 which allows states to provide a more extensive protection under their domestic law (as far as these measures are not contradictory with the agreement) can be used to provide protection to traditional knowledge.[103] The possibility of manipulating other PR regimes such as trademarks, utility models, industrial designs, service marks or geographical indicators is also suggested. Critics argue that not only do TRIPS and other IPR systems fail to adequately protect life-forms and knowledge systems but also they expose the latter to misappropriation and eventual depletion. [104] Swanson argues that TRIPS seeks to standardize, uniformalise, and accumulate human knowledge whose nature and form is biased toward uniform, human generated, western types of knowledge.[105] It is born out of a Western epistemological assumption and monoculturalisation agenda.[106] He suggests that IPRs are intimately connected with information generated through human investment to the exclusion of naturally generated information stored in genetic resources.[107] Patents on biotechnologically altered life solely seek to protect this human investment rather than real and measurable values of biological resources. TRIPS is also inflexible and burdensome to developing countries by reinforcing existing unequal allocation of benefits arising from the commercialisation of biogenetic resources.[108] This led to its rejection by WTO African member countries.[109]

The relationship between TRIPS and CBD is precarious, if not contradictory. While the CBD recognizes states' sovereign entitlements over their resources, the TRIPS creates a private enclosure over natural resources.[110] The nature of knowledge systems they seek to protect are also different.[111] Due to their advantageous bargaining power within the arrangement, developed countries prefer the primacy of TRIPS to

[100] This confusion underlines the debate whether the OAU's Model Law or UPOV should be taken as effective *sui generis* systems under the meaning of art 23(7)b.
[101] This is clearly stated in the preamble of the TRIPS. Text of the instrument available at WTO's official website, < http://www.wto.org/english/docs_e/legal_e/27-trips.pdf>, (accessed on 23 August 2002).
[102] TRIPS is formulated to protect systematic, formal and codified knowledge systems. See S Walker(2001).
[103] See G Dutfield,(1997) *Biopolicy International* 19.
[104] See the previous chapter.
[105] T Swanson (1995) 6.
[106] This market oriented-ness makes TRIPS incapable of addressing major social and cultural issues, See C Brenner (1999).
[107] As above. 12.
[108] G Dutfied (1999) 1.
[109] WTO (1999) Communication from Kenya on Behalf of the African Group. World Trade Organization, Geneva.
[110] Some however argue that the CBD does not in any way create rights but reaffirms generalized and old sovereignty principle. See Commission on Intellectual and Industrial Property, 28 June 1999.
[111] S Walker (2001) 32.

the CBD.[112] Developing countries, however, feel a sense of exclusion and alienation towards TRIPS that is largely negotiated without their full participation.[113] In Africa the TRIPS negotiations preceded national debates on its implications on development and the environment.[114] This South-North divide has also reflected itself in the TRIPS's review process. While developing countries push for unqualified patentablity exception, and the loosening of the rigor of TRIPS enforcement, developed countries want to lessen the exception purview or its total abolition. This asymmetrical agenda lead to formidable stalemate in the deliberations and negotiations.

3.3.2. Convention on Biological Diversity ("CBD")

CBD is the most significant outcome of the 1992 Rio Earth Summit.[115] Due to its broad constituency — it has over 180 member states— it creates a strong Legal-political foundation for the control and protection of genetic resources. Article 3 of the Convention reaffirms sovereign rights of states over their natural resources, thereby departing from the *common heritage* principle that had been dominant in the past[116]. It grants states the authority to adopt and implement policies on "environmentally sound uses" of genetic resources and put up conditions for access. It creates conditions for access to genetic resources on prior informed consent and mutually agreed terms.[117] States are however obliged not to "impose restrictions that counter the objective of the Convention".[118]

For biodiversity rich developing countries, though a reaffirmation of sovereign rights over genetic resources is salutary, state-centred approach undermines the rights of local communities.[119] The CBD also does not cover *ex situ* biogenetic collections, i.e. those that are found in gene banks and germplasm reserves.[120] It, however, affirms indigenous peoples' moral and legal claims to land, natural resources, and knowledge and recognizes their role in the sustainable conservation and development of genetic resources.[121] Article 8(j) obliges state parties to 'respect, preserve, and maintain' traditional knowledge with the approval and involvement of local communities. Importantly it stipulates that IPRs should not be used to undermine the protection of biodiversity.[122] It also stipulates that benefits accruing from the commercialisation of traditional knowledge, innovation and practices shall be equitably shared. Technology is defined in such a way that it

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[112] Under international law, there is no hierarchical relation between trade and environmental law. But effective enforcement mechanism under TRIPS give this arrangement a relatively strong positioning.

[113] The African Group's position at the WIPO's fora also expresses similar sentiments. See WIPO/GRTKF/IC/1/10. C Juma (1999) 5.

[114] P Cullet (2001) 45*Journal of African law* 1 97.

[115] D Downs (1996) in William Snipe and Oliver A. Houck(eds.) *Biodiversity and Law 202..*

[116] Art 15.

[117] Articles 15.5, 15.4.

[118] Art15 (2).

[119] V Shiva (1993) 152.

[120] Shiva argues that by failing to provide protection to *ex situ* collection, the CBD presents a great risk to developing countries. *Ibid* 154.

[121] The Preamble states: "the close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation and the sustainable use of its components."

[122] Art 16(5).

incorporates 'indigenous and traditional innovations'.[123] By looking at these provisions some argued that the CBD crafts a niche for a human rights discourse within trade and biodiversity protection regime.[124] Critics on the other hand point out that the Convention neither creates any concrete rights to indigenous people nor stipulates for specific measures states should take in order to fulfil those rights.[125] It important to note that the CBD is not simply a property rights regime.[126]

In its Decision III/14, the Conference of Parties ("COP") urged parties to supply information about the implementation of article 8(j) and other related provisions of the Convention, and invited member states, indigenous peoples, NGOS and other independent consultants to present proposals and case studies on best practices on the subject matter.[127] At its fourth meeting, the COP established an Ad Hoc Working Group, which is mandated to provide advice on the application and development of legal and other appropriate forms of protection for the knowledge, innovations and practices of indigenous and local communities and frame modalities of implementing article 8(j) and other relevant provisions of the Convention.[128] It also established the Panel of Experts on Access and Benefit Sharing to frame methods of implementing article 15.[129] The Working group finalized the Bonn Guidelines, which were latter adopted by COP VI.[130] These Guidelines are designed to complement national biodiversity strategies and they cover a wide ranging issues such as the establishment of a national focal point; responsibilities and roles of both providers and receivers of genetic resources; participation of stakeholders in negotiations; informed consent; sharing of the benefits from the utilization of natural resources on mutually agreed terms; types of benefits; incentives; settlement of disputes and others.[131] Protection of traditional knowledge is also encoded as the central objective of the Guidelines.[132] The existence of mechanisms of involving local and indigenous communities in each step of negotiation are emphasized.[133] Users are obliged to gain the prior consent of local people and satisfy the latter's request for information.[134] It also provides for the provision of monetary and none-monetary benefits.

123 Art 18(4).
124 As one researcher puts it " in the Biodiversity Convention, international law takes a step, however tentative towards justice in the field of economic and environmental regulation-justice with ecological and economic disputes" D Downs(1996) 203.
125 WIPO/GRTKF/1C/1/7/.
126 S Droege and B Soete (2001) *Environmental and Resources Economics* 19 152.
127 *Ibid.*
128 These other relevant provisions include articles 8(j); 16; 17.2; 18.4; 19.1; and 2.15 and 10.c. See A Yupari (2000)14.
129 Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at its Fourth Meeting, Decision No IV/I, < http://www.biodiv.org/doc/decisions/cop-04-dec-en.pdf>, (accessed on 2 May 2002).
130 See Decision VI/24 UNEP/CBD /COP/5/23.
131 The Bonn Guideline are available at COP's official website at, < http://www.biodiv.org>, (accessed on 2 May 2002).
132 Art 11(J).
133 The Guidelines call for the establishment of national arrangements such as National Consultative Committee where indigenous and local people are duly represented. By recognizing the differing interests of local community groups, it prescribes for a case-by-case determination of their involvement and benefit sharing. See Art 14 (h) and Section Three.
134 Art 16(B).

3.3.3. The International Convention for the Protection of New Varieties of Plants ("UPOV")

The UPOV (French acronym) is a treaty originally negotiated in 1961 mainly by Western countries. Primarily designed to protect the interest of plant breeders that develop " new, distinct, uniform and stable" plant varieties, it is the only multilateral system that sets minimum standards for the protection of plant varieties through IPR.[135] It has been subsequently revised in 1972, 1978 and 1991. The 1978 Act being closed to further accession in April 1999, any country wishing to join UPOV can only be a member to the 1991 version. Currently around 70 percent of UPOV members are developed countries. South Africa and Kenya are the only African countries parties to UPOV.[136]

The primary beneficiaries of plant variety protection are plant breeders.[137] Like patents, the period of protection is limited.[138] The breeder's monopoly right does not extend to private use and research application, including experimentation on propagation of new varieties and it is subject to public interest control.[139] Though TRIPS does not make reference to UPOV, Western member states are increasingly pressurizing developing countries to accept the instrument as a *sui genris* system.

The UPOV has a number of drawbacks that makes it less suitable as a *sui generis* system.[140] With subsequent revisions, it has become almost identical to patent. The 1991 Act not only restricts farmers' rights but also recognizes breeders' rights and patents. The 1978 UPOV's extensive reference to farmers' rights is considerably limited.[141] The UPOV is mainly designed to provide protection to Western agricultural businesses.[142] There is no reference to traditional knowledge.[143] The UPOV Secretariat argues that the UPOV regime enhances food security in developing countries. A survey, however, shows that only 36 % of the varieties protected by plant varieties certificates are food crops.[144] In Kenya, only one title out of 136 applications relates to a green bean that is exported to the European market.[145] Moreover, both in Kenya and South Africa the majority of the applicants are disproportionately foreigners, suggesting that the system is less supportive of local research and technological capacity building.[146]

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135 While the CBD covers all biological resources, the UPOV only covers plant varieties.

136 1961 International Convention for the Protection of New Varieties of Plants as revised at Geneva (1971, 1978,1991) Status on July 30 2002. < http://www.upov.int/ eng/ratif/pdf /rat ifmem.pdf>(accessed on 2 August 2002).

137 Art 5(1) of the 1991 Act.

138 According to Art 19 of the 1991 Act, the period of protection are not fixed but shall not be shorter than 20 years.

139 Art 15 of the 1991 Act.

140 On different approaches to *sui generis*, see A Siler(1998) 34 *Biotechnology and Development Monitor* March 1998.

141 Cullet also notes that: " the 1991 version of the Convention, which has significantly weakened the exceptions to the rights of breeders contained in the 1978 version, there is no significant difference between patents and the regime offered by UPOV." P Cullet (2001) 45*Journal of African law* 1. See also *Third World Network* May 1999.

142 All the revisions processes were triggered by a desire to strengthen the rights of breeder, they restricted the rights and privileges of farmers.

143. T Egzihabehere (2002) 4.

144 Genetic Resources Action International (Grain) June 2001, 3.

145 *Ibid.*

146 See Grain(1999).

Developing countries' disenchantment with the UPOV has spawned a new wave of debate within the Food and Agriculture Organization (FAO) starting in the 1970s and leading up to the adoption of the International Undertaking on Plant Genetic Resources in 1983.[147] This instrument espoused 'a common human heritage principle' which makes both traditional and natural varieties of the developing countries and advanced and enhanced varieties of the developed world free and accessible.[148] Some of the Undertaking's provisions provide for the sharing of benefits and local participation in decision-making. Most of these principles were further elaborated and developed by FAO's interpretative resolutions. The absence of enhanced breeders' rights protection under the instrument caused its rejection by developed countries.[149] Negotiators form developing countries also criticized the Undertaking for transferring "wealth of genetic material to the North in return for access to specialized lines of great technical sophistication of dubious value".[150] Hence as one commentator noted, "The Undertaking failed to prevent developed countries from protecting their IPR systems in plants and failed to win any sort of compensation for least developed countries".[151]

3.3.4. World Intellectual Property Rights Organization (" WIPO")

The WIPO is a specialized UN agency mandated to administer IPRs.[152]. In 1982 WIPO and UNESCO developed the Model Provisions on the Protection of Expression of Folklore.[153] In 1997 it established the Global Intellectual Property Issue Division (GIPID), which is mandated "to explore and investigate the needs and expectation of new beneficiaries of intellectual property rights". GIPID's mandate touches upon issues including, among others, traditional knowledge, innovation and creativity, biodiversity and biotechnology; protection of folklore; and intellectual property and development. It organized two important global roundtables, namely a Roundtable on Intellectual Property and Indigenous Peoples in July 1998 and a Roundtable on Intellectual Property and Traditional Knowledge in November 1999.[154] It also undertook fact-finding missions in 28 countries.[155] In Africa, these fact-finding missions covered Uganda, Namibia, South Africa, Nigeria, Ghana, Mali and Senegal.

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147 Resolution 8/83 Twenty Second Session of the FAO Conference Rome 1983.

148 The preamble states," plant genetic resources are a heritage of mankind to be preserved, and to be freely available for use, for the benefit of present and future generations."

149 Klause Bosselamn (1996) 'Plant and Politics: The International Legal Regime concerning Biotechnology and Biodiversity' *7 Colorado Journal of International Law, Environmental Law and Policy* 111 134.

150 *Idem* 133.

151 *Idem* 133.

152 The two important treaties which fall outside of WIPO's mandate include TRIPS and CBD. Bahtti, Shakeel, 'Intellectual Property and Traditional Knowledge; the Work and Role of the World intellectual Property Organization' Expert Meeting on System and National Experiences for protecting Traditional Knowledge, Innovations and Practices, UNCTAD, GENEVA, October 30 to November 2, 2000, <www.unctad.org/trade_env/docs/wipo.pdf>(Accessed 23 May 2002).

153 The text of the Model Provisions is available at, <www.wipo.int /global issues /tk/ pdf/19820folklore-model-provision.pdf> (accessed on 24 May 2002).

154See Round Table on intellectual Property and Indigenous Peoples Geneva July 23 and 24, 1998 WIPO/INDIP/RT/98/1Rev.

155 See the report of these fact finding missions in *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact Finding Missions on Intellectual Property and Traditional Knowledge(1998-1999), Geneva 2000.*

At its 12th Extraordinary Session, the General Assembly of WIPO established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore to engage states in continuous discussions and consultations on the protection of traditional knowledge and folklore and access to genetic resource and benefits sharing.[156] The Committee's membership is open to all WIPO parties and other accredited international and national organizations. At the Committee's first meeting in May 2001 in Geneva, Madagascar presented the African Group's proposal.[157] The submission identifies the inbuilt inadequacy of IPR for the protection of genetic resources and traditional knowledge and calls for the adoption of an inclusive international legal instrument.

There is a fear that WIPO is attempting to co-opt indigenous groups into dominant IPR systems.[158] Contested IPR matters such as the revision of TRIPS are pushed aside from WIPO's reach. Industrialized countries always try to offload contentious IPR matters from WIPO's mandate, as decisions within WIPO may not necessarily protect their interests.[159] Cognizant of this development, however, developing WTO-member countries such as Bolivia, Colombia, Ecuador, Nicaragua and Peru, are now pushing for the inclusion of traditional knowledge in trade negotiations.[160]

3.3.5. The United Nations Conference on Trade and Development ("UNCTAD")

In 1996 UNCTAD launched the Bio Trade Initiative, which is designed to assist biogenetically rich countries to profit from the commercialisation of their genetic resources. By stimulating investment in genetic resources, it seeks to promote the sustainable use of natural resources.[161] UNCTAD's Bio Trade Facilitation Program (BTFP) supports entrepreneurs to trade in biological materials and related products both at the national and international markets.[162] At UNCTAD's 10th Conference, it was decided to inform these projects with provisions of the CBD and TRIPS. Though UNCTAD's program has mainly concentrated on the Americas, some African partners have benefited from the program. [163] For example the Southern African Natural Product Trade Association (SANProTA) has benefited from the UNCTAD trade facilitation programme.[164] It held an Expert Meeting on Systems and National Experiences for Protecting Traditional

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156 See WIPO General Assembly Twenty-Six Session, Geneva, September 25 to October 3, 2000 WO/GA/26/6.

157 *Proposal Presented by the African Group to the First Meeting of the Inter-Governmental Committee on Intellectual Property and genetic Resources, Traditional Knowledge and Folklore.* WIPO/GRTKF/IC/1/10.

158 See M Khor (1999) *Third World Network.*

159 *Communication by the European Communities and their Member States to the TRIPS Council on the Review of Art 27.3(B) of the TRIPS agreement, and the Relationship Between the TRIPs agreement and the Convention on Biological Diversity("CBD") and the Protection of Traditional Knowledge and Folklore,* European Commission Directorate General for Trade Brussels 12 September 2002.

160 *Ibid.*

161 Art 10 of the CBD

162 See, <http://192.91.247.28/QuickPlace/biotrade/Main.nsf/h_Toc /1cdd658666407394c1256c0 00035947 f/!O pen Document>, (accessed on 3 August 2002).

163 These country programs focused on generation and exchange of information, business and trade promotion of biological resources, capacity building and technical support. See UNCTAD(2002).

164 SANProTA is a non-governmental organization representing local community producers in Southern Africa (Botswana, Zambia, Malawi, Namibia and Zimbabwe). See < www.sanprota.com >, (Accessed on 23 July 2002).

Knowledge, Innovations and Practices on 30 October - 1 November 2000 in Geneva to discuss available best practices on the protection of traditional knowledge and benefit sharing. [165]

3.3.6. World Trade Organization ("WTO")

The WTO is a very important forum for negotiating IPRs. Its Committee on Trade and Environment (WTO-CTE) is a specialized unit that engages member states in clarifying their commitments under WTO rules *vis a vis* other multilateral environmental instruments. Neither the CBD Secretariat nor the COP had access to WTO.[166] Currently, however, both have observer status at WTO CTE according to article 31(ii) of the Doha Declaration.[167] Nonetheless, their attempt to be represented at the TRIPS Council has been blocked by the US and other developed countries making it difficult for COP to influence TRIPS negotiation. Nonetheless the Doha Declaration requires the Council to examine the relationship between TRIPS and CBD by taking into account the views expressed by member states and considering the development impact of such revision process.[168] Such negotiations therefore are likely to affect trade related provisions of CBD, i.e. Articles 8(j), 10(b), 15, 16, and 22. The Bio Safety Protocol to the CBD also conflicts with WTO rules. According to the Protocol's precautionary principle, a CBD member country is entitled to adopt restrictive measures on a transboundary movement of genetically modified substance from another country. This is however a clear violation of WTO rules which do not recognize precautionary rules. At the 2002 Johannesburg Earth Summit, developed countries wanted to put a clause into the official Plan of Action to grant WTO rules overriding jurisdiction over environment-related treaties; an attempt that was successfully resisted by African countries.[169]

African member countries to the WTO and CBD may find their commitments under the two institutions incompatible.[170] The African group in the COP has been lobbying for the revision of TRIPS on the ground that the latter contradicts the CBD.[171] It particularly wanted the revision of Article 27(3) b to out law any patenting of life forms and further clarify the meaning and scope of *sui generis*.. Nonetheless developed countries' unwillingness, lack of technical capability, inexperience, ignorance and lack of bargaining power are important structural problems negatively impacting African countries' influence in WTO.[172]

3.4. Conclusion

There has been a tremendous interest by UN bodies, governments and civic society actors in traditional knowledge holders and their role in the protection of biodiversity. UN organs in particular have played a

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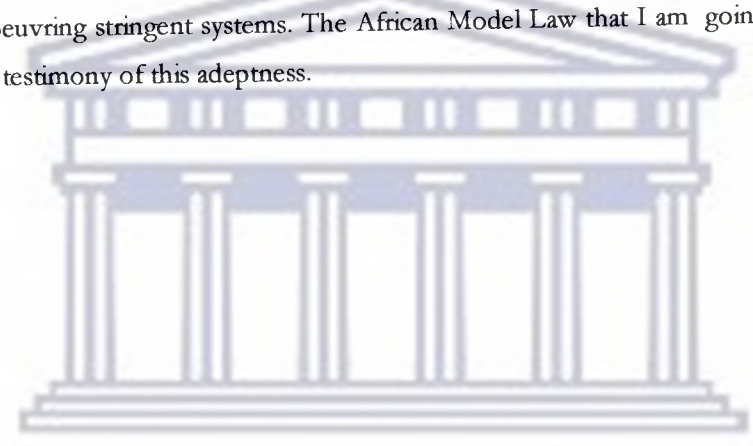
165 Background Documents TD/B/COM.1/EM.13/2.
166 Friends of the Earth International(2002) 3.
167 Doha WTO Ministerial 2001. WT/MIN(01)/DEC/1/.
168 Article 19. *Ibid*
169 *The Independent* 2 September 2002.
170 See.The Trips Agreement. Communication from Kenya on Behalf of the African Group. World Trade Organization, Geneva, 1999.
171 See Declaration of the African Group in the meeting of the 5th Conference of the Parties of the Convention on Biological Diversity, 15-26 May 2000,Nirobi, Kenya.
172 *The Nation* 11 February 1999.

leading role in identifying the cutting edge issues of human rights and trade as they relate to the protection of traditional knowledge and genetic resources. This directly impacts on the development of international norms for the protection of the rights of indigenous and local peoples. Many institutions are established and new and innovative projects are formulated to identify new beneficiaries of intellectual property rights regimes. The path to full realization of the rights of communities, however, has been rocky. There is a lack of coordination among many of the UN institutions that took an interest in the matter. UN approaches and proposals often have their own Western biases as exemplified by their insistence that traditional knowledge and genetic resources are best protected through IPR systems and markets. However market considerations, which exclude human rights premises, are often sources of social conflict. Emerging social movements have been successful in showing the cost of such human rights deficits. They have supported African governments whose participation in environmental negotiations have been significant. The stalemate in reviewing TRIPS, however, shows that these forces have their own limitations. Nonetheless poor countries have developed new strategies of manoeuvring stringent systems. The African Model Law that I am going to discuss in the next Chapter is a living testimony of this adeptness.



CHAPTER FOUR

THE OAU'S MODEL LAW ON THE PROTECTION OF THE RIGHTS OF LOCAL COMMUNITIES, FARMERS. BREEDERS AND FOR THE REGULATION OF ACESS TO BIOLOGICAL RESOURCES

4.1. Historical background

Various initiatives resulted in the final adoption of the Model Law at the 68th Ordinary Session of the Council of Ministers of the OAU held in Ouagadougou, Burkina Faso in June 1998. The STRC had been studying the status and protection of medicinal plants in Africa since mid-1990s.[173] This culminated in a workshop organized in April 1997 Kenya which called for a legal protection of medicinal plants and entitlements of local communities over traditional Knowledge.[174] The workshop underscored the need for establishing an expert panel, which will deliberate, coordinate and harmonize national policies on protection of biodiversity resources and associated traditional knowledge. The newly established expert panel met for the first time in March 1999 in Ethiopia where it reviewed national experiences, adopted the Declaration on Community Rights and proposed an African Convention and model law on community rights and access to genetic resources.[175] The STRC finally kick started the process of drafting a Model Law that assists African WTO member states to fulfil their obligation under the TRIPS by developing an effective *sui generis* system for the protection of plant varieties.[176]

African Common Positions within the WTO, the CBD and other forum has assisted the STRC's work in identifying areas of concern.[177] The Model Law seeks to ensure the national enforcement of values that African countries want to reinforce at the international level. It provided significant succour for the formulation of African common positions discussed at the OAU's Council of Ministers Meeting in Algiers (July 1999) and the meeting of Africa's Ministers of Trade in Algiers (September 1999), and communications by Kenya, Mauritius and other WTO member African countries on behalf of the Africa's group.[178]

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[173] The OAU/STRC, based in Lagos, Nigeria, had initiated the documentation and publication of traditional medicinal plants, which was later reviewed in the OAU/STRC/DEPA/KIPO Workshop on Medicinal Plants and Herbal Medicine in Africa: Policy Issues on Ownership, Access and Conservation, held in Nairobi, Kenya, on 14-17 April 1997. The Kenyan workshop was a follow up of similar expert meeting on traditional medicinal plants in Uganda in 1996.

[174] J Ekpere(2001) 3.

[175] Text of the Declaration and Draft Model Law by the OAU/STRC Task Force on Community Rights and Access to Biological Resources, March 1998, < http://users.ox.ac.uk/~wgtrr/OAU-decl.htm>(accessed 23 August 2002).

[176] Art 27(3) of TRIPS.

[177] Prohibition of patent over life forms and development of sui *generis* system for the protection of community rights and traditional knowledge form the focal areas of the Model Law and the various declarations of the African common position on WTO negotiations.

[178] Kenya presented its proposal on Behalf of the African group to WTO Council for TRIPS on 6 August 1999(WT/GC/w/302), which was reiterated by Mauritius's submission again on behalf of the African group on 20 September 2000(IP/C/w/206). Both proposals primarily deal with the substantive review of article 27(3) b of

Parallel to OAU's process, the Ethiopian Authority for Environmental Protection with the assistance of Institute of Sustainable Development and the Third World Network had been working on a Model Law on community rights.[179] When the OAU's expert meeting was held in April 1998 in Addis Ababa, it tabled a draft model law for deliberation and approval. Both the Ethiopian experts and STRC were not aware of each other's initiatives. However, after the expert panel approved Ethiopia's document, the Ethiopian government presented it at the 68th Ordinary Session of the Council of Ministers of the OAU where it was officially adopted. The Council of Minister while adopting the draft law recommended that member states shall enact domestic laws inline with the Model Law; negotiation among member states should start with the aim of adopting an African Convention on biological diversity which regulates access to genetic resources and protection of community rights and member states shall forge an African regional Common position and commitment to shared aims with other countries from the South to negotiate and reform TRIPS.[180]

4.2. Substantive Provisions

The OAU's Model law is imbued with issues touching on community rights, biodiversity protection, ethics, development, law, economic justice and human rights.[181] It incorporates provisions drown from the CBD.[182] The Model law, however, is not a mere verbatim copy of the CBD. Farmers' rights are not covered in the CBD but form the core content of the Model Law. The CBD covers only *in situ* genetic resources while the Model Law applies to both *ex situ* and *in situ* resources. The Model Law presents itself as a *sui generis* system prescribed by the TRIPS.

4.2.1 Access to genetic resources and traditional knowledge

The Model Law defines access as, "acquisition of biological resources, their derivatives, community knowledge, innovations, technologies or practices as authorized by national competent authority."[183] Access refers to both to indigenous peoples' access to their genetic resources and breeders' right to collect genetic resources for commercial and industrial applications.[184] These two renditions are informed by apparently contradictory legal principles. While collective entitlements to traditional access is underpinned with principle of sovereign rights over natural resources, breeders' rights are encumbered with the principle of unfettered

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TRIPS which African countries want to be more flexible for the development of national *sui generis* system and prohibit the patenting of living things.

[179] Ethiopia was an active negotiator on Catagna Protocol on Bio safety on behalf of the African group and Dr Tewolde G/Igzihabeher, the manager of the Ethiopia Authority on Environmental Protection was the spokesperson of the African group, G-77 and like-minded groups.

[180] Similar sentiment was expressed in Madagascar's proposal on behalf of African group to the First Meeting of the Intergovernmental Committee on Intellectual property and Genetic Resources, Traditional Knowledge and Folklore 30 April-3 May 2001, WIPO/GRTKF/IC/1/10.

[181] See *Maryknoll Global Concern* September/October 2001.

[182] See C Oh(1999) *Third World Resurgence No* 106.

[183] Part II, 1 para. 2.

[184] A Pluralist approach recognizes customary laws, which ensures free access to local communities.

erode breeders' entitlements through its expansive farmers' rights regime it was severely criticized by the UPOV. [205]

Community rights incorporate both tangible rights and intangible intellectual property rights on genetic resources and traditional knowledge.[206] These include communities' collective entitlements over their biological resources and traditional knowledge, and over collective benefits from their utilization.[207] As in the case of farmers' rights, community rights relating to access, use, exchange or share biological resources are deeply entrenched in local customary laws.[208] Access to community genetic resource and traditional knowledge are subject to PIC procedures that should also involve the full participation of women.[209] Communities also enjoy the right to refuse access and withdraw or place restrictions on consent and access where "such access will be detrimental to the integrity of their natural or cultural heritage".[210]

4.2.4. Plant breeders' rights

Plant breeders' rights are individual entitlements that reward innovations and contributions of individuals or industries.[211] In order to enjoy full protection under this regime, breeders' innovations have to meet different standards than the one the Model Law stipulates for farmers' breeding techniques. Accordingly breeders' plant varieties should be new with *identifiable, stable and homogenous characters* (emphasise added).[212]

Breeders' rights cover exclusive rights to sale or produce, including the right to license other persons to sell or produce or propagate that material for sale.[213] The length of period of production is between 20 to 25 years.[214] The Model Law introduces a number of limitations to plant breeders' rights. Article 31(1) provides that breeders' rights may be limited by the rights of any person or farmers' community to propagate, grow and use plants of protected variety for purposes other than commerce; sell plants or propagating material of that variety as food or for another use that does not involve the growing of the plants or the propagation of that variety; sell within a farm or any other place at which plants of that variety are grown and use of protected variety for the development of another variety. Plant breeders' rights are further limited under Part V of the Model Law which recognizes the right of farmers' to save, use, multiply and process protected varieties.[215] Moreover Article 33 (1) grants governments extensive powers to restrict breeders' rights if problems associated with competitive practices of the rights holder are identified; food security or nutritional

[205] T Egzihabeher(2002)8.
[206] Art 23.
[207] Art 16.
[208] Arts 17 and 21 enjoin the state to protect community rights that are embedded in norms, practices, and customary laws.
[209] Art 18.
[210] Arts 18 and 19.
[211] Art 28.
[212] Art 29 defines each of these criteria.
[213] Article 30.
[214] The period for annual crops is 20 years while it is 25 years for trees, vines and other perennials. Art 34.
[215] 26(1) f.

or health needs are adversely affected; high proportion of the plant variety offered for sale are being imported; the requirements of the farming community for propagating material of a particular variety are not met; and where it is considered important to promote public interest for socio-economic reasons and for the development of indigenous and other technologies.[216] It is also provided that the National Authority may convert the exclusive Plant Breeders' into compulsory license of right.[217] Breeders' rights are also restricted by the Model law's exclusion of life forms, i.e. accessed material, biological processes or any of their derivatives.[218] Article 15 empowers to National Competent Authority to establish restrictions to or prohibitions on those activities directly or indirectly related to access if they undermine endangered wild life, negatively affect human health, adversely impact on the environment, result in genetic erosion, and create non-compliance with rules on bio safety or food security and contradict national interest and international obligations.[219]

4.2.5. National institutional arrangement

Part VII of the Model Law deals with institutional arrangements at the national level for the implementation of the Model Law. It obliges the state to establish a NCA, which implement and enforce provisions relating to access to genetic resources and protection of community entitlements. Its functions include examination of plant breeders' applications for access; testing of the applicant's variety; registering and issuing certificates or licenses; entering the applications in an official *gazette* and maintaining these official documents; dispute settlement; fix royalties on commercialised protected seeds, and hold consultation with local people.[220] A follow up and coordination of NCA's activities shall be undertaken by a National Inter-Sectoral Co-ordination Body composed of representatives from the public sectors, scientific and professional organization, and non-governmental and local community organization.[221] This organ will have a Technical Advisory Body. The Model Law also calls for the establishment of a National Information System that will keep a database on local genetic resources and traditional Knowledge.[222] Access to such information will be regulated by a charter.[223] Article 66 involves the most specific institutional mechanism of channelling benefits to local communities i.e. the establishment of Community Gene Fund. The Fund will be established as autonomous tax exempt trust managed by a Management Committee comprising farming community representatives, professionals, non governmental organization and the public sector.[224] It finances projects initiated by local communities themselves in a manner which ensures gender equity.[225]

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[216] It is however stipulated that an instrument involving conditions of such restriction shall be handed down to the guarantee; public notice shall be served and the amount of compensation shall be specified.
[217] Art 33(3).
[218] Art 9(1) States: " Patent over life forms and biological processes are not recognized and can not be applied for."
[219] Art 15.
[220] Arts 38, 39 and 66(3).
[221] Art 59.
[222] Arts 64 and 65.
[223] Art 64(3).
[224] Art 66(6).
[225] Art 66(4).

4.2.6. Benefit Sharing

As in the CBD, fair and equitable benefit sharing is incorporated as one of the objectives of the Model Law.[226] It defines benefit sharing as 'the sharing of whatever accrues from the utilization of biological resources, community knowledge, technologies, innovations or practices' and recognizes the same as an important entitlement of local communities.[227] Two types of benefits are recognized; financial and non-financial benefits. The latter include technology transfer, research, information exchange and capacity building.[228] The state and local communities are recognized as the twin beneficiaries of benefits.[229] The right of farming communities to benefits sharing is also covered in the section that governs farmer's rights. The model law enjoins states to set aside a minimum of 50% of any financial returns, which should be channelled, to local communities.[230] The modalities of financial disbursement to the local communities are not clearly spelled out. Nonetheless the Model Law specifically states that earnings should be channelled to local communities ' in a manner that treats both men and woman equally' and in a manner which involves 'the full participation and approval of the concerned communities'.[231]

4.3. Conclusion

The OAU Model Law emerges from different initiatives but aims to resist the negative impacts of intellectual property rights on Africa's biodiversity and genetic resource. Like the CBD, it declares the inalienable rights of states to their natural resources, protects traditional knowledge and ensures benefits accruing from the commercial and industrial application of genetic resources and traditional knowledge. By doing so the Model Law seeks to revitalize the legitimacy of the CBD as a superior legal regime *vis-à-vis* international intellectual property rights instruments in regulating matters relating to biodiversity. This gets even more nuanced as it presents itself as a *sui generis* system excluding the application of patent like regimes on genetic resources. As such it became a rallying agenda for African governments and civic societies during international trade and environment negotiations.

Even though the idea of drafting and adopting an African Convention on Biological Diversity has been in the air for sometime now, the Model Law remains a non-binding framework. There are however reasons to think that the Model Law will attract wide recognition and acceptance. Firstly it incorporates principles recognized under the CBD to which many African countries already subscribe. Secondly it offers a unique regional response for state obligation under TRIPS that requires effective national *sui generis* system. Thirdly the fact that the initiative of developing the Model Law has been undertaken under the auspices of the continental organ shows the importance African states attached to the matter. Nonetheless as we will see in the following

[226] Part I d.
[227] Art 3.
[228] J Ekepere(200)13.
[229] Art 12(1) (2).
[230] Art 22(1).
[231] Art 22.

chapter there are many inbuilt and external problems that may stand in the way of a successful realisation of the ideals the Model Law seeks to achieve.

CHAPTER FIVE

PROBLEMATIZING OAU'S MODEL LAW AND REVIEW OF CHALLENGES TO ITS IMPLEMNTATION

5.1. Introduction

This Chapter aims to highlight factors undermining the implementation of the Model Law. The discussion however is not based on a national experience of domesticating the Model Law for the simple reason that so far there is no single country that undertook appropriate measures to give effect to the latter. However there has been a remarkable level of enthusiasm expressed by governments that have committed themselves to promulgate national legislations in implementing the Model Law. This official stance however is beleaguered by myriads of obstacles that are either linked to the way a particular issue is articulated in the Model Law or the practical difficulty of ensuring the latter's implementation at the national level.

Reactions to the OAU Model Law have been mixed. Some have branded it as a ground breaking rethinking of IPRs within the African context.[232] Others dubbed it a *sui generis* alternative to intellectual property rights systems.[233] Here I shall discuss issues that influence the efficacy of such regime.

5.2. Notes on some problem areas of the Model Law

5.2.1. Ecological regionalism

The Model Law seeks to harmonize legislations and policies on ownership, access, utilization and conservation of natural resources within OAU member states.[234] It is specifically designed to shape domestic institutional arrangements on biodiversity. All the institutions it establishes are operational at the national level. However its objective of harmonizing national policies and the proposed African convention on biological diversity shows the existing interest in moulding a regional mechanism. This is premised on the assumption that political boundaries are not necessarily ecological belts and harmonization of policies is hence an important aspect of creating effective regulatory system. Access to transboundary nature of genetic resources is best regulated through a common benefit sharing and access system where common standards are set for the regulation of consent, participation and equitable benefit sharing. Common system firstly

[232] Seuret and Perriere(2000) *Le Mode Diplomatique* July 2000.

[233] Similar experiment include the Mesoamerican and Caribbean Convention for the Protection of Collective Intellectual Property Rights, the Andean system and Community intellectual protection arrangements in India and Thailand.

[234] See International Plant Genetic Resource Institute (2002).

facilitates effective implementation and experience sharing.[235] Secondly it resists prospecting institutions' urge to hunt for transboundary resources in countries that offer them the lowest prices.[236] Channelling financial benefits to single 'right holder' community or country of origin begets competition thereby lowering the price beyond that minimum threshold needed to cover the opportunity cost for biodiversity conservation.[237] Joseph Vogel proposed the *Cartel System* where a certain royalty rate for all contributors is fixed and additional percentage is allocated to the actual supplier.[238] *Cartels Model* however is criticised for allocating rewards equally between or among countries or communities that made different degree of investment on conservation. Another model that was suggested was a Global Fund that will channel generalized benefit sharing into biodiversity countries. The Model Law approach is very localized and hence different from both two models.

Though the Model law envisages some level of regionalism, it is different from other existing regional arrangements. For example the Andean Community's Common System on Access to Genetic Resources establishes common system of access and benefit sharing within five member states including Peru, Venezuela, Columbia, Ecuador and Bolivia.[239] It is entirely based on *Cartel's Model* whereby all contributors enjoyed equal benefit sharing.[240] Unlike the OAU Model Law, the Andean System is also a binding arrangement.

5.2.2. Dissonance with international instruments

The Model Law draws inspiration from the CBD.[241] It reiterates sovereign right, environmentally sound access to genetic resource, community rights, PIC and equitable benefit sharing principles.[242] It both builds up on the CBD and introduces new paradigm. This, however, puts the Model Law in a peculiarly uneasy position in relation to TRIPS and UPOV. Ekpere notes that CBD/ the Model Law on the one hand and TRIPS/UPOV on the other form two separate multilateral approaches to the utilization of biological resources.[243]

By guaranteeing the right of farmers to save and exchange farm seeds, the Model Law contradicts the 1991 UPOV which severely restricts such practice.[244] The Model Law's system of breeders' rights protection is also

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[235] The CBD's Panel of Expert on Access and Benefit Sharing underscore the importance of regional cooperation in designating legislative framework for access and benefit sharing. UNEP/ CBD/ COP/4/23/Rev.1.
[236] I Wolden(1995)in Timothy M. Swason (ed.) *Intellectual property rights and biodiversity conservation: an interdisciplinary analysis of the values of medicinal plants* 192.
[237] *Ibid.*
[238] See G Dutfield (1997) *Biopolicy International* NO. 19
[239] M Muller (2000) 4.
[240] Nonetheless article 7 of the Andean Common system enjoins contact-entering local communities to inform other riparian communities about their decision to do.
[241]. Article 6 of the CBD requires states to develop a national biodiversity program.
[242] J Ekpere (2000) 6
[243] *Ibid.*
[244] Compare article of 15 of the UPOV and 26 of the Model Law.

much less extensive than patents. While TRIPS allows for patenting of life forms, the Model Law prohibits recognition of patent over plant and animal varieties.[245]

The concern stemming from the Model Laws' dissonance with these instruments is that it may undercut badly needed international cooperation in the harmonization of international intellectual property rights.[246] African states members to both instrument are encumbered with a difficult task of reconciling and operationalising these conflicting ideals. There was hope that the review process under TRIPS agreement itself would achieve this goal.[247] African WTO members tried to impress on the WTO Council on the need to make WTO rules more flexible and consistent with member states' other international obligations.[248] The dominant view in Africa is that the Model Law is a *sui genris* system within the meaning of TRIPS. Nevertheless this has been continuously rejected by both WIPO and UPOV that promote the 1991 UPOV as a *sui generis* system.[249] The view that the Model Law should strictly conform to TRIPS is not entirely acceptable. *Sui generis* system is designed to protect plant varieties which cannot be protected under normal patent regimes. This means that the Model Law is not a duplication of TRIPS rule but rather its alternative. As such The Model Law should be seen as an attempt of unifying the various international instruments.

5.2.3 Institutional problem

The Model Law accords the state a central role in administrating access contracts and protecting community entitlements. The CNA enjoys a dominant position as an oversight mechanism. The efficacy of the regime is therefore heavily dependent on the states' institutional capacity.[250] However few African countries have the needed institutional capacity. Often legislations on protection of plant varieties and community are non-existent.[251] *Ex situ* resource enjoy a far less legal protection than *in situ* resources.[252] In those countries where genetic resource legislations are adopted, protection of community rights and traditional knowledge are also skewed.[253] Access to these resources and benefit sharing are regulated by *ad hoc* arrangements. The complexity attendant to such scenarios is tellingly exemplified by the following case.

In Cameroon a benefit sharing scheme over the collection of *Ancistrocladus korupensis*, for the development of *anti*-HIV naphthyl-isoquinoline alkaloid michellamine B by the US National Cancer Institute ("NIC")

[245] Compare articles 23 of TRIPS and 9 of the Model Law.
[246] *Intellectual Property Rights and Farmers Rights*, Position Paper, Africabio No. 5. Pretoria 2002 2. Africabio argues that developing countries' concern about IPRs steams form the former's lack of participation and non-availabity of infrastructure than disagreement over principles. This position however misreads developing countries' disenchantment with IPR systems that are linked with some core principles entrenched within IPRs.
[247] P Seuret(2000) *Le Mode Diplomatique July 2000.*
[248] On Behalf of African group, Tanzania and Zimbabwe submitted proposal on what African negotiators believed should be incorporate in the 4th Ministerial conference in Doha.
[249] J Ekpere(2000) 5.
[250] Kameri and Cullet (1999) 15.
[251] See P Cullette(2001)1 *Journal of African Law* 45.
[252] See IPGRI Newsletter No 13 May 2000.
[253] See The Plant Breeders' Rights Act of Zimbabwe 1974, the South African Breeders' Rights Act of 1976 and its 1996 amended version and the Morocco Plant protection Legislation.

involved a lot of government ministries—often resulting in confusion of responsibilities— under the Prime Minister's office.[254] In 1991 NIC signed a Letter of Intent with the University of Yaounde for the collection of the plant. The government latter revoked the agreement saying that the University does not have the mandate.[255] Even tough, the NIC was funding a research program in the University of Yaounde, the bulk of the expenditure and investment was made on American subcontractor collectors.[256] The government's direct dialogue with NIC afterwards was not formalized. Worse local communities did not participate in the negotiations. There was no significant benefit gained by local communities, around the Korub national park area where the plant was collected, except the employment of few people for picking the plant.[257] Moreover, there was a lack of certainty on how to handle the various legal issues emerging from the project. Both the 1994 Forestry Law (Law no. 94/01) and the 1996 Framework Law for Environmental Management (Law no. 96/12), which came long after the project commenced, were ambiguous, general and broad.[258] According to the 1994 Forestry Law, financial spin offs can only be paid to the state which will then distribute it to local communities.[259] It also outlaws the collection of leafs from national parks.[260] Even after the establishment of the Inter-ministerial Committee to specifically deal with the testing and commercialisation of *Ancistrocladus korupensis*, institutional confusion did not subside. The finding that the plant is also found in other parts of West Africa brought question as to who should get the benefit and where shall the point of collection be located; an issue the Model Law does not sufficiently address.[261]

5.2.4. Rhetoric of benefit sharing

Critics say that the Model law's provisions on benefit sharing are based on unwarranted assumption on the economic value of genetic resources and entitlement of tropical countries over such wealth encouraging states to take measures that may undermine cooperation over research and access.[262] So far benefit accruing from scientific application of indigenous knowledge has been remarkably insignificant and often researches on indigenous resources depend on small quantity of harvested genetic products. This however in no way undermines the significant economic value of genetic resources and traditional knowledge.[263] Perhaps the

[254] *Benefit Sharing Case Studies: Aristocladus and prunus Africana*, Submission by the United Nations Environment Program, UNEP/CBD/COP/4/inf.25 20 April 1998 5.
[255] *Idem* 12.
[256] *Idem* 11.
[257] *Idem* 18.
[258] Nonetheless general CBD principles such as state sovereignty over natural resources, PIC and control over access to biological resources are incorporated into these legislations. Nonetheless they are clearly biased towards tangible entitlements over natural resources than intellectual property rights. *Access to Genetic Resources: An Evaluation of the Development and Implementation of Recent Regulation and Access Agreement*, School of International and Public Affairs, Columbia University 45.
[259] *Idem* 49.
[260] *Idem* 11.
[261] In one of its letters to NIC, the government of Cameroon demanded that propagation and other research on the plant should be undertaken mainly at the place where the plant is collected and only in Cameroon. *Ibid* 17.
[262] See J Macknelly(1999) *Plant Talk* No. 17.
[263] See Karrey and Laird (1999).

sharpest criticism levelled against economic evaluation of biodiversity and traditional knowledge is that 'bio-prospecting' is damaging to the conservation and protection of biodiversity.[264]

Due to the excessive focus on benefits sharing, the Model Law failed to accord a more nouanced placement for traditional knowledge in conservation, decision-making and development. It is hardly clear how the Massai's weather forecast in Tanzania or the Mossi farmers' soil management practices in Burkina Faso are given proper governmental protection and identification for development process.[265] This blurred 'developmental gaze' made it difficult for the model law to sufficiently address the concerns of some traditional knowledge beneficiaries such as pastoralists.[266] The Model does not also question state's ownership monopoly over land which is a source of all community interests on genetic resources and traditional knowledge.

There are also no clearly set methods and procedures of implementing for example farmers' rights. As we have already noted the Model Law fails to provide elaborate rules on benefit sharing. The Model Law does say little about such types of disputes and the institution that is responsible for handling it. Is a national response sufficient to address complex questions that arise from the transnational nature of genetic and traditional knowledge or should a regional mechanism be devised? How best can benefit sharing be regulated that it may not encourage over-harvesting and hence undermine the sustainable use and management of genetic resources and associated knowledge? These are practical questions that have been raised in many instances. The harvesting of Devil's Claw plant, a traditional medicinal found in Botswana, Namibia and South Africa plant used for threading various ailments including *hepatitis, arteries, diabetes and spasmodic blood pressure* has been patented and commercialised in Germany and the UK has raised these questions.[267]

5.2.5. Popularity and Acceptance

Little is known about the Model Law. Though state officials, experts and civic society groups contributed for the drafting of the model law, its beneficiaries, farmers' rights and community rights, however were not involved in the process. This has contributed its own share for the obscurity about the Model Law. Most state officials are not aware of the instrument. This explains why some countries perhaps prematurely accepted the 1991 UPOV as their *sui generis* system. The Model Law does not specify any fixed period with which states are required to adopt the legislation. The popularity of the Model Law and states' public expression of commitment is gradually increasing.[268] The support from the civic society has also been

[264] See *Seedling Solution* Volume I 2000.
[265] World Bank(2000) 3
[266] See Larsen and Hassen(2001).
[267] T Shicongo(2001) 6-9
[268] SADC Sub Regional Consultation in Preparation for the World Summit on Sustainable Development, 11-19 September 2001.

remarkable. Now there are different international civil society organizations, which are undertaking concerted effort to galvanize western support for the African initiative.[269]

5.2.6. African Institutional dilemma

Two regional property organizations were established to harmonize industrial property rights and facilitate common services in African countries. OAIP which has French-speaking members was constituted by the 1977 Bangui agreement. This agreement was later revised to the effect that it obliges its member states to adopt the 1991 revised UPOV as an "effective *sui generis* system'.[270] The revised agreement obliges its signatories to adopt the more stringent 1991 UPOV as their national *sui generis* systems despite the fact that least developed countries under TRIPS are given grace period till 2006 to implement some of the national measures outlined in the agreement.[271] A national adoption of 1991 UPOV would mean that farmers within member states couldn't enjoy their entitlement to freely exchange protected seeds.[272]

ARIPO on the other hand does not deal much with plant protection. For example, its 1982 Protocol on Patents and Industrial Design did not mention plant varieties. Nonetheless, in 1999, the Administrative Council amended the Protocol to make provision for patent applications involving microorganisms in accordance with the Budapest Treaty on the International Recognition of the Deposit of Micro-organisms for the Purposes of Patent Procedures. Nonetheless, the stance in Anglophone countries is different from the francophone countries. SADC countries for example called for the revision of the same instrument.[273] Only two Anglophone African countries, Kenya and South Africa, are full-fledged members of UPOV 1978.[274]

5.3. Conclusion

The Model Law is far less than a regional instrument and it mainly establishes local institutions. This is a significant weakness, as the transboundary nature of genetic resources calls for a common system that covers all contributing communities and countries. Its drive to protect collective rights puts it at loggerheads with international IPR systems attracting sever criticisms from international institutions such as the WIPO and UPOV which attempt to discredit the Model Law as an 'effective *sui generis* system' under TRIPS. Even tough this interpretation is patently erroneous, many African countries have accepted 1991 UPOV as TRIPS's based UPOV *sui generis*. The legal out come of this split within African countries will work to undermine the efficacy of the Model Law. It is disconcerting that so far no single country has domesticated the Model Law

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[269] In March 2002 in Valley Trust, 1,000 Hills, Kwa Zulu Natal, South Africa, large congregation of NGOs adopted what is now called the Valley of 1,000 of Hills Declaration supporting the OAU Mode. See J Goodwin (2002).

[270] See the Agreement to revise the Bangui Agreement on the creation of an African Intellectual Property Organization of 2 March 1977, Bangui 1999.

[271] P Cullet(2001) 103

[272] GRAIN(2002) 2.

[273] See L Machipisa(1999) *Third Word Network* 2.

[274] UPOV Convention (1961), as Revised at Geneva (1972, 1978 and 1991) Status on 30 July 2002, < http:// www.upov.int /eng/ratif/ MsWord/ratifmem.doc>(accessed on 23 September 2002).

and as such after four years since the Model Law is adopted by the OAU it is impossible to see the practical difficulties states may face in the implementation of the instruments.

sui generis system than a national legislation based on the Model Law. Non-francophone countries such as Kenya and South Africa are also members to the UPOV.

The Model Law is a very ambitious instrument covering wide ranging issues such as access to genetic resources, microbial derivatives, *in situ* and *ex situ* resources and traditional knowledge. It is therefore questionable whether it is entirely restricted to matters that relate to *sui generis* systems for plant varieties as envisaged by the TRIPS. Even though TRIPS allows for the application of patent over microbial organisms, the Model Law out laws any forms of patent application over life forms. The Model Law is inspired by the CBD but not restricted by it. Farmers' rights are expanded and the state is accorded with expansive responsibility. It creates appropriate national institutional arraignments. It is not mere access and benefit sharing instrument but rather incorporates provisions that touches upon various issues such as community rights, rational knowledge and farmers' rights. This makes the implementation of the Model Law difficult requiring significant resources and expertise.

Both within WTO and other platforms, African common positions were presented which strongly espoused some of the principles enshrined in the Model Law. Issues such as exclusion of patent application on life forms have invited fierce criticism from the US government and other international patent related organizations such as WIPO, WTO and UPOV. On the other hand various international and local civil society organizations have expressed a remarkable support to African position. The Western disenchantment with the Model Law and the resultant pressure on Africans countries is real. This is an outcome of the inequitable relationship between countries with varying economic potential in the global market where discourse trends are immensely influenced by the logic of the market. Nonetheless African leaders have learnt that there are still openings of influencing emerging trends. We are in a time where human rights discourse command an immense value. That is indeed why it has been remarkably easier for the Model Law's embracement of rights language to secure unqualified support from a wide group of civic society organizations.

It is important therefore that the following measure be undertaken to facilitate the enforcement of the Model Law at the national level.

Publicity: The Model Law is not a well-known instrument. It is hence very crucial that it is available to legislatures, local communities, farmers, diplomats, expert negotiators, biodiversity related organizations, individual researchers and other players. Awareness creation at the national level may incorporate techniques such as training programs, consultative meetings, publications, grass root promotion and media campaigns. In order for the instrument to be accessible to various language groups, multilingual publications should also be provided.

Familiarize IPRs: International Property Intellectual Rights instruments have a complex relationship with the Model Law and often have a direct bearing on the efficacy of the latter's implementation. Unfortunately these IPR systems exist in disparate instruments whose negotiation has increasingly become a complicated affair. However the Model Law has inscribed some of the most important principles African countries wish to push during the negotiation of these instruments. This demands an expertise and familiarity with both the Model Law and these IPR systems. Hence imparting negotiation skills and knowledge about IPR regimes should be given priority.

Research and Documentation: Even best legislations, policies and guidelines for the protection of genetic resources do very little if they are not backed by a well planned and financed research and documentation on available flora and fauna, and the myriads of best practices and traditional knowledge.

Policies and Legislations: Policies and legislations for regulation of access to genetic resources and traditional knowledge and protection of community rights should of course be designed to give effect to the Model Law at the national level. This process should invite the full participation of local communities at every level. Governments also need to integrate the objectives of the Model Law in their policies on agriculture, forestry, investment, trade and education.

Recognition of the Role of Women: National legislations which domesticate the Model Law's provision on women shall be designed. National Competent Authority envisaged by the Model Law should have representation from local women the themselves or organizations they voluntarily established than for example self-titled women NGOs;

Civic Society Partnership: International and national civil society actors are very important in providing lobbying, financial and technical support for the implementation of the Model Law. The role of community-based organizations is even more important as they serve as 'interlocutors' between state and community. Therefore the CNA should create a strong alliance with these civil society actors.

Capacity Building: The implementation of the Model Law involves a complex process, which demands both institutional capacity and trained human resources. For example issuing breeder licence requires a prior testing of the breeders' variety, which in turn assumes the existence of well-trained personnel and equipped laboratory. Breeders and other applicant for access have obligations not only to share financial benefits but also to transfer knowledge and impart skills. The government share of benefit sharing hence should entirely be invested for capacity building of these institutions.

WORD COUNT INCLUDING FOOTNOTES: **17, 968**

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APPENDIX 1

Text of the OAU's Model Law

AFRICAN MODEL LAW FOR THE PROTECTION OF THE RIGHTS OF LOCAL COMMUNITIES, FARMERS AND BREEDERS, AND FOR THE REGULATION OF ACCESS TO BIOLOGICAL RESOURCES

PREAMBLE

Whereas, the State and its people exercise sovereign and inalienable rights over their biological resources;

Whereas, the rights of local communities over their biological resources, knowledge and technologies that represent the very nature of their livelihood systems and that have evolved over generations of human history, are of a collective nature and, therefore, are a priori rights which take precedence over rights based on private interests;

Whereas, the vital role that women play in the generation, conservation, and sustainable use of biological diversity and associated knowledge and technologies is self evident, and it thus becomes essential to make it possible for their full participation at all levels of policymaking and implementation in relation to biological diversity, and associated knowledge and technologies;

Whereas, it is necessary to protect and encourage cultural diversity, giving due value to the knowledge, technologies, innovations and practices of local communities with respect to the conservation, management and use of biological resources;

Whereas, it is the duty of the State and its people to regulate access to biological resources and to community knowledge and technologies;

Whereas, the State recognizes the necessity of providing adequate mechanisms for guaranteeing the just, equitable and effective participation of its citizens in the protection of their collective and individual rights and in making decisions which affect its biological and intellectual resources as well as the activities and benefits derived from their utilization;

Whereas, there is the need to promote and support traditional and indigenous technologies for in the conservation and sustainable use of biological resources and to complement them by appropriately developed modern technologies;

Whereas, there is the need to implement the relevant provisions of the Convention on Biological Diversity, in particular Article 15) on access to genetic resources, and Article 8(j) on the preservation and maintenance of knowledge, innovations and practices of indigenous and local communities;

Whereas, all forms of life are the basis for human survival, and, therefore, the patenting of life, or the exclusive appropriation of any life form or part or derivative thereof violates the fundamental human right to life;

Now, therefore, it is hereby legislated as follows:

PART I

OBJECTIVES

The main aim of this legislation shall be to ensure the conservation, evaluation and sustainable use of biological resources, including agricultural genetic resources, and knowledge and technologies in order to maintain and improve their diversity as a means of sustaining all life support systems.

The specific objectives of this legislation shall be to:

a) recognize, protect and support the inalienable rights of local communities including farming communities over their biological resources, knowledge and technologies;

b) recognize and protect the rights of breeders;

c) provide an appropriate system of access to biological resources, community knowledge and technologies subject to the prior informed consent of the State and the concerned local communities;

d) promote appropriate mechanisms for a fair and equitable sharing of benefits arising from the use of biological resources, knowledge and technologies;

e) ensure the effective participation of concerned communities, with a particular focus on women, in making decisions as regards the distribution of benefits which may derive from the use of their biological resources, knowledge and technologies;

f) promote and encourage the building of national and grassroots scientific and technological capacity relevant to the conservation and sustainable use of biological resources;

g) provide appropriate institutional mechanisms for the effective implementation and enforcement of the rights of local communities, including farming communities and breeders, and the conditions of access to biological resources, community knowledge and technologies;

h) promote the conservation, evaluation and sustainable utilisation of biological resources with a particular focus on the major role women play;

i) promote improvements in the productivity, profitability, stability and sustainability of major production systems through yield enhancement and maintenance of biological diversity;

j) promote the supply of good quality seed/planting material to farmers; and

k) ensure that biological resources are utilised in an effective and equitable manner in order to strengthen the food security of the nation.

PART II

DEFINITIONS AND SCOPE

1. Definitions

The use of the following terms shall take the meanings in this legislation, as defined below:

Access is the acquisition of biological resources, their derivatives, community knowledge, innovations, technologies or practices as authorised by the National Competent Authority.

Benefit Sharing is the sharing of whatever accrues from the utilisation of biological resources, community knowledge, technologies, innovations or practices.

Biological resource includes genetic resources, organisms or parts thereof, populations, or any other component of ecosystems, including ecosystems themselves, with actual or potential use or value for humanity.

Collector is any natural or legal person, entity or agent obtaining access to biological resources, local practices, innovations, knowledge or technologies under authority given by the National Competent Authority.

Community Intellectual Rights are those rights held by local communities over their biological resources or parts or derivatives thereof, and over their practices, innovations, knowledge and technologies.

Community Knowledge or indigenous knowledge is the accumulated knowledge that is vital for conservation and sustainable use of biological resources and/or which is of socio-economic value, and which has beendeveloped over the years in indigenous/local communities.

Derivative is a product developed or extracted from a biological resource; a derivative may include such products as plant varieties, oils, resins, gums, proteins etc.

***Ex Situ* Condition** is the condition in which a biological resource is found outside its natural habitat Under the present law, any lineage that is cultivated within its country of origin is not considered to be in an *ex situ* condition.

Innovation is any generation of a new, or an improvement of an existing, collective and/or cumulative knowledge or technology through alteration or modification, or the use of the properties, values or processes of any biological material or any part thereof, whether documented, recorded, oral, written or in whatever manner otherwise existing .

***In Situ* Condition** is the condition in which a biological resource is found in its ecosystem or natural habitat In the case of a domesticated or cultivated variety, its condition is *in situ* when that variety is found in the cultural context in which its specific properties have been developed.

Local Community is a human population in a distinct geographical area, with ownership over its biological resources, innovations, practices, knowledge, and technologies governed partially or completely by its own customs, traditions or laws.

National Competent Authority is the entity authorised by the State to supervise and watch over the implementation of one or more of the components of the present law.

Prior Informed Consent (PIC) is the giving by a collector of complete and accurate information, and, based on that information, the prior acceptance of that collector by the government and the concerned local community or communities to collect biological resources, or indigenous knowledge, or technologies.

2. Scope

1) This legislation applies to:

i) Biological resources in both *in situ* and *ex situ* conditions;

ii) The derivatives of the biological resources;

iii) Community knowledge and technologies;

iv) Local and indigenous communities; and

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v) Plant breeders.

2) This legislation shall not affect the following:

i) The traditional systems of access, use of exchange of biological resources

ii) Access, use of exchange of knowledge and technologies by an between local communities;

3) The sharing of benefits upon the customary practices of the concerned local communities, provided that the provisions of Paragraph 2 shall not be taken to apply to any person or persons not living in the traditional and customary way of life relevant to the conservation and sustainable use of biological resources.

PART III

ACCESS TO BIOLOGICAL RESOURCES

3. Application for Access to Biological Resources and to the Knowledge and Technologies of Local Communities

1) Any access to any biological resources and knowledge or technologies of local communities in any part of the country shall be subject to an application for the necessary prior informed consent and written permit.

2) Any access to any biological resource in a protected area shall be subject to an application for the necessary prior informed consent and written permit.

3) All applications for the necessary consent and written permit to access any biological resource, community knowledge or technology, shall be directed to the National Competent Authority unless otherwise explicitly provided for by law.

PRIOR INFORMED CONSENT (PIC)

4. Prior Informed Consent (PIC)

1) In making an application for access as provided in Article above, the following information shall be provided by the applicant:

i) the identity of the applicant and the documents that testify to her/his legal capacity to contract, including, where appropriate, the identity of all partners with the contracting party;

ii) the resources to which access is sought, including the sites from, its present and potential uses, its sustainability and the risks which may arise from access to it;

iii) whether any collection of the resource endangers any component of biological diversity and the risks which may arise from the access;

iv) the purpose for which access to the resource is requested including the type and extent of research, teaching or commercial use expected to be derived from it;

v) description of the manner and extent of local and national collaboration in the research and development of the biological resource concerned;

vi) the identification of the national institution or institutions which will participate in the research and be in charge of the monitoring process;

vii) the identity of the location where the research and development will be carried out;

viii) the primary destination of the resource and its probable subsequent destination(s);

ix) the economic, social, technical, biotechnological, scientific, environmental or any other benefits that are intended, or may be likely to, accrue to the country and local communities providing the biological resource as well as the collector and the country or countries where he/she operates;

x) the proposed mechanisms and arrangements for benefit sharing;

xi) description of the innovation, practice, knowledge or technology associated with the biological resource; and

xii) an environmental and socio-economic impact assessment covering at least the coming three generations, in cases where the collection is in large quantities.

2) Nothing in Paragraph 1) shall prevent the National Competent Authority requesting for any other information, which it may deem necessary for the effective implementation of this legislation.

5. Requirement of Consultation and Prior Informed Consent (PIC)

1) Any access to biological resources, knowledge and or technologies of local communities shall be subject to the written prior informed consent of:

i) the National Competent Authority; as well as that of:

ii) the concerned local communities, ensuring that women are also involved in decision making.

2) Any access carried out without the prior informed consent of the State and the concerned local community or communities shall be deemed to be invalid

and shall be subject to the penalties provided in this legislation or any other legislation that deals with access to biological resources.

3) The National Competent Authority shall consult with the local community or communities in order to ascertain that its/their consent is sought and granted. Any access granted without consultation with the concerned community or communities shall be deemed to be invalid and in violation of the principle and requirement for prior informed consent as required under this Article.

6. Placement of Completed Application Form in Public Registry

1) Upon completion of the application, the National Competent Authority shall place or cause to be placed, the said application in a public registry or gazette, or cause it to be published in a newspaper that is reasonably accessible to the public for a duration of x days.

2) Any person may consult the public registry and comment on the application.

3) The National Competent Authority shall cause the wide and effective dissemination of the relevant information to the communities concerned and to other interested parties.

7. Granting of Access

1) The granting of an access permit shall be carried out by the National Competent Authority or any person duly Authorized to do so under the provisions of this legislation within a specified time limit.

2) Any access permit shall be granted through a signed written agreement, between the National Competent Authority and the concerned local community or communities on the one hand, and, the applicant or collector on the other hand.

3) The access permit shall only be valid if there is a written prior informed consent.

8. Contents of the Agreement

1) The agreement referred to in Article 7) shall contain commitments undertaken or to be undertaken by the collector, as follows.

i) to adhere to a limit set by the National Competent Authority on the quantity and specification of the quality of the biological resource that the collector may obtain and/or export;

ii) to guarantee to deposit duplicates of, with complete field information on, each specimen of the biological resource or the records of community innovation, practice, knowledge or technology

collected with the duly designated governmental agencies and, if so required, with local community organizations;

iii) to inform immediately the National Competent Authority and the concerned local community or communities of all findings from research and development on the resource;

iv) not to transfer the biological resource or any of its derivatives or the community innovation, practice, knowledge or technology to any third party without the authorization of the National Competent Authority and the concerned local community or communities;

v) not to apply for any form of intellectual property protection over the
biological resource or parts or derivatives thereof and not to apply for intellectual property rights protection over a community innovation, practice, knowledge or technology without the prior informed consent of the original providers;

vi) to provide for the sharing of benefits;

vii) access shall be conditioned upon a commitment to contribute economically to the efforts of the State and concerned local community or communities in the regeneration and conservation of the biological resource, and the maintenance of the innovation, practice, knowledge or technology to which access is sought;

viii) submit to the National Competent Authority a regular status report of research and development on the resource concerned and where the biological resource is to be collected in large quantities on the ecological state of the area; and

ix) abide by the relevant laws of the country particularly those regarding sanitary control, biosafety and the protection of the environment as well as by the cultural practices, traditional values and customs of the local communities.

2) All efforts should be made for the research to be done in the country and in a manner that facilitates the participation of actors in the country of the provider of the biological resource.

9. Patents over Life Forms and Biological Processes

1) Patents over life forms and biological processes are not recognized and cannot be applied for.

2) The collector shall, therefore, not apply for patents over life forms and biological processes under this legislation or under any other legislation relevant to the regulation of access and use of a biological resource, community innovation, practice, knowledge and technology, and the protection of rights therein.

10. Approval of Granting of Access

The National Competent Authority shall approve the granting of access to the biological resource or the community innovation, practice, knowledge or technology in question with any conditions it may deem necessary. In granting access the National Competent Authority shall ensure that all the requirements under this legislation have been fulfilled.

11. Conditions Pertaining to Academic and Research Institutions, Public Agencies and Inter-governmental Institutions

1) The National Competent Authority shall subject all applications for access to a biological resource, a community innovation, practice, knowledge or technology to the prior informed consent of the concerned community or communities.

2) The National Competent Authority shall determine the appropriate conditions to be met under the written agreement referred to in Article 8), by academic and research institutions, public agencies and inter-governmental institutions.

3) The application for access for research purposes shall clearly state the objective of the research and the relation of the applicant to industry. Neither the sample nor the associated information shall be transferred without a material transfer agreement reserving the prior rights of the State and/or community or communities.

4) Where the institutions referred to in this Article change their activities to be predominantly the commercialisation of a biological resource, the National Competent Authority shall cause the conditions and terms to be varied accordingly.

12. Benefit Sharing

1) The access permit should be subject to the payment, made before commencement of collection, of a fee the sum of which will depend on whether or not the collection is to be used for commercial purposes, and the number of samples, the area of collecting, the duration of collection and whether or not the collector is granted exclusive rights.

2) The State and the community or communities shall be entitled to a share of the earning derived from when any biological resource and/or knowledge collected generates, directly or indirectly, a product used in a production process.

13. Types of Permit to be Granted for Access

1) Having ascertained that the conditions set by the prior informed consent procedure have been fulfilled, the National Competent Authority shall grant the applicant/collector the appropriate permit for access. This may be an academic research permit, a commercial research permit, or a commercial exploitation permit.

2) No person shall be in possession of and use two types of permit at the same time for the same resource unless granted written permission to do so.

3) Nothing in this Article shall be deemed to limit the National Competent Authority's power to issue any other type of access permit.

14. Revocation of Access Permit

1) The National Competent Authority may unilaterally withdraw consent and repossess the written permit under the following conditions:

i) when there is evidence that the collector has violated any of the provisions of this legislation;

ii) when there is evidence that the collector has failed to comply with the agreed terms; and

iii) when there is failure to meet any of the conditions of access;

iv) for reasons of overriding public interest; or

v) for the protection of the environment and biological diversity.

2) Any termination or withdrawal of consent shall be done in consultation with the concerned local community or communities.

15. Restrictions on Activities Related to Access or Introduction of Biological Resources

The National Competent Authority should establish restrictions to or prohibitions on those activities which are directly or indirectly related to access to or introduction of a biological resource, particularly in cases of:

i) endangered taxa;

ii) endemism or rarity;

iii) adverse effects upon human health or upon the quality of life or the cultural values of local communities;

iv) environmental impacts which are undesirable or difficult to control;

v) danger of genetic erosion or loss of ecosystems, their resources or their components, which arise from undue or uncontrolled collection of biological resources;

vi) non-compliance with rules on biosafety or food security; and

vii) use of resources for purposes contrary to national interest and to relevant international agreements entered into by the country.

PART IV
COMMUNITY RIGHTS

16. Recognition of the Rights of Local and Indigenous Communities

The State recognizes the rights of communities over the following:

i) their biological resources;

ii) *the right to collectively benefit from the use* of their biological resources;

iii) their innovations, practices, knowledge and technologies acquired through generations;

iv) the right to collectively benefit from the utilisation of their innovations, practices, knowledge and technologies;

v) their rights to use their innovations, practices, knowledge and technologies

in the conservation and sustainable use of biological diversity;

vi) the exercise of collective rights as legitimate custodians and users of their biological resources;

17. Application of the Law on Community Rights

The State recognizes and protects the community rights that are specified in Article 16) as they are enshrined and protected under the norms, practices and customary law found in, and recognized by, the concerned local and indigenous communities, whether such law is written or not.

18. Prior Informed Consent (PIC) of Local

Any access to a biological resource, innovation, practice, knowledge or technology, shall be subject to the prior informed consent (pic) of the concerned community or communities ensuring that women fully andequally participate in decision-making.

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19. Right to Refuse Consent and Access

Local communities have the right to refuse access to their biological resources, innovations, practices, knowledge and technologies where such access will be detrimental to the integrity of their natural or cultural heritage.

20. Right to Withdraw or Place Restrictions on Consent and Access

Local communities shall have the right to withdraw consent or place restrictions on the activities relating to access where such activities are likely to be detrimental to their socio-economic life, or their natural or cultural heritage.

21. Right to Traditional Access, Use and Exchange

1) Local communities shall exercise their inalienable right to access, use, exchange or share their biological resources in sustaining their livelihood systems as regulated by their customary practices and laws.

2) No legal barriers shall be placed on the traditional exchange system of the local communities in the exercise of their rights as provided for in Paragraph

1) above and in other rights that may be provided by the customary practices and laws of the concerned local communities.

22. Right to Benefit

1) The State shall ensure that at least fifty per cent of benefits provided for in

Article 12 (2) shall be channeled to the concerned local community or communities in a manner, which treats men and women equitably.

2) The sharing the benefits in Paragraph 1) above shall involve the full participation and approval of the concerned local community or communities.

23. Recognition of Community Intellectual Rights

1) The Community Intellectual Rights of the local communities, including traditional professional groups, particularly traditional practitioners, shall at all times remain inalienable, and shall be further protected under the mechanism established by this legislation.

2) An item of community innovation, practice, knowledge or technology, or a particular use of a biological or any other natural resource shall be identified, interpreted and ascertained by the local communities concerned themselves under their customary practice and law, whether such law is written or not.

3) Non-registration of any community innovations, practices, knowledge or technologies, is not to mean that these are not protected by Community Intellectual Rights.

4) The publication of a written or oral description of a biological resource and its associated knowledge and information, or the presence of these resources in a gene bank or any other collection, or its local use, shall not preclude the local community from exercising its community intellectual rights in relation to those resources.

PART V

FARMERS' RIGHTS

24. Recognition of Farmers' Rights

1) Farmers' Rights are recognized as stemming from the enormous contributions that local farming communities, especially their women members, of all regions of the world, particularly those in the centres of origin or diversity of crops and other agro-biodiversity, have made in the conservation, development and sustainable use of plant and animal genetic resources that constitute the basis of breeding for food and agriculture production; and

2) For farmers to continue making these achievements, therefore, Farmers' Rights have to be recognized and protected.

25. Application of the Law on Farmers' Varieties

1) Farmers' varieties and breeds are recognized and shall be protected under the rules of practice as found in, and recognized by, the customary practices and laws of the concerned local farming communities, whether such laws are written or not.

2) A variety with specific attributes identified by a community shall be granted intellectual protection through a variety certificate, which does not have to meet the criteria of distinction, uniformity and stability. This variety certificate entitles the community to have the exclusive rights to multiply, cultivate, use or sell the variety, or to license its use without prejudice to the Farmers' Rights set out in this law.

26. Farmers' Rights

1) Farmers' Rights shall, with due regard for gender equity, include the right to:

a) the protection of their traditional knowledge relevant to plant and animal genetic resources;

b) obtain an equitable share of benefits arising from the use of plant and animal genetic resources;

c) participate in making decisions, including at the national level, on matters related to the conservation and sustainable use of plant and animal genetic resources;

d) save, use, exchange and sell farm-saved seed/propagating material of farmers' varieties;

e) use a new breeders' variety protected under this law to develop farmers' varieties, including material obtained from gene banks or plant genetic resource centres; and

f) collectively save, use, multiply and process farm-saved seed of protected varieties.

2) Notwithstanding Sub-paragraphs c) and d), the farmer shall not sell farm-saved seed/propagating material of a breeders' protected variety in the seed industry on a commercial scale.

3) Breeders' Rights on a new variety shall be subject to restriction with the objective of protecting food security, health, biological diversity and any other requirements of the farming community for propagation material of a particular variety. **27. Certification of Farmers' Varieties**

1) Any product derived from the sustainable use a biological resource shall be granted a certificate or label of recognition.

2) A certificate of fair trade shall be granted to a product derived from a biological resource or knowledge or technology, when a significant part of the benefits derived from the product go back to the local community.

PART VI

PLANT BREEDERS' RIGHTS

28. Recognition of Plant Breeders Rights

Plant Breeders' Rights stem from the efforts and investments made by persons/institutions for the development of new varieties of plants, as defined in Article 41), being the basis for providing recognition and economic reward.

29. Characteristics of New Varieties

A variety will be considered new if it:

a) is, by reason of one or more identifiable characteristics clearly distinguishable from all varieties the existence of which is a matter of common knowledge at the effective date of application for the grant of a Plant Breeders' Rights;

b) is stable in its essential characteristics, in that after repeated reproduction or propagation or, where the applicant has defined a particular cycle of reproduction or multiplication, at the end of each cycle, remains true to its description;

c) is, having regard to its particular features of sexual reproduction or vegetative propagation, a sufficiently homogenous variety or is a well-defined multi-line.

30. Rights of Plant Breeders

1) A Plant Breeders' Rights, in respect of a new variety, is:

a) the exclusive right to sell, including the right to license other persons to sell plants or propagating material of that variety;

b) the exclusive right to produce, including the right to license other persons to produce, propagating material of that variety for sale;

2) A Plant Breeders' Rights in respect of a plant variety is subject to the conditions provided in Part V, the Farmers' Rights Part of this Act.

31. Exemptions to the Rights of Breeders

1) Notwithstanding the existences of Plant Breeders' Rights in respect of a plant variety, any person or farmers' community may:

a) propagate, grow and use plants of that variety for purposes other than commerce;

b) sell plants or propagating material of that variety as food or for another use that does not involve the growing of the plants or the propagation of that variety;

c) sell within a farm or any other place at which plants of that variety are grown any plants or propagating material of that variety at that place;

d) use plants or propagating material of the variety as an initial source of variation for the purpose of developing another new plant variety except where the person makes repeated use of plants or propagating material of the first mentioned variety for the commercial production of another variety;

e) sprout the protected variety as food for home consumption or for the market

f) use the protected variety in further breeding, research or teaching;

g) obtain, with the conditions of utilization, such a protected variety fromgene banks or plant genetic resources centres;

2) Farmers will be free to save, exchange and use part of the seed from the first crop of plants which they have grown for sowing in their own farms to produce a second and subsequent crops subject to conditions specified in Part V, the Farmers' Rights Part of this Act.

32. Application of Breeders' Rights

1) Subject to this Act, a breeder of a new plant variety may make an application to the National Competent Authority for a Plant Breeders' Rights in respect of the variety.

2) A breeder of a new variety, or his successor, has the right to make an application for a Plant Breeders' Rights in respect of that variety, whether or not the breeder is a citizen or foreigner, or is resident or not and whether the variety was bred locally or abroad.

3) Where two or more persons are entitled to make an application for a Plant Breeders' Rights in respect of a new variety, whether by reason that they bred the plant variety jointly or independently or otherwise, those persons or some of those persons may make a joint application for those Rights.

4) Where two or more persons breed a new plant variety jointly, one of those breeders or a successor of one of those breeders shall not make an application for a Plant Breeders' Rights in respect of that variety otherwise than jointly

with, or with the consent in writing of, the other person, or each other person, entitled to make an application for those Rights.

5) In the case of both public-financed and private institutions, the application can be made in the name of the institution.

33. Restrictions to Plant Breeders' Rights

1) Where the Government considers it necessary, in the public interest, the Plant Breeders' Rights in respect of a new variety shall be subject to conditions restricting the realization of those rights, These restrictions may be imposed, *inter alia*:

a) where problems with competitive practices of the Rights holder are identified;

b) where food security or nutritional or health needs are adversely affected;

c) where a high proportion of the plant variety offered for sale is being imported;

d) where the requirements of the farming community for propagating material of a particular variety are not met; and

e) where it is considered important to promote public interest for socio-economic reasons and for developing indigenous and other technologies;

2) Where restrictions are imposed on a Plant Breeders' Rights:

a) the grantee shall be given a copy of the instrument setting out the conditions of the restriction;

b) a public notice shall be given; c) the compensation to be awarded to the holder of the Rights shall be specified;

d) the Rights-holder may appeal against the compensation award.

3) In particular, and without prejudice to the generality of the foregoing provisions, the relevant Government authority shall have the right to convert the exclusive Plant Breeders' Rights granted under this Act to non-exclusive Plant Breeders' Rights (compulsory licence of right).

34. Duration of Plant Breeders Rights

Subject to this Act, a Plant Breeders' Rights in respect of a plant variety shallexist for a period of 20 years in the case of annual crops and 25 years in the case of trees, vines and other perennials commencing on the day on which the successful application for a Plant Breeders' Rights in respect of the plant variety was accepted.

35. Dispute Settlement

Where conflicts arise on whether a plant variety qualifies as a new plant variety under the Act, they will be handled administratively through the National Competent Authority, an ad hoc tribunal and finally through the] court of law.

1) Where an application is filed in respect of a Plant Breeders' Rights:

a) the application is accepted if the National Competent Authority is satisfied that:

i) the application complies with the requirements of Article 29); and

ii) the specified fees have been paid; or

b) the application is rejected if the National Competent Authority is satisfied that it does not fulfill the prescribed requirements.

2) Where the National Competent Authority accepts an application it shall, within 30 days after accepting the application, given written notice to the applicant stating that the application has been accepted and it shall give public notice of the application.

3) Where the National Competent Authority rejects an application, it shall, within 30 days after rejecting the application, give written notice to the applicant stating that the application has been rejected and stating the grounds for rejection.

42. Uniform Testing and Assessment Procedures

1) On the acceptance of an application, the National Competent Authority shall stipulate the quantity of seed/planting material that should be made available by the applicant for trials and testing.

2) The National Competent Authority shall arrange to get statistically valid trials conducted to evaluate the suitability of the variety for national release.

3) The assessment criteria shall include important economic, physiological, ecological and nutritive quality attributes.

4) The fees with respect to a Plant Breeders' Rights shall be fixed on the basis of the administrative and examination costs incurred. **43. Characteristics of Plant Varieties Originating from Outside the Country**

For the purpose of this Act, where a plant variety in respect of which an application has been accepted has originated from outside the country, the variety shall not be taken to have a particular characteristic unless:

a) statistically valid, multi-locational, variety trials carried out in the country for at least three growing seasons have demonstrated that the variety has the specific characteristic as claimed by the applicant; or

b) an exceptional crises in food production so requires and the National Competent Authority is satisfied that:

i) statistically valid trials on the variety carried out outside the country have demonstrated that the variety has that specified characteristic; and

ii) the natural environment outside the country under which the statistically valid trials were carried is similar to the environment in the country.

44. Plant Varieties Trials

1) Where, in dealing with an application in respect of a plant variety, the National Competent Authority considers it necessary that there should be a statistically valid trial or a further statistically valid trial of the variety, trials shall be carried out:

a) for the purpose of determining whether the plant variety is distinct, homogenous or stable;

b) for the purpose of determining whether the variety will, if grown in the] country, exhibit the claimed distinctiveness, homogeneity and stability;

c) requiring the applicant to supply sufficient seed or propagation material of the variety, as the case requires, and with any necessary information, to enable the variety to be test grown for the purpose so specified.

2) After the completion of the trials on a plant variety, any plants or propagation material of plants used in, or resulting from, the trials that are capable of being transported shall be removed by the applicant for a Plant Breeders' Rights in respect of that plant variety.

45. Withdrawal of Application

1) An application may be withdrawn by the applicant at any time before the publication of the application.

2) Where an application is withdrawn after its publication in the Official Gazette, but before the granting of a Plant Breeders' Rights, the National Competent Authority shall forthwith publicise that withdrawal.

46. Provisional Protection

1) Where an application for a Plant Breeders' Rights in respect of a plant variety has been accepted, the applicant shall be deemed to be the owner of a Plant Breeders' Rights in respect of that plant variety during the period commencing on the date of filing of the application and ending on whichever of the dates specified in a) and b) occurs first:

a) when the application is disposed of; or

b) where the National Competent Authority has given the applicant a notice at the expiration of the prescribed period, after the notice is given.

2) Steps to protect genetic materials of new varieties under testing will be taken, so as to prevent their use for non-research purposes. **47. Opposition to Grant of Plant Breeders' Rights**

1) Where official gazettement of an application for a Plant Breeders' Rights in respect of a plant variety or of the variation of such a variety is given, any person who considers that:

a) commercial or public interests would be negatively affected by the grant of those rights to the applicant;

b) the application in relation to that variety does not fulfil the prescribed criteria for granting a Plant Breeders' Rights; may within 6 months after publication of the application, or any further time before the application is disposed of, lodge with the National Competent Authority a written objection to the granting of the Rights setting out the particulars of the objection.

2) Where an opposition to the grant of a Plant Breeders' Rights is lodged under Paragraph 1), the National Competent Authority shall cause a copy of that opposition to be given to the applicant for that Plant Breeders' Rights.

3) Any person may inspect an application, or an opposition lodged, at any reasonable time and is entitled, upon payment of such fee as is prescribed, to be given a copy of the application or of the opposition.

48. Grant of Plant Breeders' Rights

1) Subject to this Article, an application for a Plant Breeders' Rights in respect of a plant variety is granted if the National Competent Authority is satisfied that:

i) there is such a plant variety;

ii) the plant variety is a new plant variety;

iii) the applicant is entitled to the application;

iv) the grant of those rights to the applicant is not prohibited by this Act;

v) those rights have not been granted to another person;

vi) there has been no earlier application for those rights that has not been withdrawn or otherwise disposed of; and

vii) all fees payable under this Act in relation to the application have been paid;

2) If the National Competent Authority is not satisfied that the conditions in Paragraph 1) above have been fulfilled, the National Competent Authority shall refuse to grant that Plant Breeders' Rights to the applicant.

3) The National Competent Authority shall not grant, or refuse to grant, a Plant Breeders' Rights in respect of a plant variety unless a period of six (6) months has elapsed since the publication of the application in the official gazette, or, if the application has been varied in a manner that the National Competent Authority considers to be significant, a period of 6 months has elapsed since the publication of particulars of the variation, or of the last such variation, asthe case requires.

4) The National Competent Authority shall not refuse to grant a Plant Breeders' Rights unless it has given the applicant for that Plant Breeders' Rights a reasonable opportunity to make a written submission in relation to the application.

5) Where an opposition to the grant of a Plant Breeders' Rights has been lodged, the National Competent Authority shall not grant the Plant Breeders' Righ tsnunless it has given the person who

lodged the opposition a reasonable opportunity to make a written submission in relation to the objection.

6) A Plant Breeders' Rights shall be granted and issued by the National Competent Authority to the applicant in the form specified in its regulations.

7) Where a Plant Breeders' Rights over one variety is granted to persons, that Plant Breeders' Rights shall be granted to those persons jointly.

8) Where a Plant Breeders' Rights is granted to a public or private institution, it shall accrue to the institution represented by the designated person or persons.

9) Where the National Competent Authority refuses to grant a Plant Breeders' Rights in respect of a plant variety, the National Competent Authority shall, within 30 days after refusing, give written notice of the refusal to the applicant clearly setting out the grounds for the refusal.

49. Entry of Plant Breeders Rights in the Register

1) When the National Competent Authority grants a Plant Breeders' Rights in respect of a plant variety, it shall enter in the Register:

a) a description, or a description and photograph, of the plant variety;

b) the name of the variety;

c) the pedigree of the variety (where possible);

d) the name of the grantee;

e) the name and address of the breeder;

f) the address for the service of documents on the grantee for the purpose of this Act, which is shown on the application for the Rights;

g) the date on which the Plant Breeders' Rights was granted;

h) a description of the communities/localities in the country entitled to Farmers' Rights in relation to the variety;

i) such other particulars relating to the grant as the National Competent Authority considers appropriate.

50. Publication of Grant of Plant Breeders Rights

Where a Plant Breeders' Rights has been granted, the National Competent Authority shall, within 30 days after granting, publish that Plant Breeders' Rights in the official gazette. The publication will also make reference to the entitlements under Farmers' Rights.

51. Effect of Grant on Certain Persons

1) Where a Plant Breeders' Rights in respect of a plant variety has been granted to a person, another person who was entitled to make an application for that Plant Breeders' Rights, whether or not a person who developed that variety independently of the breeder, or the successor of such another person, is not entitled to any interest in that Plant Breeders' Rights because of the nentitlement to

make the application or because of the grounds of the entitlement, but nothing in this Article prevents a person from applying tothe National Competent Authority for the revocation of that Plant Breeders' Rights or from instituting proceedings before a court in respect of that Plant Breeders' Rights.

2) Where:

a) a Plant Breeders' Rights in respect of a new plant variety has beengranted to a person, and

b) another person (in this Paragraph referred to as the eligible person') was entitled, at a law or in equity to have the right to make an application for that Plant Breeders' Rights assigned to the eligible person, then the eligible person is entitled to have that Plant Breeders' Rights assigned to her/him.

52. Nature of Plant Breeders' Rights

1) A Plant Breeders' Rights is personal property and, subject to any conditions imposed under other Paragraphs, is capable of assignment or of transmission by will or by operation of law.

2) An assignment of a Plant Breeders' Rights does not have effect unless it is in writing, signed by or on behalf of the assignor.

53. Assignment of Plant Breeders' Rights

1) Where a Plant Breeders' Rights is assigned or transmitted to a person, that person shall, within 30 days after acquiring it, inform the National Competent Authority in writing that the person has acquired that Plant Breeders' Rights, giving particulars of the manner in which it was acquired, and the National Competent Authority, if satisfied that the Plant Breeders' Rights has been so assigned or transmitted, shall enter the name of that person on the Register as the grantee of that Plant Breeders' Rights.

2) Where in accordance with Paragraph 1), the National Competent Authority enters on the Register as the grantee of a Plant Breeders' Rights the name of a person who claims to have acquired that Plant Breeders' Rights, it shall, within 30 days after entering the name in the Register, give written notice to the person newly entered and to the person who was the grantee before the new entry was made stating that the entry has been made.

3) Where the National Competent Authority is not satisfied that a PlantBreeders' Rights has been assigned or transmitted to a person who has informed the National Competent Authority in accordance with Paragraph 1) that that Plant Breeders' Rights has been thus assigned or transmitted to the claimant, the National Competent Authority shall forthwith:

a) give written notice to the claimant:

i) stating that the National Competent Authority is not satisfied; and

ii) setting out the grounds on which the National Competent Authority is not so satisfied; and

b) give written notice to the grantee of those rights:

i) setting out particulars of the information given by the claimant;

ii) stating that the National Competent Authority is not satisfied; and

iii) setting out the grounds on which it is not so satisfied.

4) A person who informs the National Competent Authority in accordance with Paragraph 1) that a Plant Breeders' Rights has been assigned or transmitted to her/him shall give written notice to the National Competent Authority of an address in the country for the service of documents in accordance with this Act; and

a) where the National Competent Authority enters the name of that person on the Register in accordance with Paragraph 1) and that address is different from the address already entered in the Register, it shall amend the Register so that the address so given is entered in the Register as the address for service of documents on the grantee for the purpose of thisAct; or

b) where the National Competent Authority is not satisfied that those rights have been assigned or transmitted to that person, the notice to that person under Paragraph 3)a) shall be given by being posted.

54. Supply of Propagating Material

1) A Plant Breeders' Rights in respect of a plant variety is subject to the condition that the grantee of the Rights shall comply with any notice given to her/him by the National Competent Authority. 2) Where a Plant Breeders' Rights are granted in respect of a plant variety, the National Competent Authority may give the grantee of the Plant Breeders', Rights written notice requiring the grantee, within 14 days of the giving ofthe notice or any other time that is allowed, to cause a specified quantity of propagating material of that variety to be delivered, at the expense of the grantee, to a specified plant genetic resources centre and a herbarium.

3) The quantity of the propagating material of a variety specified in a noticeunder Paragraph 2) shall be the quantity that the National Competent Authority considers would be sufficient to enable that variety to be kept in existence if there were no other propagating material of that variety.

4) Where the propagating material is delivered to a plant genetic resources centre in accordance with the conditions imposed on Plant Breeders' Rights by Paragraph 1), the National Competent Authority shall, subject to Paragraph

6), cause that material to be stored at a specified plant genetic resources centre.

5) The delivery and storing of the propagating material in accordance with thisParagraph does not affect the ownership of the material but that the material shall not be dealt with otherwise than for the purposes of this Act.

6) The propagating material stored at a plant genetic resources centre may be used by the National Competent Authority for the purposes set out in this Act.

7) Without limiting Paragraphs 5) and 6), where, the propagating material is stored at a plant genetic resources centre as gazetted by the Government according to Article 39) of this Act, the material

shall not form part of the national collection, and shall not be used for the purposes of that collection, until a decision on the application for a Plant Breeders' Rights is taken. Once the variety is accorded recognition, the propagating material can be provided for purposes of further research and breeding under the intimation of the depositor of the material.

55. Revocation of Plant Breeders' Rights

1) The National Competent Authority shall revoke a Plant Breeders' Rights in respect of a plant variety if

a) it is satisfied that the plant variety was not new or that facts exist which, if known before the grant of that Plant Breeders' Rights, would have resulted in the refusal of the grant; or

b) the grantee has failed to pay a prescribed fee payable in respect of that

Plant Breeders' within 90 days after having been notified that the prescribed fee was due for payment.

2) The National Competent Authority may revoke a Plant Breeders' Rights if it is satisfied that:

a) the grantee has failed to comply, in relation to that Plant Breeders'

Rights, with the prescribed conditions; or

b) a person to whom that Plant Breeders' Rights has been assigned or transmitted has failed to comply with the provisions of this Act.

3) Where the National Competent Authority revokes a Plant Breeders' Rights in respect of a plant variety in accordance with this Article, it shall, within 7 days after the decision is taken, give written notice of the revocation to the grantee setting out the grounds for the revocation.

4) The National Competent Authority shall not revoke a Plant Breeders' Rights in accordance with this Article unless and until it has given the grantee and any person to whom it believes that Plant Breeders' Rights has been assigned or transmitted, particulars of the grounds for the proposed revocation and given the grantee and any such person a reasonable opportunity to make a written submission in relation to the proposed revocation.

5) The revocation of a Plant Breeders' Rights in respect of a plant variety in accordance with this Article takes effect: a) subject to Paragraph 4), at the expiration of the period within which an application may be made to a court for a review of the revocation; or

b) if such an application is made to the court, at the time when the

application is withdrawn or finally determined by a court.

6) Nothing in this Article shall be taken to affect the powers or the legal system.

7) Any person whose interests are affected by the granting of a Plant Breeders'

Rights in respect of a plant variety may apply to the National Competent

Authority for the revocation of that Plant Breeders' Rights in accordance with

this section.

8) The National Competent Authority shall consider any application under Paragraph 7) for the revocation of a Plant Breeders' Rights The decision of the National Competent Authority not to revoke the Plant Breeders' Rights shall be communicated to the applicant by a written notice within 7 days after the decision is taken, setting out the grounds for the decision.

56. Surrender of Plant Breeders Rights

1) Subject to Paragraph 2) of Article 34), a grantee of a Plant Breeders' Rights may at any time, by giving notice to National Competent Authority, offer to surrender that Plant Breeders' Rights: the National Competent Authority, after giving public notice of the offer and giving all interested parties an opportunity to make a written submission in relation to the offer, may, if it finds fit, accept the offer and revoke those rights

2) Where an action or proceeding in respect of a Plant Breeders' Rights is pending in a court, the National Competent Authority shall not accept an offer for the surrender of, or revoke, that Plant Breeders' Rights, except by leave of the court or by consent of the parties to the action or proceeding.

PART VII

INSTITUTIONAL ARRANGEMENTS

57. Establishment of the National Competent Authority

The State shall designate or establish a National Competent Authority which shall implement and enforce the provisions of this legislation. Its duties shall include those set out in Article 29).

58. Duties of the National Competent Authority

The duties of the National Competent Authority are, while ensuring gender equity, to:

i) create and operate a regulatory mechanism that will ensure effective protection of Community Intellectual Rights and Farmers' Rights, and the regulation of access to biological resources;

ii) carry out the process of consultation and participation of local communities, including farming communities, in the identification of their rights as provided for under the customary practices and laws of the communities;

iii) identify types of Community Intellectual Rights and Farmers' Rights;

iv) identify and define the requirements and procedures necessary for the recognition of Community Intellectual Rights and Farmers' Rights;

v) develop criteria and mechanisms to standardise procedures;

vi) develop a system of registration of items protected by Community Intellectual Rights and Farmers' Rights according to their customary practices and law;

vii) issue licenses for the exploitation and commercialisation of biological resources, including protected species, varieties or lineages, and community innovations, practices, knowledge and technologies;

viii) identify relevant technical institutions that will assist local communities, including farming communities, in the categorisation and characterization of their biological resources, innovations, practices, knowledge and technologies.

59. Establishment of National Inter-Sectoral Co-ordination Body

A National Inter-Sectoral Co-ordination Body at the highest level, composed of representatives from relevant public sectors, scientific and professional organizations, non-governmental and local community organizations, shall be created as a body to co-ordinate and follow-up the proper implementation of this legislation by the National Competent Authority.

60. Functions of the National Inter-Sectoral Co-ordination Body

The functions of the National Inter-Sectoral Coordination Body shall be to:

i) ensure that the minimum conditions for agreements with collectors are strictly observed and complied with;

ii) ensure that the rights of local communities, including farming communities, are protected, with due regard for gender equity, wherever the activities relating to the accessing, collection or research on biological resources, community innovations, practices, knowledge and technologies are conducted, including verifying that the requirements of prior informed consent by the local communities are complied with;

iii) recommend policies and laws on the sustainable use of biological resources including new laws on intellectual property rights, Community Intellectual Rights and Farmers' Rights over their biological resources, innovations, practices, knowledge and technologies; and

iv) perform such other functions as may be necessary for the effective implementation of this legislation.

61. Composition of the National Inter-Sectoral Co-ordination

The National Inter-Sectoral Co-ordination Body shall be composed of the following persons:

Here the functional composition of the body can be outlined the qualifications, fields of expertise or specialisation, public interest qualities, industry,

community based organizations and persons from relevant areas and fields with due regard for gender equity. This section seeks to fulfil the requirements set out in Article 29) above.

62. Appointment of Technical Advisory Body

It is hereby appointed a body to be known as the Technical Advisory Body to support the work of the National Inter-Sectoral Co-ordination Body.

63. Functions of the Technical Advisory Body

The functions of the Technical Advisory Body shall be to:

i) formulate policy options that promote the protection of Community Intellectual Rights, Farmers' Rights, gender equity and the regulation of access to biological resources;

ii) prepare lists of taxa threatened by deterioration and/or extinction and of the places threatened by serious loss of biological diversity;

iii) monitor and evaluate, at regular intervals, the implementation of this legislation or actual or potential threats to biological diversity and the likely impacts on the pursuit towards sustainable development;

iv) develop and recommend a mechanism to enable the identification and dissemination of information regarding threats to biological resources; and

v) perform such other functions as may be necessary to implement this legislation.

64. Establishment of a National Information System

1) It is hereby established that there shall be a National Information System with regard to biological resources, which includes the activities set out in the following Article.

2) Local communities may also establish databases on their biological resources together with their components and derivatives, and the knowledge and technologies of those communities.

3) Access to information in the National Information System and databases shall be regulated by a charter setting out the rights of the owners of the data.

65. Activities of the National Information System

The activities of the National Information System shall include *inter alia* the following:

i) the compilation and documentation of information on Community Intellectual Rights, Farmers' Rights, gender equity and access to biological resources, community innovations, practices, knowledge and technologies;

ii) the maintenance of an up-to-date system of information about research and development activities on biological resources and community innovations, practices, knowledge and technologies; and

iii) the compilation of information on piracy of biological resources, community innovations, practices, knowledge and technologies, and the disseminating of this information to all relevant and concerned bodies.

66. Establishment of a Community Gene Fund

1) The Community Gene Fund shall be established as an autonomous Trust. A Director shall be appointed to administer the Fund. The Director shall report to the National Competent Authority.
2) There shall be an autonomous Trust to administer a Community Gene Fund deriving its funds from the shares due to local farming communities under Article 27 1(b) in Part V on Farmers' Rights. The Fund, which will be exempted from income tax, can receive contributions from national and international bodies and others interested in strengthening genetic conservation by local communities.
3) A royalty to be fixed by the National Competent Authority based on the gross value of the Breeders' Rights protected seeds sold shall be credited to the Community Gene Fund for the benefit of farming communities whose farmers' varieties have been the basis for the breeding of breeders' varieties.
4) The gene fund shall be used to finance projects developed by the farming communities, ensuring equity for women, with or without the participation of experts to help them, aimed at solving their felt problems, including, but not restricted to, the development, conservation and sustainable use of agricultural genetic resources.
5) All salaries and administrative expenses relating to the establishment and administration of the Community Gene Fund will be met by the Government, in order to ensure that the entire proceeds of the Fund go to the
farming local communities.
6) The Community Gene Fund will have a Fund Management Committee, comprising representatives of farming local communities, professionals, non-governmental organizations, and the public and private sector.

PART VIII
ENABLING PROVISIONS

67. Sanctions and Penalties

1) Without prejudice to the existing agencies and authorities, the State shall establish appropriate agencies with the power to ensure compliance with the provisions of this law.
2) Without prejudice to the exercise of civil and penal actions which may arise from violations of the provisions of this legislation and subsequent regulations, sanctions and penalties to be provided may include:
i) written warning;
ii) fines;
iii) automatic cancellation/revocation of the permission for access;
iv) confiscation of collected biological specimens and equipment;

v) permanent ban from access to biological resources, community knowledge and technologies in the country.

3) The violation committed shall be publicized in the national and international media and shall be reported by the National Competent Authority to the secretariats of relevant international agreements and regional bodies.

4) When the collector conducts his/her operations outside of national jurisdiction, any alleged violations by such a collector may be prosecuted through the cooperation of the government under whose jurisdiction the collector operates based on the guarantee that the latter has provided.

68. Appeals

Decisions on approval, disapproval or cancellation of agreements regarding access to biological resources, community knowledge or technologies may be appealed through appropriate administrative channels. Recourse to the courts shall be allowed after exhaustion of all administrative remedies.