

POLITICS OF BIOPIRACY: AN ADVENTURE INTO HOODIA/XHOBA PATENTING IN SOUTHERN AFRICA

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Abstract

Background: Africa is being described as the wretched of the earth, despite this, the continent is endowed with natural resources, dynamic ecosystem, and different species of plants and animals, and species derivatives. This paper area of departure is to focus on Hoodia, a plant that is being a source of food, medicine and water for the San and Khoe indigenous peoples before the advent of Europeans into southern Africa. South African Council for Scientific and Industrial Research (CSIR) dubiously patented Hoodia without observing the basic indices of geographical indications (GIs), indigenous knowledge (IK), novelty, access sharing benefit (ASB), prior informed consent (PIC) and sustainability of ecosystem before the rights was sold to Phytopharm pharmaceutical company.

Materials and methods: This article adopts neoliberal thesis with emphasis on complex interdependence theory of organic linkages between developing and developed countries. Secondary sources of information taken into account of qualitative and critical discuss content analyses dominate this paper.

Result: The paper recommends a linkage between developed and developing states based on endowment theory and comparative advantage with the notion of adhering to the Convention on Biological Diversity (CBD) which has three objectives: the conservation of biodiversity; the sustainable utilisation of indigenous biological resources (IBR); and fair and equitable benefit sharing.

Conclusion: The paper recommends that there is a need to follow CBD and other relevant international regimes that promote equal exchange in exploitation of Africa resources as against the present skewed arrangement that is in favour of multinational corporations (MNCs).

Keywords: Hoodia, Patenting, San, Indigenous peoples, ASB, PIC, GIs

Introduction

To say that Africa is under-developed is not an overstatement. Many students of African political economy believe hook, line and sicker the writing of Walter Rodney (1972) “How Europe Under-developed Africa”, a book that discussed how Africa resources have been the source of the West development. Other scholars (Ake, 1981, 1982; Bond, 2003, 2006; Chang, 2010; McGown, 2006; Moghalu, 2013; Onimode, 2000, 2004; Wilkinson, 2014), to mention but a few, subscribed to this view. Examining the politics and economic imperatives of *Hoodia gorginii* patenting is a confirmation that underdevelopment of Africa may not be totally blamed on Europe and other developed states. This plant, *green diamond* as described by Wyberg and Chennells (2009) is an invaluable and wonder plant that has been a source of ailment of different kinds of diseases by the most oppressed and dehumanised San tribe scattered across Southern Africa. Under relevant international laws, these are the group of people that are qualified for indigenous peoples with all the rights and benefits attached.

Hoodia is cover with thorn in rows, succulent, leafless and slightly bitter, which served as food and water for the San hunters and gatherers in the Kalahari Desert (KD) for ages. It is hunger and thirst suppressant, which keep San hunters going in a long journey for hunting. Geographically, this product can be found in abundance in southern Africa, which may be passed for the Convention on Biological Diversity’s (CBD) GIs (Vermaak & Vijoen, 2008: 37).

Hoodia’s chemical composition as a source of obesity treatment, a common disease in developed states, is a traditional knowledge (TK) of the San peoples confined to a community with culturally based way of life. Information gathered from the San people on the use of the plant led to the laboratory research commissioned by Council for Scientific and Industrial Research (CSIR). When the breakthrough was achieved, the owners of the knowledge were not consulted. This violated PIC that is ethically demanded on information sharing and ASB in line with the: CBD;

International Labour Organisation’s (ILO) Convention No. 169; African Union’s Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources; and the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilisation. The basic demands for information and material transfer and its associated benefit-sharing arrangement were not observed.

CSIR R&D came up with P57 that is effective in hunger suppressant in treating obesity. The research centre, patented the products which was later sold to a British MNCs, Phytopharm for further R&D to a commercial level. Phytopharm could not carry out the demands of the research and sold it to Unilever. When CSIR was accused of bio-pirating, the institute was of the view that the San were extinct tribe in southern Africa and as a result of this the 1998 Bioprospecting policy on ABS did not include P57 (Chennells, 2007: 421). This position may not be too far away from the colonialist treatment of the San people in the form of genocidal attacks that made a population of over 300, 000 to reduce to about 100, 000 today. Afrikaners' eviction of the San started in 1652, when they landed in Cape of Good Hope (Cape Town), unabated till the British colonised South Africa and Botswana. As recent as 1960s, Europeans were allowed to hunt Barsarwa (San in Botswana). This tribe therefore scattered and could be found as far as rivers Congo and Zambezi areas. San are therefore in Angola, Botswana, Namibia, South Africa, Zambia and Zimbabwe as minority and indigenous peoples (Chennells, 2007: 421; Hankey & van der Walt, 2011: 82). Patenting of P57 led to a legal tussle. Roger Channells San peoples filled an application against CSIR's bio-piracy to challenge the unauthorised collection and development of indigenous resources and the associated TK for commercial gain (Popplewell, 2011: 58). The case was eventually won and accords ASB and royalties to the San and their communities to alleviate the tribe level of poverty (Mukuka, 2010: 62). The activities of CSIR is an example of gate-keeping to perpetuate underdevelopment in Africa despite a notion of neoliberal theory of general economic development of the north and south as captured through interdependence theory.

Neoliberal Theory

This theory has its explanation from market libertarianism of Friedrich von Hayek. It gains its present currency from 1980s as against conservative liberal theory (Hopper, 2012: 39). Neoliberal theorists have a conviction that economic development may not come to fruition without adherence to theories of comparative advantage and endowment thesis. This calls for a need for developed and developing states to come together for commonwealth of the international system. This could have brought about formation of plethora of international regimes meant for furthering economic development to reduce if not to eradicate poverty holistically. This theory, as discussed in the writings of Kant, Fukuyama, Doyle, Cobden, Schumpeter, Russett and Rawls (Burchill, 2013), believes in transparency, free movement of factors of production, individualism, rationality and inevitable human development. It is in tandem with constitutionalism (republican), democracy, limited state power over its subject, capitalism, interdependence, globalisation and the rule of law (Amusan & Oyewole, 2012). The post-Cold War global system described it as 'the end of history of mankind' as it focuses on *inside-out* approach of global self-regulatory peace. Neoliberal theory is an adherent of human rights. Technologically developed countries should partner with biologically-resource rich developing countries for economic growth that ought to lead to economic development. In doing this, development of the impoverished areas will receive a lasting solution based on free trade, but with adherence to various international regimes for the regulation of the member states activities (Burchill, 2013). This led to the formation of the CBD in 1992 to address issues of the minorities and indigenous people who have been denied of their TK and culture for economic development (Drahos, 2007). To achieve this, there is a need to adhere to ASB in the form of profit sharing and payment of royalties to the natural owners of biological resources that promote economic and health developments of mankind.

Despite all the positive attributes inherent in this theory, some grey areas are still awaiting academic solution. It fails to see the second and third human generations' rights as necessary because of their inherent responsibilities that states and private organisations need to adhere to. These are rights to one's culture, sustainable development, clean environment, rights of indigenous and minorities. The theory also fails to explain the negative impacts of globalisation on sovereignty and nation-state system that sometimes promote MNCs economic interest over its subjects' welfare. It is also observed that despite ultra-liberalism championed by this theory, developing states are struggling to cope with the 21st century international economic system because of protectionist measures in technology transfer and trade system, which perpetuate inequality, poverty and instability (Hopper, 2012; Uslaner, 2007).

In spite of the lapses associated with neoliberal theory as a source of underdevelopment in Africa, it is the intention of this paper to examine how the MNCs and CSIR abide by relevant conventions (CBD), protocols and treaties to protect the minorities, the poor and the indigenous peoples through management of biodiversity in a sustainable manner (Imevbore, 2012). This is included in Appendix 11 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2004 (Maharaj, 2011: 26); to preserve the natural wild plant against over-exploitation, poaching and illegal harvesting of biological resources for MNCs financial ambition. How all the necessary rules and regulations are observed will be this paper's next focus through interrogation of Hoodia in international economic relations and how relevant international regimes, civil societies and government regulatory apparatus put in place.

Hoodia in international economic relations

Hoodia has different varieties such as *Currorii*, *gordonii*, *flava* and *officinalis* commonly found in Botswana, Namibia and South Africa. These species are almost of the same use as food, water, medicine and spiritual intervention (Mukuka, 2010: 57-58). These are the areas, together with Angola, Zambia and Zimbabwe, that the remaining Sans that survived legalised hunting and extermination can be found today. Out of the estimated 300,000 population, only 100, 000

with the following distribution in estimate: 55,000 in Botswana, 35,000 in Namibia, 8,500 in South Africa and 4,500 in Angola, and scattered populations in Zambia and Zimbabwe are left (Wynberg and Channells, 2009: 91). Despite their small in population, this minority and indigenous peoples in their different countries have global influence that makes their culture and heritage significant in the comity of nations. As discussed elsewhere (Amusan, 2014), there are various international regimes that protect indigenous knowledge and culture through CBD in the form of ASB, PIC and GIs. In 1996, San were able to come together under an umbrella of the Working Group of Indigenous Minorities in southern Africa (WIMSA) to represent Sans from Botswana, Namibia and South Africa with the aim of consolidating their linguistic and cultural diversity. Hoodia *gorginii* is the common specie and effective for anti-obesity caused by a display of opulence in the western world. Roger Channells from Stellenbosch, one of the contributors and editors to a book titled, *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San-Hoodia Case* (2009) represented the San in the SASC negotiation when a claim by CSIR that the San are extinct fails. CSIR attempts to biopirate Hoodia fails to observe CITES, CBD, WIPO and ILO Convention No. 169 Art. 1. This therefore raised international concern as it violates WIPO Ar. 1(2) despite South Africa's membership of the organisation since 1975 (Adams & Adams, 2012: 492), which define misappropriation (WIPO/GRTKF/IC/16/5, 2010: 18) as:

Any acquisition, appropriation, revelation or utilization of traditional knowledge by unfair or illicit means shall constitute an act of misappropriation and misuse. Misappropriation and misuse also include any acquisition, appropriation or utilization of traditional knowledge by unfair or illicit means that constitutes an act to derive commercial benefit from the acquisition, appropriation or utilization of traditional knowledge when the person using that knowledge knows, or fails to know, that it was acquired or appropriated by unfair means; and other commercial activities contrary to honest practices that gain inequitable benefit from traditional knowledge.

In the same vein, Art. 15 of CBD stated the roles of national government to provide a framework for regulating access to and fair benefit-sharing arising from the use of genetic resources. Also Art. 15 of the Covenant on Economic, Social and Cultural Rights states that parties to the Covenant, which South Africa subscribes to, observes that: members should take part in cultural life; enjoy the benefits of scientific progress and its applications; benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author (Mgbeoji, 2006: 188). This implies that any community that its genetic resources are linked to its culture, bio-piracy of such amounts to violation of relevant international regimes that protect rights to culture.

Hoodia is a source of food and water for the San who embarked on long hunting in the KD. It also cures series of ailment, though not confirmed, such as HIV/AIDs, asthma, pulmonary tuberculosis, stomach pain, metabolic disorder, hangovers, haemorrhoids, high blood pressure, flu, eye pain, diabetes and inflammation (Maharaji, 2011; Wynberg & Channells, 2009). The importance of Hoodia and the research breakthrough from CSIR, though through misappropriation, South Africa and the research centre are globally known as important centres that contributes to health care development. CSIR, a government institute towed pro-western international organisations (WTO, Multilateral Investment Guarantee Agency (MIGA), Trade-Related aspects of Intellectual Property Rights-TRIPs, technology-, Trade-Related Investment Measures- TRIMs, trade in service-, the UN Food and Agricultural Organisation-FAO- and MNCs) that are ultra-capitalists (Wilkinson, 2014); while CBD's pro-developing gene-rich but technology-poor countries. As of 2015, Hoodia products were rated among 10 top diet pills among which are Vivexilis, Alli, Leptiburn by Biotrust, Slimquick, Plexus Slim, Probiostlim, Xenadrine, Recore, Hydroxycut Avesil (<http://www.warningreviews.com>). It is also manufacture in cream, drinks and gel forms.

CSIR patenting of Hoodia

Information gathered on the usefulness of Hoodia from San could have inspired the research and development project embarked by CSIR in 1963. This inspiration may be as a result of the published toxic and non-toxic plants in 1962 to further South Africa's apartheid system in southern Africa. It might be the aim of the apartheid South African government to develop Hoodia as hunger suppressants for foot soldiers in a bid to promote its destabilisation policy in the sub-region. The need to develop toxic plants as food for exportation to the frontline states South Rhodesia (Zimbabwe), South West Africa (Namibia), Mozambique, Angola, Botswana, Lesotho and Swaziland) may not be totally ruled out at the time. This made South African Defense Force (SADF) to enter into partner with CSIR in the R&D of some plants in the country (Wynberg & Channells, 2009: 95). Development in science and technology is known to have inspired by the need to ensure military power at the international system. This position is well articulated by White (2005: 8-9) when he was of the opinion that:

The volume of national resources which is devoted to the applications of science for military purposes is usually enormous relative to that which governments set aside in the civil sphere...This colonising of civilian science by the military means that military application of a design, a devise or a technique is usually ten years ahead of any mainstream commercial application...In the eyes of politicians and military leaders, there will always be a new enemy, a new reasons to develop weapons, medicines, transportation systems and communication network. From these have come, and will continue to come, new modes of war, and with them bloody outcomes.

Going by this quotation, one may be of a view that the rationale behind this research was to foster Pretoria's *force majeure* as against commercial intention. The need to fill application for patent as an open activity may be related to the irrelevance of the technology for the military power as apartheid system was at its twilight

The concept of ABS continue to generate argument among students of IPRs (Ostergard, 2007). Adherents to capitalist pro-America school, like UN Food and Agricultural Organisation (FAO) (Art. 1 and annexes 1-111) see genetic resources as part of the common heritage of mankind, which should be freely accessed without any impediment (Visser, 2006: 429). This school opines that R&D is capital incurred by MNCs implies that any breakthrough should be to the exclusive right of researchers and patenting such genetic resources may not consider host communities that own such resources (Visser, 2006).

Other relevant instruments as discussed below forced CSIR into benefit-sharing procedure. How can one describe the arrangement entered into between CSIR and San peoples as a balanced system when some issues were failed to take into account? Absence of PIC is not only ethically inappropriate in the field of any research work, it is also an invasion on the private affairs of others. A researcher should indicate why such a research is embarked on and the likely outcome of such enterprise. This was not put in place by CSIR. Instead, the institute in connivance with the British Pharmaceutical company, Phytopharm were of the view that they rather keep quiet on the research to avoid pledging what they might not be able to meet. The same institute in its contradictory statement was of the opinion that it was difficult to identify the real owner of the knowledge; and that a scenario may occur where the present owner may steal the knowledge from other unknown tribe. This latter position looks credible. As discussed below, many tribes laid claim to this resources based on GIs: Nama, Khoe, Damara, Koranna, Griqua, and Topnaar.

Negotiation between WIMSA (represented by SASC) and CSIR put San into a dilemma of whether to charge the later for ethical and novelty (that the product patented is not a new invention/innovation) or to negotiate directly for benefit-sharing. Alternatively, should the San be on a stand on “no patent on life”, which may be too expensive for the tribe because of their level of poverty, a common attribute of indigenous peoples? San settled for ASB.

After five years of negotiation (1998-2003), a formula was crafted out to pay 6% in royalty and 8% of milestone payment from commercial activities. Available information proof that payments by Unilever to Phytopharm was secretive and what was initially paid by Phytopharm to CSIR was equally undisclosed (Wynberg & Channells, 2009). These raise more questions than answer as the agreed 6% royalty and 8% profit payment from CSIR to South African San Council (SASC) may be bogus. SASC is a wing of WIMSA representing three communities of Khomani, !Xun and Khwe in conjunction with the South African San Institute (SASI) based in Cape Town legally recognised by CSIR as true representative of the San for legal and financial implications.

Kalahari Trust Fund (KTF) was set up in the form of corporate social responsibility (CSR) as a volte-face to take care of the effects of misappropriation for the development of the San in the affected countries by the MNCs. This approach does not address some issues of GIs and indigenous communities’ concepts (Amusan, 2014). Problem of classification of indigenous peoples that have rights to Hoodia, a plant that has different species, but use for almost the same way is a problem that fails to receive rigorous academic attention. The migrant herders in the Kalahari (classified as Khoe peoples) who have been staying with the San for millennia also use the same plant (called Xhoba in San language), but different species such as Hoodia *currorii* for the same way, but left unattended to (Vermaak & Viljoen, 2012). This position is contrary to Russell and Swindells (2012: 6) view who believe that only Hoodia *gordonii* is effective for decreased food intake and body weight. Damara, Griqua, Koranna, Nama and Topnaar in Namibia that have been using the species for cleansing against bad luck, animal fertility and increase crop yield were not considered as co-owner of Hoodia. This complex scenario appeared to have contributed to why CSIR recognised only SASC as against WIMSA as true representative of San because of its legal and financial costs. Like the San, they also use it as medicine, food and water. Cohabitation of these peoples for thousands of years should qualify them for ABS and GIs.

Another problem associated with ABS is the question of who is a San and how can one differentiate from these peoples from other tribes in the age of globalisation when inter-marriage is the norm. Except for Botswana and Zambia, other states (South Africa, Angola, Zimbabwe and Namibia) experienced various types of apartheid system that made different groups to embark on inter-marriage during colonialism and separateness systems inflicted on them. The Khoe and San that were the most affected by the White genocide during colonialism and apartheid land grab adventure that caused them to migrate to different directions (Lewis-Williams, 2015: 173). A few of them that are alive today as mentioned above may not know how to return to their root. If they have that tendency of regrouping, where will they settle as their land is been expropriated as mentioned above. In such a situation, issues of land claim and access to ancestral land may remain a mirage despite the ongoing land redistribution in South Africa. Problem associated with the use of Hoodia and indigenous knowledge is complex. As observed by Mukuka (2010: 59), “An interesting though rarely stated aspect of this debate is that some Northern Sotho and Tswana, and Venda-speaking groups also used Hoodia, but this was conveniently overlooked by the WIMSA claimant”. This position is also maintaining by Lewis-Williams (2015: 50) as he observed that “the Maloti San had been in contact with Bantu-speaking (Herero, Tswana and Ovambo) agriculturalist neighbour with whom they interacted in various ways and to various degrees-the Sotho to the north of the Drakensberg and the Nguni to the south and east”.

Very close to the above discussion is the distribution of royalties and profit from CSIR among the parties (South Africa, Botswana and Namibia) to WIMSA. South Africa is being accorded a responsibility to champion the redress against misappropriation through SASC. SASC/WIMSA triumph is a pyrrhic victory. Going by the malign hegemonic approach of South Africa towards its coterminous states as evidence from SACU and SADC arrangement, the Pretoria government may

dominate the activities of WIMSA and only hand out a fraction of the profit to the rest of the members, though the arrangement is to share any benefit equally. South Africa, for instance, was accused by Africa Jubilee group meeting in Cape Town in June 2004 of sub-imperialist through NEPAD agenda to promote underdevelopment in Africa and to always satisfy MNCs by other African states (Bond, 2006: 124). This was evidence when CSIR was unwilling to negotiate with outside South Africa's border institutions or governments despite the fact that Hoodia cut across many states as a genetic resource. This explained why SASC was mandated by WIMSA to negotiate on its behalf. Available evidence confirms that genocide by different forms of government in South Africa reveals that San peoples were scattered throughout southern Africa. This explains why San are in Angola, Zimbabwe and Zambia. These states have not been considered in the arrangement that leads to the sharing of benefits accruable from Hoodia. Little is being said about other species of Hoodia that are housed by Botswana, Angola and Namibia, for instance, which have chemical compositions like Hoodia *gordonii*. Does it mean that only the specie that CSIR tagged as P57 may enjoy the benefit from pharmaceutical MNCs (PMNCs)? This needs additional clarification to avoid biodiversity war in southern Africa. An opportunity that MNCs may exploit to their interest through "divide and exploit" tactic as evidenced in diamond, coltan and hydrocarbon conflicts in many parts of Africa. Entering and opting out of business agreement through executive license agreement between CSIR and Phytopharm on the one hand and outlicense agreement between Phytopharm and Unilever on the other hand indicate two major things. One, the unwillingness of the PMNCs to share their profits with San peoples because of the imperative in GIs and biopiracy accusation against CSIR with legal implications; and two, their unwillingness to embark on CSR as evidenced on the issue of Rooibos tea politics (Amusan, 2015).

Associated with ABS is the post-Cold War variant of globalisation of various kinds: economic, culture, politics and communication to mention a few that are employed by some Africans to consolidate 'extraversion' type of economic underdevelopment of unequal exchange (Jerven, 2015: 77). With ultra-capitalism being imposed on the southern African states, land grab may vitiate ABS in the future. Development of 300 ha of Hoodia in Namibia and South Africa for commercial production of the green diamond by Unilever is an indication of research efforts to embark on semi-synthetic versions of the active molecules as push forward by Pfizer PMNCs, may be a means to avoid royalty payment (Wynberg and Channells (2009: 96; Visser, 2006: 435).

Presently, how to share KTF for the San peoples is not only complex as mentioned above, when the perceived uninhabitable KD is either grab by foreign states or individuals, possibly from the developed states and the Arab world in a guise of food production, this will force the indigenous peoples around the area to further extinction as claimed by CSIR in the late 1990s. The land claim in the Kruger National Park, some part of the San land is ongoing with no immediate solution. It is also claimed that the Botswana government mal-treatment of the Basarwa because of the large deposit of diamond they sit on aggravates their plights in the country. Forceful removal is part of southern Africa history, a phenomenon that leads to the present bogus boundary system in the sub-region. The more instability in the states that control Hoodia (green diamond), the better for the PMNCs who believe that they should abide by the privatisation of property because of the cost they incurred through R&D that is capital (technologically and financially) intensive.

Hoodia *gordonii* growers and breeders agreed with WIMSA to pay 6% farmgate sales of raw Hoodia in 2006 is highly problematic. Their sales and profit may not be easily calculated for the purpose of ASB. By 2007, ABS agreement signed between WIMSA and the Southern African Hoodia Growers Association (SAHGA) gives R24 per dry kg of Hoodia to San is not only fraudulent, but also not inflationary and fluidity in international market conscious (Mukuka, 2010: 63). Other Hoodia growers with no agreement on benefit-sharing may not benefit the San (Wynberg and Channells, 2009: 111). Between 2001 and 2004, there was a parallel market of Hoodia in herbal and dietary supplement because of financial profit, but later discovered to be fakes (Vermaak & Viljoen, 2012). The Boers Afrikaners that are into commercial plantation of Hoodia in South Africa with their improved seeds through genetic modification, which may contaminate wild Hoodia despite CITES arrangement to maintain the original product. In this situation, IPRs and TRIPs may bring about financial burden to the small-scale farmers that maintains wild Hoodia in their farm as the case of Rooibos and *Masakhane Pelargonium* in South Africa demonstrate (Amusan, 2014; Msomi & Matthews, 2015).

This brings into focus the crisis associated with GIs. There is no objection to the ownership of Hoodia at the global level for now. With the invasion of southern Africa by colonialists and later by apartheid system that evicted the Khoe and San from their lands, who are the rightful owners of the land where Hoodia is found. Extensive cultural linkages, trade transactions and intermarriage between the Bantu, Khoi and San peoples may bring about a crisis of who is a San and who should share from the profits and royalties from Hoodia (Lewis-Williams, 2015: 51). CBD recognised a need to use any proceeds from the product to develop the communities of the plant. Presently, majority of the land are in the hand of *foreigners* who, by political arrangement, are in control of the land while the indigenous peoples are scattered all over and beyond southern Africa.

Conclusion

Going by the above discussion, CSIR is no doubt an agent of underdevelopment in Africa because of its lack of ethics clearance before it embarked on research to the usefulness of the San indigenous knowledge as expected based on relevant international norms. A claim that San are extinct because of the financial reward to the research centre is an indication of promoting apartheid that has been laid to rest since 1994. Though it is discussed above that the reason behind the research was to promote SADF military ambition of total victory against guerrilla fighters in the coterminous colonial

states. Development of Hoodia as hunger suppressant is not a new invention in southern Africa. This has been the product that the San and Khoe have been using as hunger killer and to quench thirst in the KD. It is also a plant that is medicinal for human and animals, it is also for spiritual purpose as indicated above. Patenting the same and eventually license it to various PMNCs without PIC, ABS and observation of GIs is not only violation of CBD, WIPO and ILO Convention 169, this perpetuates underdevelopment of Africa and advancing poverty in the midst of plenty on the continent (Mgbeoji, 2006; Moahi, 2007). *No patent on life* may not be an option for the San because of the level of their neglect by their governments. The only option as a poverty reduction is to enter into fair and equitable benefit-sharing arrangement. This led to the establishment of WIMSA and SASC supported by SASI

Formation of WIMSA, an amorphous organisation may promote corruption as the ASB and royalties paying to this organisation may benefit the civil servants and a few San elite to the disadvantage of the poor tribe who are scattered all over southern Africa (Joffe, 2007: 7). ABS is meant for the government of a state to determine how to share whatever comes under indigenous tribes in their states. Almost all African states are yet to recognise indigenous peoples in their territory because of the financial and social responsibilities inherent in it. This explains why the Nama in South Africa and Namibia are always at the disadvantage of people's empowerment programs. How to locate every San tribe is no easy task as discussed above. The question is who is a San in the age of cultural globalisation? In South Africa for instance, inter-marriages, naming and physique appearance of the San peoples may not be too far from the Xhosa tribe in the Eastern, Western and Northern Cape. By 1949 the San were forced to assimilate coloured's (mixed race) culture. Also, because this tribe intends to maintain their culture and occupation in Botswana, they separate themselves from the Batswana in the country and therefore not ready to mix with *ungodly* people despite the KTF that they ought to have a share from in the promotion of education, health facilities and community development.

Another area of potential legal tussle and consolidation of underdevelopment of the *others* in southern Africa is the exclusion of other tribes from San-CSIR benefit-sharing arrangement despite their common history of persecution, dislocation and genocidal attitudes of the whites from 1652 to 1993. These are tribes, as discussed above, equally use Hoodia the same way the San have been using the product for millennia.

Relevant instruments that protect the rights of the indigenous peoples need enforcement. Question of GIs should be addressed with caution. Large part of the areas where Hoodia can be found are occupied by the whites as the case of Rooibos discussed elsewhere (Amusan, 2014). Issues that may generate more argument is who are the present occupier of the area? Are we to accord recognition to the *invaders* from 1652 when Afrikaners Boers came to South Africa or from the British colonialist that eventually settled in the present San communities?. In the alternative, may we accord recognition to the Boers who occupy the land presently or when land redistribution is finalised, may we, for instance, in South Africa recognised the blacks who are likely to occupy the vast land despite that fact that they are not of San tribe. This need a proper examination to avoid litigation against government.

Another area that this paper looks into is the introduction of globalisation tenet in the authoritative allocation of value. This brings into focus the question of land grab that is common in the turn of the 21st century. The perceived uninhabitable KD may be bought at ridiculous amount by MNCs, foreign government and possibly some Africa business conglomerate based on the provision of WTO. Such land may turn out to Hoodia plantation as presently in place by the large-scale Hoodia breeders and growers. In such a development, can KTF, WIMSA, SASC and SASI with the support on South Africa's Biodiversity Act of 2004 and its supplementary regulations will continue to protect indigenous peoples of southern Africa from South Africa perceived hegemonic ambition? There is a need for a new biopiracy diplomacy that is not western inspired for the development of developing areas, Africa inclusive (Dukes, Braithwaite & Molony, 2014: 363). Answering this question forms the bedrock of my ongoing other research work.

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