

Addressing the concerns of rural communities about access to plants and knowledge in a *sui generis* legislation in Cameroon

MARCELIN TONYE MAHOP

Queen Mary Intellectual Property Research Institute, John Vane Science Center,
Charterhouse Square, London EC1M 6BQ, UK

(Fax, 44-2078823446; Email, t.m.marcelin@qmul.ac.uk)

This article assesses the traditional systems of accessing and using plant genetic resources as well as the benefit sharing and systems of sanctioning infringement in the context of biodiversity related activities in specific areas in the Northwest province of Cameroon. The article also addresses the type research and development activities using plant genetic resources and associated traditional knowledge in the context of Cameroon, the current laws regulating such activities and the extent to which these activities and laws affect and/or protect the customary biodiversity rights of rural communities. The article uses these assessments to suggest the context under which a *sui generis* legislation for the protection of the biodiversity rights of rural communities can be established in Cameroon.

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1. Introduction

It is essential for researchers and commercial partners using plant genetic resources and associated knowledge in their activities to seek access to these resources from the people who are ensuring the primary custody. Indeed, rural communities living in remote areas rich in plant resources are the primary custodians of biodiversity. In addition, due to their long lasting and close reliance to plants for their basic needs, they have developed a significant body of knowledge which allows them to make use of the plants around them. Both the knowledge and plants therefore appear to have substantial value to them. On the other hand, plant genetic resources and the traditional knowledge appear to be important basic assets for research and development and are therefore heavily sought by other stakeholders who will exploit them beyond the control of rural communities. This article is meant to suggest the context under which a *sui generis* legislation for the protection of the biodiversity rights of rural communities can be established in Cameroon.

The information provided here constitutes the outcome of survey carried out by the author in his country of origin – Cameroon – during the last quarter of 2003 as part of his

first phase data gathering within the framework of his current research. The research was intended to collect ground data that can be used to justify the need for the development of a *sui generis* system for the protection of the intellectual and resources rights of rural communities in Cameroon. In this respect several groups were targeted to be interviewed during field surveys in Cameroon including policy makers, researchers – commercial and academic researchers –, lawyers and IP experts, human rights experts and importantly rural communities in selected areas. As well as being very relevant in research and development especially phytomedical and pharmaceutical research, plant genetic resources are very useful to rural communities for their living. In this connection, rural communities were asked to express their views on how valuable are the plants that surround them and the knowledge that they have about these plants. Not only the value of these assets to the communities was an important issue of investigation during field surveys, it also seemed necessary to investigate how rural communities perceive their relationship with outsiders who collect these resources for further research that is usually carried out beyond them. The broader picture of this research as it suggests grounds for the development of an alternative

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system for the protection of rural communities' rights is based on certain assumptions. Firstly, other stakeholders with interests in plants genetic resources and traditional knowledge have poor understanding of how rural communities themselves manage their resources on the basis of their customary rules. It is submitted that only a direct contact and interaction with rural communities themselves can improve this situation. This article reviews the current legislation in Cameroon as far as it accommodates the protection of the biodiversity rights of rural communities. Also the article reviews the local systems of using accessing and managing the resources in a selected area, the kind of research and development carried out on Cameroon bio-resources, the intellectual property laws – especially patents laws – as they address biodiversity matters in the sub-region and Cameroon in particular and will end up suggesting alternative options in terms of a context under which a *sui generis* law protecting the rights of rural communities can be developed in Cameroon.

2. A review of the current legislation and the status of the biodiversity rights of rural communities in Cameroon

2.1 *The provisions of the forestry and environmental laws*

The current legal environment in Cameroon regulating biodiversity related activities and the way such environment provides for the protection of rural populations customary rights is encompassed in a certain number of legal instruments. From the perspectives of this article, forestry activities are not limited to timber exploitation only. They include a wide range of activities that extend to the exploitation of and research on Non Timber Forest Products, especially medicinal plants and the knowledge associated with these resources which is nurtured, held and improved by rural communities. Such activities can be undertaken for commercial on non-commercial purposes. The customary rights of rural communities that we are talking about in terms of assessing the extent of its legal protection in the current context in Cameroon include:

- (i) Their ownership rights over plant genetic resources and land.
- (ii) Their rights to be fully involved in the management and decision making regarding the management of their resources.
- (iii) Their rights to monitor and control access to the resources and to determine the grounds for access authorization and to be consulted prior to any access and utilization of their resources.
- (iv) Their right to fairly benefit from the utilization of the resources and traditional knowledge.

(v) Their rights to stop any activity that is not in line with their traditional rules and to file a lawsuit against anybody who infringes the terms under which access was allowed.

An outline of the key instruments currently applied in the regulation of biodiversity-related activities as well as including provisions applied in the protection of rural communities' rights is as follows:

- (i) Ordinance No. 73/18 of May 1973 and its text of application No. 74/357 of 17 August 1974.
- (ii) Law No. 81/13 of November 1981 on the Forestry, Wildlife and Fisheries and its text of application No. 83/169 of 12th April 1983.
- (iii) Law No. 94/01 of 20th January 1994 on Forestry, Wildlife and Fisheries.
- (iv) The Cameroon Forest Policy Document produced by the ministry of Environment and Forestry (MINEF) in 1995.
- (v) Law No. 96/12 of 5th August 1996 relating to environmental protection management.

It is worth highlighting that, alongside these laws, there is a series of decrees of application usually signed by the Prime Minister which are used to actually put some of the above-mentioned laws into practice. For example:

- (i) Decree No. 95-531 of 23rd August 1995 to determine the conditions of implementation of forestry regulations.
- (ii) Decree No. 95-678 PM of 18th December 1995 to institute an indicative land use framework for the southern forested area of Cameroon.
- (iii) Decree No. 96-237 PM of 10th April 1996 to define the conditions for the functioning of special funds provided in Law No. 94 of 20th January 1994 to lay down forestry, wildlife and fisheries regulations.

It is worth highlighting that among these laws and decrees, a significant step taken by the state of Cameroon towards ensuring a gradual inclusion of rural populations in biodiversity activities was made under section 37 and 38 of Law 94/01 of 20th January 1994 that for the first time gave avenue to the community forest scheme. Furthermore, section 1 of these general provisions provided that: "the law and the instruments for implementation thereof lay down forestry, wildlife and fisheries regulations with a view to attaining the general objectives of the forestry, wildlife and fisheries policy, within the framework of an integrated management ensuring sustainable conservation and use of the said resources and of the various ecosystems".

An in depth examination of the extent to which the above mentioned instruments address the customary rights of rural communities over resources and their knowledge, suggests that broadly, the statutory rights of the state over the resources seriously outweigh the customary rights of rural communities to control access, utilization of and

even benefit from bioresources. For example, section 6 of the law provides that ownership of forest resources shall be determined by the regulations governing land tenure and State lands and by the provisions of the law. In stipulating on what is called forest products, section 9 makes the difference between what we may call ordinary products and special products. Section 9(3) stipulates that the extraction of special forest products shall be laid down by decree. Seemingly borrowing from the preamble of the 1996 constitution, Section 12 of the 1994 forestry law clarifies state ownership of all genetic resources and stresses that no person shall use them for scientific, commercial or cultural purposes without prior authorization of the relevant governing authorities. As an implementation tool of the 1994 forestry law, the forestry decree signed the Prime Minister on the 23rd August 1995 was meant to clarify some grey areas of the forestry law. One of these areas is the type of rights that populations living in the vicinity of forested areas have over forest resources. Article 26(1) through (3) clarifies that local populations' rights over forest resources are limited to usufruct rights. Section 26(1) of decree No. 95-531-PM of 23rd August 1995 to determine the conditions of implementation of forestry regulations further defines usufruct rights as follows: "the rights that consist in carrying out within these forests their traditional activities such as collecting secondary forest products such as raffia, palms, bamboo, cane or foodstuff and fire wood". Moreover, the 1996 environmental framework law No. 96/12 in its article 65(1) makes provision for rural communities' involvement in research activities that should be profitable to them. In addition, the same provision emphasises the need for the development of a decree laying down conditions under which foreign researchers, national researchers and local communities can collaborate. What should however be underlined here is that this provision is still very vague, as it does not specifically refer to rural communities' rights to have a critical say on such activities that may be carried out in their local areas or rights to claim or to set the benefits that they deserve from such activities.

2.2 *The legal status of customary land ownership in Cameroon*

Beside the 1994 forestry law, and as access and ownership of resources is heavily linked to access and ownership of land, the land ordinance enacted in 1974 is the land law that is still in force in Cameroon. The 1974 land ordinance of Cameroon actually abolished any customary or indigenous land tenure throughout the country as this law practically nationalized all land in Cameroon that became the property of the state. As evidence of this state move towards nationalizing all the land, by an order of

the then minister of finance who was as well in charge of land matters, in 1976 all land consultative boards throughout the country were informed that the 1974 land ordinance had put an end to the customary ownership of land in the country (Ngwasiri 1998). However, the land ordinance made provision for rural people to individually acquire their land through a registration system. Here the law provides that rural communities can also enjoy land ownership through a statutory registration scheme. But in practice, the registration system and acquisition of private land titles has not made it possible for individual community members to register their land, due to bureaucratic procedures, several obstructions to communities' willingness to acquire land title and the expensiveness of the system. It can be argued that what we are referring to as obstructions are just the normal administrative procedures that must be followed by any individual willing to acquire land titles. But the fact is, the registration scheme has not made any difference between a normal illiterate person living in a remote area and a wealthy person, educated and perhaps having a high position in the society. The registration of land and an eventual acquisition of land titles are all based on the premise that the applicant demonstrates to the satisfaction of the land consultative board that he either established or exploited the land before 5 August 1974. It can be argued that this particular provision of the 1974 land law may frustrate those who want to acquire and later on exploit their customary land, simply because they did not have the means to exploit this land before the date and neither did their elders exploit the said land. The normal application procedure must be in four copies. The application documents must be accompanied by a description of the property, the nature of occupation and exploitation, estimated values and details of the charges with which the land is encumbered (Ngwasiri 1998). In order to arrive at this stage, applicant may need to hire the services of at least two experts, one on land tenure and another on land valuation. Adding to all of these the required fees 40,000 FCFA to be paid by the applicant for the site survey, the whole procedure turns up to be not only administratively cumbersome to rural communities, but also very expensive. Apart from these requirements, it has to be mentioned that all other charges including transportation and food in connection to on-site visits of the consultative board are the responsibility of the applicant. As a matter of fact, many people interviewed in the ministry of environment and forestry acknowledge that land titles are easily acquired by wealthy private individuals living in urban areas because of their financial power and the level of networking they have within the government. As indicated by one staff member at the provincial delegation of environment and forestry Northwest province of Cameroon, this issue of land ownership is just like the community forest issue. Any wealthy indi-

vidual or group can eventually own private land title or successfully sponsor the processes leading to the acquisition of the community forest. One of the key findings deriving from the survey carried out in Cameroon is the strong suggestion for the need to reform the land law or an inclusion of provisions related to land ownership by rural communities in Cameroon in the context of the new law. This is also to indicate that from the perspective of this article, the prospective *sui generis* law may not protect the customary rights of rural communities unless it clearly provides for land ownership rights of rural communities on the basis of their customary systems.

From the foregoing, it appears that in Cameroon ownership of land is strictly linked to ownership of the resources all of which belong to the state. In fact, looking at Section 39(1)(2)(3) and (4) of Law No. 94 of 20th January 1994, it can be observed that the law has gone further to specify that even the special products found on private land shall be exploited under state supervisory control. On the other hand, the customary rights of rural communities are indeed poorly considered in the current shape of the legislative texts in Cameroon. It is true that the laws and decrees were drafted with due consideration to timber exploitation, although the fact of mentioning other forest products was an indication of the state's awareness about the interests of stakeholders in other forest products. The state therefore wanted to secure substantial amount of ownership and control so that perhaps the benefits accruing from these resources could be well managed through the state institutional layout. But it has to be said that bioprospecting activities and biodiversity research are new ways of using the forest through which biodiversity conservation and rural development can come together. If Cameroon wants to achieve these goals, an appropriate protection of the rights of rural communities is highly needed. This can be achieved through the development of a tailored legal instrument as it is recommended under the Convention on Biological Diversity to which Cameroon is party. Indeed reading together some of the provisions of the 1992 Convention on Biological Diversity including Art 10 ©, 8(j), 15(1) and (7) parties to the convention (especially those rich in biodiversity) are suggested to develop national legislation that recognize and protect the biodiversity customary rights of rural communities in the context of the exploitation of biodiversity. But in their current shape the laws in Cameroon lay emphasis on the state sovereignty and pay very little attention to the concerns of rural communities.

3. Traditional systems of access, use, benefit sharing and sanctioning infringement

This article addresses local management systems focusing in two villages of the Northwest Province of Camer-

oon. Two factors contributed to the selection of these villages: firstly during interviews with resource persons during the practical planning phase of field activities, it was noticed that these villages are frequently visited by researchers working on traditional medicines and in general the use of local plants; secondly the traditional authority of the *fons* in these villages were said to be very strong. Fons are legally recognized traditional authorities, playing the role of intermediaries between government authorities and village communities. Decision-making is very centralized and every community member is answerable to the *fon* and the community as whole for any involvement in biodiversity activities especially in partnership with outsiders. So it is on the basis of these two elements that matters related to access, use, benefit sharing and the ways traditional rules are enforced are dealt with in these English-speaking villages. The utilization and management of these resources at the local level is hereby referred to from the perspective of most of our interviewees – in practical terms – as the way in which local communities collect, conserve, and use plants for their own purposes/personal needs and the local enforcement measures and rules put in place allowing the communities to ensure that at their level, everyone is committed to wise and sustainable use of the resources.

Talking about the conservation of plant genetic resources and traditional knowledge, there were contrasting perceptions concerning the conservation status and the possible continuity of the traditional knowledge to be available and useful to future generations. Some distinguished researchers and policy makers interviewed in Yaounde expressed their worry about the gradual weakening of the traditional systems of knowledge protection leading to the loss of important local knowledge and practices on the basis of which they were nurtured and brought up. For example one respected research authority interviewed in Cameroon stated that as he was told, in his village traditional birth attendants attended virtually all the mothers who were delivering at the time he was born. Most of his village relatives of his generation benefited from this important local knowledge and practices held by women. An elder in the Bamunka village in the Northwest Province also told me an interesting story in connection to the importance of knowledge and practices held by traditional birth attendants. He said that – as he was told – he was delivered in the bush when her mother was on her way back from the farm. His mother began labour just a few yards from her house and that phase of *travail* plus the overall delivery process went so fast that she could not reach home. She was however fortunate enough because just a few minutes when the situation became very serious, the village's traditional birth attendant was passing by, on her way to the her own farm. After a quick assessment of the condition of the young

mother, the birth attendant realized that there was no time to get her to the village and just applied her traditional techniques to assist childbirth. Both the research authority and this village elder pointed out that nowadays, such traditional birth attendants are very scarce in their respective villages. There are local health centers that started operating just a bit more than a decade ago in these villages. According to the village elder, perhaps this modern health center had contributed to reduce the incentive of young girls to learn about traditional birth attendance practices using local herbs. However, I will comment that on a private trip to my village during my stay in Cameroon as well as whenever I happened to discuss with my mother on these issues of traditional medicine and the transmission of local knowledge to youngsters, I did notice that there is no local traditional birth attendant in my village. The remaining aged women did not learn these practices from the specialist ladies who have all passed away. Nearly all the young girls are looking for better life and better jobs – such as nurses – and obviously undervalue activities like traditional birth attendants.

However the previous perception did not seem to be shared by many other traditional healers interviewed in the course of this field research. Traditional healers, village chiefs and other members in the villages visited during this research stressed that traditional knowledge of the use of medicinal plants and the plants with which this knowledge is associated should be and are being well managed by village communities. As mentioned by Dr Pa Moussa in Bamunka – Ngok Etunja division, Northwest Province – not only the plant genetic resources should be conserved, but the local knowledge associated with these plants must be improved in order for them to continue to be useful to rural communities. According to Dr Pa Moussa, “these resources and our knowledge constitute our food, soap, pesticides that we use in our farms, our cosmetics and our medicines.” Pa Moussa stressed for example that in his household, people are not taken to the hospital in Bamenda when they are sick. He recalled that it was only on one occasion when his son was critically sick and this required surgery that he took him to the hospital. In terms of improvement and conservation of traditional knowledge, community members, but especially native doctors like Pa Moussa presented their strategies. For example, native doctors acknowledged that most of the medicinal knowledge they hold now was acquired free of charge in a trans-generational manner. But with their closeness to the nature, by studying how some animals use these plants, they are able to improve it in order to tackle the diseases that did not exist by the time their forefathers generated this knowledge. For example, it is largely known that there is currently no drug to cure AIDS. But traditional healers met during field work stressed that they are helping AIDS patient who seek the services at the earlier stage,

to re-build their immunity system back. They claim to have successfully studied plants and generated some mixtures that can be used accordingly. This is a way of adapting to the current context. In terms of preservation of the knowledge, apart from Dr Pa Moussa many other healers stated that because they are making sure to transmit this important knowledge to their children, the local knowledge would never die. However it was recurrently admitted that even from the same household with the family head being a native doctor, youngsters do not have the same motivation to learn about traditional medical practices. It was then understood that the motivation to learn and keep traditional knowledge is by vocation. Pa Moussa and other traditional healers met in other areas stressed that, with the lack of employment, many people who are not good native doctors have reversed into traditional medicine. These people did not have the vocation to do traditional medicine and they actually have no first hand knowledge on these practices. This situation is destroying the image of trustworthy native doctors. Young people looking for money in traditional medicine will not succeed because this knowledge as it is transmitted from one generation to another is not moneymaking tool. It should be used to save the humanity. This is the basic for the survival of traditional knowledge.

Another important issue is about the traditional systems applied in the conservation of the genetic resources with which the knowledge is associated. Indeed, following discussions with resources persons in Bamunka and Bamukubit, it was realized that the conservation strategies are not specifically targeting plants, neither were they narrowed to medicinal plants only. It was submitted that conservation strategies within the framework of traditional systems should target forests and forest resources as a whole. For example, it was identified that some parts of the forest in these villages are protected areas, while others are open for everybody. Some protected areas are under the authority of the *fon* and the others are under the authority of the quarter head who is an intermediate authority between the *fon* and the community. But in practice the real traditional power is held by the *fon*. As such, it was presented that under the royal authority, there are two types of protected areas that are always located in the vicinity of the royal palace. The *prince* forest is on the right of the palace and is only accessible to those who are very close to the *fon* for example his children, nephew etc.; the *Ngomba* forest, highly restricted, is located on the left of the royal palace. Under the authority of the quarter head, there are small forests where access is also protected by tradition, but not as high as the areas under the royal authority. It was submitted that these are still virgin forests where no major exploitation or bioprospecting activity has taken place. Access to these special forest parts of the village is allowed with special authori-

zation, and such authorization might involve some sort of ritual ceremonies. Due to these hurdles, remnant forests in the other parts of the village have been subject to this free access that has led to the reduction of the wild population of certain medicinal plants. In order to make the category of medicinal plants of special use to local communities – especially native doctors – available any time the need to use one arises, local communities proceed by domesticating these plants around their settlements.

A specific method of processing and using plant genetic resources traditionally has been described in the context of traditional medicinal use. Native doctors and other community members in the Northwest stressed that processing medicinal plants before administration to a patient is very important to the efficiency of the treatment. In that respect, prior to administering a specific treatment, medicinal plants are usually processed following the local methods applied by every individual healer. As part of these processing methods, drying appeared to be a critical step in all processing. Dried plants can even be preserved for longer periods to be used on other patients when the need arises. A mixture of many types of medicinal plants should be used together against a given disease in order to expect a positive outcome. The author tried unsuccessfully to get the names of the plants constituting the mixture and the name of the disease against which the mixture is directed. One step in processing the traditional drug from this mixture might involve boiling it and getting the boiled solution to steam up for some time before the actual administration to the patient. Without this short period when the boiled solution condenses, the drug might not possess its necessary efficacy. The native doctor in Bamunka said to me that these are the kind of details that people require when they interview them about their traditional practices related to medicinal plants.

In terms of sharing the resources and associated knowledge and perhaps sharing the benefits deriving from the utilization of these assets among community members, it was submitted that it is achieved on the basis of the communal ownership of the resources and the free prior acquisition of the knowledge. Many native doctors said that they received their knowledge of medicinal plants for free from their fathers, uncles or other family relatives. One actually stated that, when training him in traditional medical practices, his father told him that he was teaching him about the use of medicinal herbs, not to make money, but to use these herbs in order to treat people. And this is the basic philosophy guiding his actions now. So in principle, any village member who comes to him because he wants to learn about traditional medical practices will be served free of charge. On the other hand, this native doctor claimed that if after providing a treatment to someone the latter gives him some money, he

will make sure that he in turn shares it with his closest village members. It has to be stressed that native doctors themselves acknowledged that this free share of knowledge has limits even at the community level. There are some practices that are known by virtually everyone in the village, while others are only known in a specific family lineage, making this sort of knowledge or practice a strict family property. In this respect other village members can benefit from this knowledge or practice only when they are seeking treatment as patient. But the holders of these practices tend to make sure that it is actually restricted to the family from one generation to the other. As for the collection of medicinal plants for local use, it was noticed in Bamunka and Bamukubit that on the basis of a simple demand a villager will be allowed to access his neighbour's land in order to collect certain plants if they are found in that land. Such free exchange of knowledge and resources and share of compensation among people in the same village was also said to be the practice among people living in neighbouring villages. However, Mr Bobo Sonjong met at Bamunka mentioned that in fact traditional communities were applying the same principles of knowledge and resources sharing even with outsiders. But they gradually feel betrayed by outsiders, which is why of recent, they have begun to apply secretive behaviour when approached by outsiders.

From the foregoing, there is no doubt that local communities do rely a great deal on plant genetic resources and their knowledge in order to carry on their life and address their basic needs in their specific contexts. The fact that these people have developed strategies to conserve these resources implies that there are local rules to which every community member must adhere to when using these resources. Failure to adhere to these rules might lead to the community to provide sanctions to whoever infringes the rules. When talking to the *Fons*, for example to the *fon* of Bamukubit, he explained that sanctions are provided for in the traditional laws regulating access, extraction and utilization of medicinal plants in the village and will apply to any community member who does not comply with traditional rules. The *fon* explained that there are local set ups to address these matters and these set ups can be called "traditional tribunal." One tribunal is under the authority of the quarter head and another under the authority of the *fon* himself for matters strictly under the royal authority. As a matter of fact, fines or sanctions are symbolic and are meant just to remind one that he should refrain from committing the same act in the future. These fines are usually limited to palm wine, one fowl or a goat, as fines will never mean to request money from the offender. Traditional authorities explained the extent to which such enforcement measures may apply to outsiders (who might or might not

have the legal authorization in terms of the research permit or exploitation licence) getting into the forest to collect the plants, without the authorization and blessing of the village representatives. Traditional communities see research permits or exploitation licences as simple legal documents that should not mislead holders to use the forest resources without traditional authorization. It is therefore advised that in order to avoid any consequences whatsoever, people should seek the permission of the traditional authorities prior to getting into the forest. One of the mentioned severe consequences was the fact that without the blessing authorization of the *fon* or the traditional council, one can get lost forever in the forest. In the absence of severe consequences, an outsider collecting plants without permission will receive the same fines as a community member.

4. Plant based research and development in the context of Cameroon

A significant amount of research on bioresources especially medicinal plants used by traditional healers is conducted in University laboratories in Cameroon. These cannot be classified as research and development activities in the sense that such activities are usually carried out by pharmaceutical industries. Rather these can be viewed as academic research with potential commercial applications. These research activities are usually carried in both the laboratories of biochemistry and organic chemistry belonging to the faculty of sciences in the research Universities. Another significant fact is that researchers working on medicinal plants collected from various parts of Cameroon lay a great deal of emphasis on the collection of traditional knowledge associated with these plants. Such knowledge is usually used as a starting point and may guide the researcher throughout the research process. Findings presented herein were obtained from surveys in two Universities in Cameroon during which the relevant academic researchers working on medicinal plants were interviewed. There appears to be a consensus amongst interview participants as to their motivation and basic interest in research on medicinal plants.

In essence they submitted that prior to the economic crisis that was severely felt in Cameroon in the mid 1980s, though not perfectly funded, academic research was granted substantial government funds that allowed academic researchers to carry out their activities. During these memorable times, research interest was focused on fundamental research such as organic synthesis and spectroscopic analysis. But with the occurrence of the economic crisis, government funding of academic research decreased dramatically so it became very difficult to sustain expensive research such as organic synthesis. This led to a shift

in focus from fundamental research to applied research and the rich flora of Cameroon provided plenty of opportunities. Research on therapeutic plants which was formerly in the second rank became the primary focus of University laboratories especially owing to the fact that basic research material such as solvents were cheaper to purchase and could even be provided by collaborators from overseas.

As already mentioned the in-country funding became almost unavailable to academic researchers in Cameroon with the economic crisis of the mid 1980s. In order to keep research alive, academic researchers undertook to establish linkages on personal basis with foreign researchers and other foreign bodies in the sense of developing collaborative proposals. Funds were then eventually raised and allowed the conduct of the research. This approach proved to be effective in allowing research to survive in the academic scene as well as maintaining academic researchers in their cherished job. Several academic researchers however stressed that specific areas of interest for which joint proposals for research on therapeutic plants are funded do usually reflect the interest of the foreign partner. For example, through their collaboration with the laboratory of chemistry of the Centre National de la Recherche Scientifique (CNRS) of France, the department of Organic Chemistry of the University of Yaounde I and the Centre d'Etudes des Plantes Medicinales (CEPM) of Yaounde carried out research on some species of the family of Ochnaceae. Some species from this family were reported to have active ingredients that may have anti-hypertensive effects on the one hand. On the other, some ingredients were reported of being capable to reduce hair loss effects that several women are suffering from. Even though Cameroon collaborators were interested in these research topics, the later should have primarily reflected the interest of CNRS. Let us assume the situation where the Cameroonian counterparts would have decided to shift to other research topics using the funds provided by CNRS. Being very committed to the study of active ingredients responsible for the anti-hypertensive and anti-hair loss effects of representatives of the Ochnaceae, it is unlikely that CNRS would have agreed to such shift. Consequently the Cameroonian could ultimately find themselves in the 'take it' or 'leave it' situation. This article is definitely not saying that in the above-mentioned case CNRS forced the Cameroonian counterparts to carry out this research. It is neither putting that the research idea or proposal was designed by CNRS and imposed to its partners in Cameroon. The point that is being pursued here that with lack of in-country funding, research in developing countries like Cameroon tend to be highly dependent on external funding. In this respect, local researchers and research institutions have very limited power to decide on the direction of their research.

The 'take it' or 'leave it' situation here means that CNRS for example is able to say to Cameroonian counterparts, this is the direction we want the research to follow and this is the money for it. Take it and carry out the research as we want it, or leave it, and we will find other partners in Cameroon or even in the sub-region who are ready to do this research.

Research activities on therapeutic plants – like the joint venture mentioned above – generally start with the critical issue of access to plants and traditional knowledge of rural communities. According to the research team leader interviewed in one of the academic institutions, strategically everyone in the team is required to go back to his area of origin to collect information from traditional healers and other community members – especially elders – and collect plants indicated by these peoples. One reason for using this strategy is because it can be fairly easier and cheaper for one to deal with people in his/her area of origin. Another reason raised was the fact that since the research is usually benefiting from external funding, foreign collaborators are increasingly reluctant to deal directly with local groups who increasingly view foreigners as 'thieves'. This is because foreign researchers do not return to local communities after they have received what they needed in the first place. So the understanding between these University laboratories and some of their foreign partners is that the groundwork – collection of plants and traditional knowledge – is the responsibility of the national counterpart.

Another route that was revealed to be used by academic researchers to acquire plants is through those who are involved in the exploitation of special products as defined under section 9(2) of law No 94/01 of 20th January 1994. Having accessed the basic information about the plant in herbaria including plant location and traditional use, researchers pass the names of the plants to their friends – forest exploiters – who are asked to do collection. Furthermore, researchers sometimes suggest their friends to ask further questions to villagers about the traditional use of the plants. But it has to be stressed that usually the plants that academic researchers request from their friends forest exploiters are not listed in their exploitation permit. In a very passive way community members usually provide answers to such inquiries. After the plants have been collected and identified, laboratory research is carried out leading to extraction, isolation and eventually characterization of the active molecules for a specific disease. Using some aspects of this – rather broadly described – approach, Ewola-tih *et al* (1990, 1994) characterized Lanceolins A and B anti-hypertensive substances from one Ochnaceae *Lophira lanceolata* Van Tiegh. Ex Keay; while Bongosin a new Chalcone-Dimer was characterized from *Lophira alata* Banks ex Gaern to

be the active substances responsible of anti hair-loss activity performed by these species. It has to be noted that both plants were collected in the villages of Balamba in the Mbam division in Cameroon where they have been traditionally used to treat these diseases for millennia. After such preliminary research has been completed in Cameroon useful data are usually sent to the collaborators overseas. When asked how these results would be used afterwards and whether from the onset of the collaboration the Cameroon counterpart was interested to know if CNRS could be to some extent connected to commercial partners, it was discovered that the national counterpart generally do not inquire into such issues that can be tricky enough to jeopardize success of getting the required funds. Beside the research conducted in Universities there are other institutions in Cameroon including the Centre de Recherches en Plantes Medicinally et Medicine Traditionnelle (CRPMT),¹ that are also doing research on medicinal plants. These research activities draw substantially from the local knowledge of rural communities that they collect during their plant collection missions.

Taking into consideration the kind of basic research and the technological level of Cameroon, one would be tempted to say that commercial exploitation of plant genetic resources and associated knowledge from Cameroon does essentially occur abroad. In this case the concerns of rural communities in connection to potential use of their resources by third parties and the benefit sharing issues are linked with foreign operators. The reality however is that some level of commercial exploitation of biore-sources effectively occur in Cameroon and there is no indication whatsoever that rural communities do benefit from such activities. For example, it was discovered that academic researchers in Cameroon are involved in the production of some herbal preparation used to treat certain ailments such as hair loss. These herbal preparations are not registered drugs. Also neither the processes leading to these preparations nor the preparations resulting from such processes are not patented at the regional or national patent office. But while these preparations are sold in herbal outlets, there are no mechanisms to get some benefits or compensation to flow to the communities who provided the plants and knowledge in the first place. Therefore in-country small-scale commercial exploitation of Cameroonian resource does occur and should be the concern of rural communities as far as benefit

¹By decree No. 93/215 of 4th August 1993, the Centre d'Etudes en Plantes Medicinales (CEPM) was renamed Centre de Recherches en Plantes Medicinales et Medicine Traditionnelle (CRPMT).

sharing is concerned. Thus the establishment of a tailored legislation protecting the rights of rural communities is intended to enable rural communities to be aware of these kind of activities and make informed decisions as to their involvement or not.

5. Intellectual property laws at the regional and national level and impact on biodiversity matters

5.1 *The patent working at the regional level and potential implications on biodiversity matters*

Cameroon is both a founder as well as an active member state of the African Intellectual Property Organisation (OAPI) that was created on 2nd March 1977. This organization emerged from the revision of the African and Malagasy Office of Industrial Property created in Libreville on 13th September 1962. This organization administers all the annexes of the revised² Bangui agreement of 24th February 1999. Article 2(1) sets the scene with regards to the main objectives pursued by OAPI in relation to the protection of intellectual property in the member states. Three of these objectives have been identified to be very relevant to this article. They include:

- (i) The promotion of economic development of the member states notably by means of effective protection of intellectual property and related rights.
- (ii) The provision of intellectual property training.
- (iii) The representation of each member states as both the National Industrial Property Office within the meaning of Article 12 of the Paris convention and as the central patent and documentation office.

This section is primarily concerned with the way the patent system in the OAPI operates in terms of fulfilling the above-mentioned objectives. The substantive requirements for patentability for any eligible subject matter are basically the same as what is provided under the TRIPS agreement. For a subject matter to be patentable, it has to be new,³ deriving from an inventive step⁴ and being industrially applicable.⁵ Non-patentable subject matters are

enumerated in Article 6 while the rights conferred by the patent to the patent owner are addressed in Article 7 of the agreement. From the perspective of this article the issues that are identified as likely to facilitate the expropriation of traditional medicinal knowledge and the useful plants from rural communities are connected to way the agreement has addressed the 'prior art' concept in the assessment of novelty and inventive step on the one hand and the working of patent on the other. The 'prior art' concept as defined in Article 3(2)⁶ and (3)⁷ in the assessment of the novelty criteria or its consideration in Article 4⁸ in the assessment of the inventive step may seem to be comprehensive to provide some amount of obstruction to the patenting of processes that might have used traditional knowledge and the biological materials collected from rural areas. But it instead seems that the approach or rather the wording of the agreement in connection to this issue makes the consideration of prior art very vague, allowing substantial margin to the so called 'biopirates' to play any unfair game they might want to with the resources of the poorest. Considering that bio-resources and traditional knowledge are valuable assets to local communities as well as useful tools for potential economic development of the sub-region, these elements should have been clearly specified in the prior art assessment of novelty and inventive step criteria for patentability. This is not intended to stop patenting of processes that might have used these resources, but this should have contributed to ensure that in pursuing such patenting,

²This is called revised agreement because the first Bangui agreement that was signed in March 1977 was actually the one creating OAPI in its current appellation. It was posted that the revision of the 1977 agreement was meant to make the provisions consistent with the demands of international treaties relating to intellectual property to which the member states are parties, specifically the TRIPS agreement, to streamline the procedures for issuing certificates, to broaden the base of the objects of protection among other issues.

³See Article 3 of annex I of the 1999 revised Bangui agreement.

⁴See Article 4 of annex I of the 1999 revised Bangui agreement.

⁵See Article 5 of annex I of the 1999 revised Bangui agreement.

⁶Prior art shall consist of everything made available to the public in any place and by any means or method, before the filing date either of the patent application or of a patent application filed abroad the priority date of which has been validly claimed. See Agreement Revising the Bangui agreement of 2nd March 1977, on the creation of an African Intellectual Property Organization. Bangui Central African Republic, 24th February 1999.

⁷The novelty of an invention shall not be denied if, during the 12 months preceding the date specified in paragraph (2) above, the invention has been the subject of a disclosure resulting from: (i) an obvious violation committed against the applicant or his predecessor in title (ii) the fact that the applicant or his predecessor in title has displayed it at an official or officially recognized international exhibition. See Agreement Revising the Bangui agreement of 2nd March 1977, on the creation of an African Intellectual Property Organization. Bangui Central African Republic, 24th February 1999.

⁸An invention shall be regarded as resulting from an inventive step if having regard to the prior art, it would not have been obvious to a person having ordinary knowledge and skill in the art on the filing date of the patent application or, if priority has been claimed, on the priority date validly claimed for it. See Agreement Revising the Bangui agreement of 2nd March 1977, on the creation of an African Intellectual Property Organization. Bangui Central African Republic, 24th February 1999.

certain issues such as prior informed consent of the communities and benefit sharing are appropriately adhered to by business counterparts, nationals or foreigners. However the current initiatives⁹ at the sub-regional level aiming at providing legal protection to innovations based on traditional medicinal knowledge and the valorization of such innovations suggest that OAPI is aware that plant genetic resources (especially medicinal plants) and traditional knowledge are tools for potential economic development of the sub-region. In this regards this article argues that traditional knowledge and practices should have been considered in the 'prior art' assessment of the 'novelty' and 'inventive step' requirements for patentability of a given invention that might have used these elements. Another hitch in the Bangui agreement that can seriously jeopardize the current initiatives at OAPI in connection to the protection of the rights of rural communities against unfair exploitation of their traditional knowledge and plant genetic resources is the manner in which the 'working' of patent has been defined. Article 7(3)(a)(i) stipulates that the 'working' of patent includes the following elements: manufacturing, importing, offering for sale, selling and using the products. The inclusion of importation element has been severely criticized as one of the worst and irrelevant changes brought about by the revised Bangui agreement. An important goal of patent laws is to contribute to the economic and industrial development of the country or region through mechanisms such as technology transfer. Looking at the revised Bangui agreement, it can be argued that the fact of importing in the region the products processed abroad protected by a patent filed in one of the OAPI member countries is unlikely to ensure proper technology diffusion in the region. The fully harmonized intellectual property system of OAPI makes it easy and very practical for someone to file patent at the patent office at the headquarter of the organization in Yaounde which patent if granted will be valid in all the member states. In procedural terms such a system is very practical especially for businesses that would loose substantial financial resources as well as would find it time consuming if they were to file patent in each member states. But in terms of exploiting the bioresources and associated traditional knowledge of one country member, such country might not have an attractive market for the final products deriving from research and development

processes. Let us assume the case of an industry based overseas but exploiting the genetic resources from the Central African Republic. What is worrying here is the fact that this company having an agent in Cameroon can actually file a patent at OAPI on the processes deriving from the research that might have used a cosmetic plant collected from Central African Republic. This patent will effectively work in Cameroon by way of importing to the Cameroonian market the products produced abroad. In this respect, not only Central African loses control over the use of this plant because patent has been acquired, but neither the Central African Republic nor Cameroon will benefit from any technology diffusion deriving from the utilization of this plant. Worst is the fact that, local communities living in the areas where the plants might have been collected seem to be completely excluded from the whole discourse.

In essence, the patenting procedure pursued by the Organization does not provide any solution to the complains of indigenous organizations and those who are sympathetic to the concerns of rural communities, traditional healers and other small innovators. For example there is no indication whatsoever anywhere in the Bangui Agreement that it can be used to strengthen the recognition of the customary rights of rural communities to determine how their resources should be used, to be aware of and allow such use, to benefit from such utilization and to seek reparation from the courts against whoever infringes their rights. Moreover, though the patent provisions of the Bangui agreement are bound to be in line with international instruments such as the TRIPS agreement, we argue that they should have reflected the reality of research and innovative activities in connection to biodiversity because it is implemented in biodiversity rich countries. Unfortunately, it does not reflect these realities. For example, Article 20 addressing the procedures for grant of patents makes it difficult for local and traditional practices in connection to traditional medicine for instance to be eligible for patentability.¹⁰ In addition the communities do not seem to be legally entitled to pursue the judicial matters in connection to patents including for example requests for non-voluntary licences,¹¹ request for invalidation or forfeiture of a patent. As for the invalidation of a patent, Article 43(1) states that any person having an interest in the patent may seek actions to invalidate the patent. But

⁹See rapport de la Conference des Ministres charges de l'industrie et de la sante des etats membres de l'OAPI sur: "l'initiative pour la protection et la valorisation des inventions Africaines en matiere de medicaments". Libreville, 11-13 Septembre 2002, 27 pp. Organise par l'Organisation Africaine de la Propriete Intellectuelle en Cooperation avec la Republique Gabonaise.

¹⁰See for example the requirements in patent filling as provided under Article 14 of the revised Bangui agreement.

¹¹The Revised Bangui agreement talks of non-voluntary licence while the TRIPs agreement talks of other use without authorization of the right holder. See Article 44 to 53 of the Bangui agreement and Article 31 of the TRIPs agreement.

again this provision is very broad and blurred because it does not state that the communities are legally entitled to seek such invalidation if the products or processes patented have involved their traditional knowledge or biore-sources. The patent system as it is shaped at the sub-regional level is actually showing a great deal of weaknesses and its present format does not contribute to build trust between traditional communities and those exploiting their resources for businesses. The 'utility models' appear to be the way forward for the valorization of local research as well as the establishment of trust between local researchers and groups of communities. Article 1 of Annex II of the revised Bangui agreement provides that: 'within the meaning of this annex, utility models protected by registration certificates granted by the organization shall be implements of works or objects to be utilized or part of such implements or objects in so far as they are useful for the work or employment for which they are intended on account of a new configuration, a new arrangement or a new component device, and are industrially applicable. Considering the low technological and research capacities at the sub-regional level, it can be suspected that the research carried out locally may fail for patentibility on the basis of its failure to comply with the inventive step requirement. As provided by the Bangui agreement, elements deriving from this kind of research can qualify for protection under the utility models in so far as they are new¹² and industrially applicable.¹³

5.2 Intellectual Property Rights-Patent in Cameroon

It is not clear what kind of move Cameroon is taking in order to establish a proper patent system addressing issues such as patent rights over processes or products deriving from bioresources and traditional knowledge. An evaluation of the level of consideration of intellectual property issues in the regulation of business activities and the kind of administration currently in place suggests that Cameroon is just witnessing the exploitation of its bioresources and associated knowledge by others if not perhaps indirectly encouraging such exploitation. One resource person of the administration in charge of Intellectual Property (IP) in Cameroon said he is not doing any wrong to state that in the present circumstances in Cameroon, there is no national legislation on Intellectual Property Rights. Indeed discussions with key staffs supposedly to be charge of IP issues in various capacities at the Ministry of Trade

and Industrial Development (MINDIC) revealed that after Marrakech in 1994, developing countries such as Cameroon started developing their awareness on Intellectual Property matters. In this regard, in 1998 the new organigram of the MINDIC transformed the then service on Intellectual Property matters into an entire sub-directorate of Intellectual Property Rights. In principle the national patent office should be under the authority of this sub-directorate. The objectives of this sub-directorate include sensitization of authorities about the importance of Intellectual Property Rights especially in terms of stimulating the economic development of the country, creating employment among others. In practice despite the improvement of awareness about IP matters and the institutional development attached to it, there are serious constraints to the activities of the new organ. Firstly in relation to sensitization, it has not been easy to get the authorities to understand the importance of Intellectual Property matters in the context economic development of Cameroon. This is evidenced by the fact that as recommended by the organization, member countries are required to establish national liaison structures that will work hand in hand with the central services on specific areas such as patent rights. But despite the struggle of the sub-directorate to convince the authorities about the need to establish this structure, it is yet to be created.¹⁴ Also there is no national patent office as such. All patenting are dealt with at the regional office at OAPI that serves as the central registry and documentation office to all the member countries. The lack of resources is seriously hampering the development of this kind of office that would need sufficient documentation and an up-to-date communication system allowing access to information worldwide. Importantly, there is serious need for the enhancement of human resources capacities on IP issues in order to avoid complete reliance to expertise from overseas on these matters. It is also worth mentioning that an inter-ministerial committee was created having as prime objective the development of concrete proposals on how to address Intellectual Property matters in Cameroon. The committee is composed of representatives from six governmental departments including the ministry of Environmental and Forestry, the Ministry of Agriculture, Higher Education, Scientific and Technical Research, Trade and Industrial Development and Health. It emerged that this committee has so far held just two meetings with no concrete outcome and no indication about its future direction. In fact it was submitted that perhaps this committee

¹²See annex II, Title I, Article 2 of the revised Bangui agreement of 1999.

¹³See annex II, Title I, Article 3 of the revised Bangui agreement of 1999.

¹⁴This information was obtained through interview with an Cameroonian expert in intellectual property law in Yaounde in the course of October 2003.

is still existing on paper. The members might indeed have forgotten that they belong to a committee of this sort perhaps due to the lack of interests on intellectual property rights in Cameroon.

As far as tailoring the patent laws to accommodate biodiversity rights of rural communities over their tangible and intangible assets is concerned in Cameroon, this article submits that Cameroon is at a static position concerning Intellectual Property Matters in a broader sense. Currently the context under which attentions are being paid regarding the development of an alternative law for the protection of the intellectual and resources rights of rural communities is actually the one of no Intellectual Property laws. One can possibly argue this as an overstatement, as per Article 2(3) under Section I – fundamental principles – Title I – general provisions –, the organization shall serve as the national patent office for each member state, party to the Patent Cooperation Treaty. In the case of Cameroon, this implies that patent laws exist because the provisions of the Bangui agreement apply to the national context. However Article 6(2), section II ‘operating procedures and rules’ suggest that Cameroon can develop its national IP laws (in this case patent laws). However the push seems to come from the sub-regional instances above where efforts are being devoted towards of addressing IP in connection to the assets of rural communities.

6. The suggested alternative approach

Forest and the forest communities are critical components in the conduct of biodiversity research by academic researchers and other non-academic operators in Cameroon. The current forestry legislation in force in Cameroon places the ownership of all land and forests resources under the state, meaning that, any single profit making activity in connection to these assets require the state authorization through its competent services. In the absence of this kind of authorisation all such activity are deemed to be illegal. The current legislation provides for the classification of forest as section 20(1) of the 1994 forestry law stipulates that the national forest estate is made up of permanent and non-permanent forests. In furtherance of the understanding of the meaning of the two broad categories of forest stipulated above, section 20(2) emphasises that permanent forests shall comprise lands that are used solely for forestry and/or as wildlife habitat while section 20(3) emphasises that non-permanent forests shall comprise forest lands that may be used for other purposes than forestry.

In assessing the various institutions that have been identified by law to have direct responsibilities for the

management and sustainable use of the sub-types¹⁵ of forests falling under the two broad categories identified above, it appears that the state and other specific institutions have been given the lion share, relegating the communities to the status of observers. Therefore the state and the other identified institutions entrusted with responsibilities in forest issues will be deciding on behalf of the communities about forestry matters on the basis of their current stated statutory rights. The customary rights of rural communities over land and forest resources are therefore drastically undermined making their claims over forest matters very difficult to pursue before any court in Cameroon. It should be pointed however that the situation is not extremely negative for the rights of rural communities. Indeed, considering their rights to control access to their assets and benefit from any use of these assets, the 1994 forestry law has the credit for elaborating on the community forestry scheme. Several eminent actors in Cameroon with interest on the protection of the rights of rural communities in the context of biodiversity related activities emphasised that: “the community forestry context provides the best opportunity for the communities to manage their resources themselves and benefit substantially. Section 37 of the 1994 forestry law provides that the services in charge of forest shall, in order to promote the management of forest resources by village communities which so desire, give them free of charge technical assistance for example in the development of a single management plan. Article 3(11) of the implementation Decree defines community forest as forest forming part of the non-permanent forest, which is covered by a management agreement between a village community and the forestry administration. Management of such forests is the responsibility of the village community concerned with the help or technical assistance of the forestry administration. Managing here means controlling access, determining the terms for such access that should be based on the customary systems of accessing, using and exchanging the resources among the communities and determining whether or not access should be allowed. In short, rural communities should have the rights to veto any access that does not satisfy their expect-

¹⁵Section 21 of the 1994 forestry law elaborates on the sub-types of permanent forests and stipulates that permanent forests shall comprise the state forests and the council forest. Section 23 of the law elaborates on the specific types of state forest while section 30 elaborates on the classification and description of the council forests. Section 34 of the forestry law elaborates on non-permanent forests and stipulates that non-permanent forests shall comprise communal forests, community forests and forests belonging to private individuals otherwise called private forests.

tations. In this respect any other type of forest remains to be regulated under the stipulations of the current forestry legislation, but there should be improved mechanisms allowing the communities living in the vicinities of these forests to earn appropriate benefits from the activities occurring therein in order to promote rural development. In the context of the community forest, the communities to which a portion of forest can be entrusted for management has been defined in Article 28(3) of the forest decree. By clarifying that the group or community should have a legal personality in the form of association, co-operatives, Common Initiative Groups or an Economic Interest Group, the communities that will be entrusted the management of their forest are expected to be organized enough in order to eventually tackle legal matters in connection to access to and use of the resources found in their forest as well as benefiting from such utilization.

From the foregoing, it appears obvious that decision-makers have a great opportunity through the community forest scheme to enable the communities to apply their customary laws in the management of their assets. This legal recognition and application of the customary laws of the communities would address the strong expectation of the communities who want their customary rights over their assets to be respected by all stakeholders interested in these assets. In practical terms, the rules pertaining to access and the utilization of plant genetic resources and traditional knowledge should be designed by the communities themselves and the monitoring of strict compliance with these rules should be the responsibility of the communities. Obviously the state through its competent services will not be totally omitted from the decision making set-up regarding authorization of access for activities that should be conducted in the community forests. But the actual decision to accept or refuse that research or exploitation permits as the responsibility of the relevant authority should heavily reflect the views of the communities about the proposed activity. To get to this stage there is need to assess how the community forest scheme in its current shape accommodates the rights and responsibilities of rural communities over their assets and the problems encountered by these communities in the exercise of their responsibilities. For example the definition of 'Community Forest Management Agreement'¹⁶ stipulates that it is a contract between the forest administration and the communities whereby the forest administration entrusts part of the national forest to the community. This implies

that the community forest is not the property of the community despite the apparent allocation of the forest to this community. This article submits that on the one hand the management of the community forests should not be seen as a contract between the state and the concerned communities whereby the states assigns some management responsibilities to the communities, but as the full property of the communities who may seek assistance from the forest administration if they so wish. This is perhaps the ideal situation, hard to attain considering the fact that the state is keen to maintain ownership over all forest resources. But the state's ownership does not seem to be effective in terms of assuming the responsibilities in connection to biodiversity conservation. So for the communities to take the lead in the conservation of plant genetic resources, they should be legally recognized as owner of community forests making decisions about the management of the resources. It is suggested that the assistance be in the form of contract between the state and the communities, the state being answerable to the communities. In this connection, it should be expected that the communities have the rights to sue the state before the relevant court if the contract is not respected. Another example of the limitations of the responsibilities and the rights of the communities over the resources of the community forest is in connection to the enforceability of the rights of the communities. Any ownership right over a given property should enable the rights holder to seek court actions against anyone who infringes his rights. It is therefore not understandable that for given property, one partner seems to have been entitled the ownership rights but cannot seek legal actions against those who infringe his rights because this is the responsibility of another actor. This is basically the situation that is framed under the current community forest scheme. Indeed Art 31(3) of the forestry decree of 1995 stipulates that "in case of infringement of community forests regulations, it should be up to the ministry in charge of forests to bring legal actions against the authors of such infringement. The Ministry may be notified to that effect by the official in charge of the community concerned." This should be changed in the context of a *sui generis* law in order to get the communities to appropriately enforce their rights over their resources. It is therefore necessary that the state undertakes a substantial devolution of its current power to the rural communities so that they can exploit their resources themselves even for commercial purposes or they can be fully aware and become part to such exploitation and negotiate deals with the private sector on the basis of their legally protected customary ownership rights. If implemented it is believed that these changes could provide incentives for the communities to strengthen their commitment to conservation of biological resources and the preservation of traditional knowledge at the local level.

¹⁶See definition of 'Community Forest Management Agreement' in section 1.1.1 of the Manual of the procedures for the attribution, and norms for the management of community forests. Ministry of Environment and Forests, Government of Cameroon, April 1998.

The key stakes of the *sui generis* law will be the Prior Informed Consent of the rural communities (primarily) but with sufficient balanced information sharing among all stakeholders. The law should codify the benefit sharing standards that need to be designed by the communities. Also there is a need for the reformulation of certain areas of the sub-regional patent system so that there can be more valorization of in-country research and significant technology diffusion in the sub-region within the framework of technology transfer. For example the 'working' of patent needs to be redefined to either attach nuances to the word importation or remove it from the definition. Attaching nuances to this word seems to be the best way to go. In this respect, products or goods can be imported in Cameroon provided patents for these products have been filed in Cameroon and have evolved from primary research carried out within Cameroon. Such research has to have provided considerable benefits to Cameroon in terms of technology transfer. In connection to research on medicinal plants for instance, products or processes deriving from research carried out on these plants should not be patented in Cameroon if such research has been completely carried out overseas. All these issues have to be clarified during the prior informed consent process and clearly specified in the bioprospecting agreement. In this respect the communities accepting the proposed activities have a fairly good understanding of the basis of their acceptance. This seems to be a concrete way of ensuring in-country technological development through partnerships in biodiversity activities. It is also critical that the *sui generis* law requires and encourages in-country researchers to use the utility models route to protect their innovations. Indeed with regards to the protection of bio-products or bio-processes at the sub-regional level through the utility models, small innovators or academic researchers working in Cameroon can also have access to patent-like rights that enable them to valorize their innovative efforts and to address the needs of local markets with legal security. This valorization of research would promote local partnerships between researchers and groups of communities who should greatly benefit from such partnerships. In this regard, it can be expected that

rural communities would improve their understanding of the importance of IP in research and development processes because they would have agreed and have been involved in the processes that led to making decision about the registration of these utility models. Importantly the law has to be enforceable, enabling the communities and researchers to prosecute those who infringe their customary and statutory rights.

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