CONVENTION SUR LE COMMERCE INTERNATIONAL DES ESPECES
DE FAUNE ET DE FLORE SAUVAGES MENACEES D'EXTINCTION

Cinquante-septième session du Comité permanent
Genève (Suisse), 14 – 18 juillet 2008

ETAT DES LIEUX DE LA RECHERCHE SCIENTIFIQUE SUR LE *PRUNUS AFRICANA* AU CAMEROUN

Le présent document est soumis par le Cameroun. Il est en partie en français, et en partie en anglais.

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AGENCE NATIONALE D'APPUI AU DEVELOPPEMENT FORESTIER

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AUTORITE SCIENTIFIQUE CITES FLORE DU CAMEROUN

ETAT DES LIEUX DE LA RECHERCHE SCIENTIFIQUE SUR LE PRUNUS AFRICANA AU CAMEROUN

Juillet 2008

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I.1. INTRODUCTION

En application de l'article 03 des statuts de L'Agence Nationale D'appui au Développement forestier (ANAFOR) qui dispose que : « l'ANAFOR exécute en outre toute autres tâches compatibles avec son mandat à elles confiées par le Ministre chargé des Forêts dans la mise en œuvre de ses prérogatives » ; Le Ministère des Forêts et de Faune (MINFOF) par décision N° 0104/D/MINFOF/SG/DF/SDAFF/SN du 02 mars 2006, a désigné l'ANAFOR pour assurer le rôle de l'Autorité Scientifique de la CITES au Cameroun pour les questions concernant les espèces menacées d'instinct ion de la flore sauvage.

En se référant aux articles 3, 4, et 5 de la Décision sus évoquée, l'Autorité Scientifique de la CITES est l'organe qui se doit de donner un avis à chaque étape de la gestion d'une espèce inscrite aux annexes 1, 2, 3 de ladite Convention. Par conséquence, Il est question entre autres pour l'ANAFOR en tant qu' Autorité Scientifique CITES flore .

- De mener une surveillance continue et appropriée de la situation des espèces indigènes inscrites à l'Annexe II et les données relatives à l'exploitation et, si nécessaire, recommander les mesures correctives à prendre pour limiter l'exportation de spécimens afin de conserver chaque espèce, dans toute son aire de répartition, à un niveau qui soit à la fois conforme à son rôle dans les écosystèmes et nettement supérieur à celui qui entraînerait son inscription à l'Annexe I ;
- De procéder à la vérification requise de l'aptitude des destinataires des produits CITES à conserver et traiter avec soin les spécimens vivants d'espèces inscrites à l'Annexe I importés ou introduits, ou faire des recommandations à l'organe de gestion avant que celui-ci ne procède à cette vérification et ne délivre les permis ou certificats;
- De proposer annuellement à l'organe de gestion pour chaque titre d'exploitation, le quotas (nombre de pied et volume d'exploitation de chaque espèce de flore sous CITES ;
- D'assurer le suivi de la dynamique des populations des espèces sous CITES en collaboration avec les autres institutions de recherche (IRAD, ICRAF… etc), les opérateurs économiques et les ONGs. L'activité importante qui découle de ce mandat aura des incidences aux niveaux organisationnel, technique et financier dans le fonctionnement actuel de l'ANAFOR.

Cependant, depuis la désignation de l'ANAFOR comme Autorité scientifique CITES flore du Cameroun ; bien d'acteurs impliqués dans la gestion des espèces inscrites à une des annexes de la CITES tant au niveau national qu'international attendent les effets de l'implication de cette organe dans la mise en œuvre de la dite convention au niveau national.

Il va sans dire qu'en l'absence des données scientifiques probants issus d'une stratégie globale de collecte de l'information avec des instruments et des méthodes scientifiques avérées, il s'est beaucoup plus agit d'un aperçu de qui est fait. Une sorte d'état des lieux (photographie) de la recherche scientifique sur le prunus au Cameroun. Le niveau de l'information scientifique disponible sur le Prunus africana Cameroun est fort appréciable. Une capitalisation de ces résultats garantirait absolument la gestion durable du Prunus. Aussi, cette doucment n'occulte en rien les efforts à réaliser par le Cameroun pour respecter les directives de la Commission Européenne relatives à la suspension du commerce du prunus dans l'espace des Etats de l'Union Européenne. Il beaucoup plus question de présenter tout l'intérêt que la communauté scientifique locale avec l'aide de certains partenaires au développement porte sur le Prunus africana au Cameroun.

I.2. FONCTIONNEMENT

L'Autorité Scientifique CITES Flore fonctionne effectivement au sein de l'ANAFOR. Un Point Focal a été désigné à cet effet par la Direction Générale. Le rôle dévolu à celui-ci est d'organiser le fonctionnement de cet organe afin de réfléchir sur toute la dimension institutionnelle, technique et technologique que devrait avoir cette instance dans son déploiement effectif sur le terrain.

I.3. ACTIVITES

Dès sa création, l'Autorité Scientifique CITES Flore a réalisé un ensemble d'activités.

1. Un plan d'action quinquennal de l'Autorité Scientifique a été élaboré et soumis à l'appréciation et l'approbation de l'Organe de gestion qui est le Ministère en charge des Forêts du Cameroun.
   L'incidence financière énorme de ce plan d'action a certainement été à l'origine de l'hibernation observée aujourd'hui pour sa mise en œuvre ;

2. Un projet de renforcement des capacités institutionnelles de l'Autorité Scientifique Flore pour la conservation et la gestion du Prunus a été formulé et soumis pour financement à l'Organisation Internationale des Bois Tropicaux (OIBT) ;Le Panel des experts l'ayant analysé a jugé de sa pertinence. Les suggestions de l'OIBT pour garantir l' améliorations ont été prises en compte. Le projet a de nouveau été transmis à l'OIBT ;

3. Le Point Focal de l'Autorité Scientifique CITES a participé à la dernière conférence des parties de la CITES tenue à la HAYE au Pays Bas. Il en est de même pour l'atelier régional sur le commerce durable du bois de Periscopsis elata (aformosia ou assamela) tenu à Kribi du 02 au 04 Avril 2008). Egalement, la participation de l'Autorité Scientifique CITES Flore fût effective à l'atelier sur la recherche des solutions à la suspension du commerce du Prunus Africana organisé par le Ministère en charge des Forêts du Cameroun dans son rôle d'organe de gestion de la CITES. A toutes ces occasions, l'Autorité Scientifique a eu à faire des présentations allant dans le sens de montrer les perspectives élaborées en son sein pour la gestion des espèces déjà inscrites ou à inscrire à une des annexes de la CITES ;
4. L'Autorité Scientifique CITES de retour de la COP 14 a tenu une rencontre avec le principal syndicat des exploitants forestiers du Cameroun (GFBC). Ce regroupement regorge en son sein les principaux exploitants de l'Assamela. Il a été convenu dans ce cadre qu'il soit réalisé une étude portant sur l'Assamela au Cameroun dans son aire de répartition localisé au Sud Est. Les Termes de Références de cette étude ont été élaborés et transmis au financement de l'organe de gestion. Malheureusement, les financements escomptés demeurent attendus. L'analyse et l'interprétation des données des inventaires réalisés dans les deux provinces du Nord et du Sud Ouest dans le cadre du projet FAO/SNV/CIFOR intitulé mobilisation et renforcement des capacités des petites et moyennes entreprises impliquées dans les filières des produits forestiers non ligneux (PFNL) en Afrique Centrale est en cours afin que, ces éléments nous servent à baser l'élaboration d'un plan de gestion rationnel du prunus du Cameroun , ne serait ce que sur ces deux provinces.

I.4 DIFFICULTES

Compte tenu de sa jeunesse, l'Autorité Scientifique CITES Flore du Cameroun n'est pas suffisamment outillée pour créer une synergie forte autour de la problématique de l'information scientifique et technique (IST) par rapport à la réglementation sur le commerce international le prunus et pour lequel la pression internationale s'est accentuée sur le ce pays ces deux dernières années.

Actuellement, le *Prunus africana* d'origine camerounaise fait l'objet d'une suspension du commerce dans l'ensemble des Etats de l'Union Européenne. Les Autorités scientifiques de ces Etats réunies dans le cadre du Groupe d'examen scientifique (GES) ont motivé cette décision du fait que, les quotas annuels d'exportation du prunus définis par le Cameroun ne sont pas accompagnés par un ACNP de son Autorité Scientifique CITES flore. Par ailleurs, La dernière session du Comité pour les plantes tenue à Genève en Suisse au mois d'avril dernier, a recommandé au Comité de permanent d'instruire le Cameroun de respecter les termes de la Convention CITES précisément l'application stricte de l'article IV alinéa 2a et 3.

Cette article concerne spécifiquement le fonctionnement de l'Autorité scientifique CITES qui se doit de valider les quotas d'exportation arrêtés par l'organe de gestion sur la base des informations scientifiques relatives à la gestion de cette espèce en garantissant de ce fait que, ces quotas n'entament en rien la survie de ladite espèce dans son aire de répartition.

Cette situation est problématique pour l'Autorité scientifique CITES qui se doit d'établir une gestion d'urgence dans son fonctionnement compte tenu de des nombreuses pressions suscitées par la suspension du prunus du commerce. Pourtant, il est fortement utile que l'Autorité scientifique planifie ses actions dans le long terme, quitte à prendre un temps nécessaire pour la production de l'information scientifique utile à la gestion des espèces inscrites à une des annexes.

Nous avons aussi l'inexistence d'une activité scientifique coordonnée et dynamique autour du *Prunus africana.* La première cause de ce problème est la faiblesse technique et institutionnelle de l'instance chargée d'animer cette activité scientifique en l'occurrence l'AS/CITES-F ; et la deuxième cause est l'absence d'infrastructure institutionnelle de concertation sur la gestion durable du prunus et sur le management de l'IST sur le prunus. L'effet majeur d'un tel problème est la gestion non durable du *Prunus africana* du fait de l'absence d'IST pour aider à la prise de décision stratégique, et les effets induits du problème central sont principalement (i) l'aggravation de la pauvreté des populations vivant de l'exploitation du fait de la restriction de son commerce international (pour cause de manque d'argumentaire scientifique et technique sur sa gestion durable), et (ii) la mauvaise qualité des données scientifiques et techniques sur le prunus qui rend peu crédibles les éventuels avis scientifiques de l'AS/CITES-F.

I.5 PERSPECTIVES

En l'absence des moyens financiers pour le fonctionnement de l'Autorité scientifique, toute sa perspective actuellement tourne autour du projet soumis à l'OIBT. L'objectif de développement poursuivit est de contribuer à la mise en place d'une infrastructure institutionnelle, technique et technologique pertinente et efficiente à la production de l'Information scientifique et technique sur la gestion durable du prunus de manière à aider à la prise de décision éclairée sur la planification des activités économiques et commerciales autour du prunus. Le premier objectif spécifique consiste en la mise en place de l'infrastructure institutionnelle et technique de management de cette information sur le prunus et le deuxième objectif spécifique concerne le renforcement des capacités (humaine, technique, technologique, logistique et institutionnelle de l'Autorité scientifique CITES flore du Cameroun dans le cadre de ses missions en faveur de la gestion

II. Scientific review of *Prunus africana* in Cameroon: Past and current research issues.

This paper is commissioned to researchers at the Institute of Agricultural Research for Development and the University of Dschang by the National Forestry Development Agency (ANAFOR). This paper reports important research activities that have been carried out on *Prunus africana*. The species is well known to be highly commercialized and sold to an export market and most especially that, its commercial value is increasing with increasing demand. It has been indiscriminately exploited in most of its major areas of occurrence in Cameroon. The government of Cameroon recommends increased ecological and bio-chemical knowledge so as to actively manage the species. Other studies of socio-economic aspects have been carried and results have revealed that producers and Prunus harvesters lack market information for the trade. Also producers do not receive the consent from researchers on how to establish plantations for bark production. The method of collection and handling of seeds in view to establishing these plantations does not take into consideration to maintain the species genetic diversity which is a cornerstone for any effective conservation. Of course maintaining its genetic diversity will in future solve biological and environmental problems that the species could face.

In effect this paper is prepared to indicate to the Convention on International Trade in Endangered Species of wild Fauna and Flora (CITES) that researchers both national and international are carrying out research geared towards the sustainable management of *P. africana* to improve the livelihoods of small-scale farmers and the government of Cameroon which will in future benefit from tax revenues. The recommendations made after this review will be of importance if respected and many will therefore benefit if this species exportation is not banned because more than 3500 producers have hundreds of hectares of plantation that have not been exploited yet and continue to remain a biotic storehouse for the active ingredient excellent in the treatment of the oldman's disease – benign prostatic hyperplaisia. It is worth mentioning that there is an ever growing interest in herbal medicines and the only thing we can do is to continue active research on the special products such as *P. africana.*

II. Research activities already conducted

II. 1.Domestication studies

Mount Cameroon Project (MCP) and International Centre for Research in Agroforestry (ICRAF) carried a gene-bank production in June 1995 by collecting seeds from 80 randomly selected trees in three sites: Mendakwe, Kilum forest reserves and mount Cameroon. These seeds were sown in two nurseries: Limbe Botanic garden and ICRAF Mbalmayo. Results from the gene-banks in Limbe showed that the survival rates of all provenances varied from 60 % to 100 % for some accessions. There was statistically significant variation in early growth among the various accessions in terms of the height attained after 5 months. Thus regardless of seed source, the existence of such variation is a good indication that *Prunus. africana* has a great potential for genetic improvement if carefully selected.

The Limbe Botanic Garden through the Darwin Initiative conducted nursery practices for seedling identification in the forest. The fundamental issue of the study was to provide a tool to facilitate field identification of *P. africana* seedlings and to increase seedling identification skills. To do this, they collected fruits and seeds from the forest floor, then, recorded their gross characters and cleaned off fleshy and fibrous parts. The objective was to use two shade levels 0 – 20 % and 30 – 60 % to describe the germination type, seedling morphological characters and other changes that occurred as they grow under the two shades so as to easily identify seedlings growing in the forest. Over 200 morphological characters were recorded such as the number of nodes, the first true leaves, leaf shape, venation and other morphological details were made throughout. The Conservation Technology Department of the LBZG in collaboration with ICRAF and CDC conducted experiments with the best conditions for germinating *P. africana* seeds and has used this research to initiate several plantation trials, in collaboration with the International Centre for Research in Agroforestry (ICRAF) and Cameroon Development Corporation.

The International Centre for Research in Agroforestry has carried out domestication of *P. africana* using generative and vegetative techniques. For the vegetative technique they examined which key factors could likely influence rooting ability of juvenile cuttings of *P. africana* using rooting media, auxin concentration and leaf area. Through this they were able to have a batch of many seedlings issued from cuttings and this can be provided to farmers for private forest plantation.

II.2. Studies on the genetic diversity

Dawson and Powell have assessed the genetic variation of *P. africana* in Cameroon from four sites: Mount Cameroon, Mount Kilum, Mendakwe and Ntingue using Random Amplified Polymorphic DNA (RAPD) analysis. The aim of the analysis was to assess the partitioning of genetic variation within and among populations of *P. africana* in the areas where the species is most heavily exploited in Cameroon. They collected leaf material from all these sites and used silica gel to dry and preserved the samples before taken for analysis. Results from the study revealed that differentiation among stands was considerably less

(approximately 23 % of variation among the populations), but genetic difference still highly significant when the other three populations are compared with Mount Cameroon. They concluded that the differentiation may reflect the geographical and ecological isolation of Mount Cameroon but results indicate a direct relationship between genetic and geographical distance.

II.3. Ecological studies

ICRAF-Cameroon carried out a study on the mycorrhizal association of *P. africana*. The aim of the study was to investigate the mycorrhizal status of *P. africana* and the extent of root colonization in its two native montane habitats (Mount Cameroon and Mount Kilum) and artificial regeneration sites (Ntingue. Results obtained revealed that fractional mycorrhizal root colonization in the artificial site was at variance with the montane sites. In the study, the level of fractional root colonization was scored across size classes. Results revealed that young plants were highly colonized by moderate and mature plants. This indicates that mature trees can exert a control over mycorrhizal colonization while young plants most especially seedling are obligatorily mycotrophic. Altitude significantly affects the colonization of *P. africana* with the highest recorded between 200 and 2500 m.

In addition to this work, a study on the nutrient content of soil and leaf samples of *P. africana* was equally carried out in the different vertical strata of two native montane sites (Mount Cameroon and Kilum).

II.3. Socio-economic studies

Cunningham and Mbenkum in 1993 carried out a study on the trade of *Prunus africana* taking into consideration legal and illegal exploiters, destruction of the wild stock by unsustainable practices that has driven the species occurrence in the wild to the level in which it is now.

Njombe Ewusi in 1998 reported conflicts between members of the Mount Cameroon communities (local Prunus harvesters) and the workers of the forestry services, MCP and Plantecam Medicam because of the scramble to make maximum benefits from the *P. africana* trade. In this report it was indicated that these conflicts led to continued illegal activities. And that despite attempts made by the local MINEF services and Plantecam Medicam, the illegal activities continued until November 1996. It was also indicated in the report that in response to the growing conflicts the then Mount Cameroon Project facilitated a process of conflict management in an attempt to solve the problems related to harvesting and trading of *P. africana*. The premise of this conflict management process was that:

a) By developing partnership between local communities, government, and business, sustainable harvesting of *P. africana* could be achieved; and

b) For this to work in the long term, the benefits accruing from *P. africana* exploitation to local communities needed to be increased. After MCP's intervention, local *Prunus* harvesters in Mapanja who had been involved in illegal harvesting of *P. africana* willingly decided to form a *P. africana* harvesters' union with the authorization and support of their chief. This example was later followed by the Bokwoango *P. africana* harvesters. The chiefs of these two communities realized that the scramble for *P. africana* bark and the frequent conflicts in their communities posed a serious problem that required timely intervention. The local *Prunus* harvesters elected an executive and drew up rules and regulations to bind the union. A mixed team was also formed made up of representatives from the harvesters' union, community elders, including women.

This piece of work highlights the different facets of *P. africana* management in Cameroon in general and the Bokwoango community in particular. The study examines the socio-economic impact of *P. africana* management in the Bokwoango community and shows specifically the management role played by the Bokwoango *P. africana* harvesters' union to reduce the rate of exploitation of *P. africana* and also to ensure benefit sharing of the earnings from sales of *Prunus* bark. It at the same time brings out the constraints encountered by harvesters as well as the opportunities that can make the union become more viable to the socio-economic development of the Bokwoango community. Results of this study show that for the short period that the Bokwoango *P. africana* harvesters' union has existed; the socio-economic changes in this community are encouraging if one compares the present situation with that before the formation of the union. The study ends with recommendations for policy and institutional reforms as well as suggestions for further research in sustainable management of *P. africana*.

Inventory

II.4. Development activities

The Conservation Technology Department of the Limbe Botanic and Zoologic Garden (LBZG) in collaboration with ICRAF and Cameroonn Development Corporation conducted experiments with the best conditions for germinating *Prunus africana* seeds and has used this research to initiate several plantation trials, in collaboration with the International Centre for Research in Agroforestry (ICRAF) and Cameroon Development

Corporation. CDC established a 3 ha plantation of *P. africana* in Moliwe. It was the first plantation of *P. africana* anywhere in the world and is a direct result of the propagation programme of LBZG. CDC has already planted 7000 seedlings supplied by LBZG nursery; In the North West Province of Cameroon, a 'Women in Development' cooperative has planted a further 1.5 hectare plantation of *P. africana* with seedlings from LBZG. In addition a 'Women in Development' cooperative in Fako division of the Southwest province received 1000 *P. africana* seedlings from the LBZG nursery for small-scale planting in fallow areas. The Community Development Unit of the MCP also distributed 250 seedlings of *P. africana* to some villages. The Forestry Research Division of the Mbalmayo Forestry School received *P. africana* material to undertake further trials in vegetation propagation. These activities led to the development of the species gene-bank and presently there are more than 4000 hectares of *P. africana* plantations in the North West province of Camerooon.

MCP and LBZG organized regular capacity building workshops and training courses to help empower the local communities (harvesters, non-harvesters, chiefs, and local CIGs) in the Mount Cameroon region on how to carry on with sustainable harvesting and regeneration of *P. africana*. MCP, LBZG and Ministry of Forestry and Wildlife invest for studies in price variations as well as future trade of *P. africana*. Results of these studies are presented to *P. africana* harvesters' unions and farmers involved in *Prunus* regeneration.

II.5.Current research activities

Because of the threats of *Prunus africana*, Bioversity International on its commitment to conserve forest genetic resources in sub-Saharan Africa is working in collaboration with the Institute of Agricultural Research-IRAD to address the importance of conserving the genetic diversity of *P. africana*. The collaboration includes a specific action to analyse the role of *P. africana* genetic diversity in improving its adaptability in plantation forestry and therefore maintaining its productivity under this threat. DNA analysis and another study to know how much is the concentrations of the active ingredients in the different montane habitats are being carried out. The first phase is already completed which was to collected and ship small samples of its leave and bark for analyses. The analyses are being done at the Federal Research and Training Centre for Forests, Natural Harzards and Landscapes, Department of Genetics Unit of gene conservation and nurseries, Government of Austria

Bioversity International recently organised a two week workshop in June 2008 on forest fragmentation and genetic diversity: Implications for sustainable management of *P. africana*. Three scientists from Cameroon were participants of this workshop. It was equally sponsored by the government of Austria.

II.6 Inventaire du Prunus africana

L'inventaire de *Prunus africana* dans les Provinces du Sud-ouest et du Nord-ouest du Cameroun fut réalisé dans le cadre est des activités (composante c) du Projet GCP/RAF/408/EC dont le but est de mobiliser et de renforcer les capacités des petites et moyennes entreprises impliquées dans les filières des produits forestiers non ligneux en Afrique Centrale. Il s'inscrit dans le cadre d'une convention de collaboration entre d'une part le Centre de Recherche Forestière Internationale (CIFOR) et d'autre part l'Environnement par la Connaissance pour le Développement (ENCODEV). Il est mis en œuvre dans le cadre des activités quotidiennes de ENCODEV. Il ressort des conclusions de ce travail que l'exploitation de Prunus est encore possible, sur la base des résultats de cet inventaire. Il a révélé, sur la base d'un DME $\geq$ 30 cm, des disponibilités de volumes exploitables (exprimés en m3 de volume écorce verte) certes variable d'un site à l'autre, la fixation des quotas devant en prendre compte. Ces résultats se présentent ainsi qu'il suit :

- Mont Cameroun : densité de 11,40 tiges/ha toute catégorie confondue dont, pour ce qui est des individus exploitables à court terme (DME $\geq$ 30 cm), 1,66 tige/ha et 0,369 m^3/ha de volume d'écorce moyen exploitable.

- Mont Manengouba : densité de 1,89 tiges/ha dont, pour ce qui est des individus exploitables à court terme (DME $\geq$ 30 cm), 1,00 tige/ha et 0,248 m^3/ha de volume d'écorce moyen exploitable à court terme.

- Mont Oku : densité de 3,52 tiges/ha dont, pour ce qui est des individus exploitables à court terme (DME $\geq$ 30 cm), 3,35 tiges/ha et 1,036 m^3/ha de volume d'écorce moyen exploitable à court terme.

Ces résultats révèlent que le site d'Oku est le plus riche par unité de surface. Cependant, alors que la reconstitution pour les récoltes futures est bien assurée au mont Cameroun, et assez au mont Oku, elle est plus ou moins compromise aux monts Manengouba, compte tenu du mode de répartition des individus par classe de diamètre.

II.6 Recommendations

Producer communities should be well organized into a Community-based organization that operates like a limited liability company.

There should be a favorable policy framework consistent with the 1994 forestry legislation and the 1999/2000 Finance Law that give communities the right to exploit and commercialize *Prunus africana.* This implies that, it will be particularly significant if communities are given tenure over the forests they use. There is a saying that "sustainability is correlated with ownership and without ownership there is no sense of responsibility." So when there is sense of responsibility the communities will have little incentive to manage the forests sustainably.

Harvester's groups should have a well-developed sustainable harvest method with a local control/monitoring system in place with a well-organized revenue sharing system with equitable benefit distribution in the communities involved

Communities should be opened to receive institutional support national and international organizations.

The threatened nature of *Prunus africana* and the increasing interest of its exploitation for the active ingredient are reasons for further research. Thus, the government of Cameroon should encourage active research by national and international research organizations to fill knowledge gaps.

The government should also provide land for Prunus seed orchards in the regions where the species naturally occurs in Cameroon. These orchards will act as an effective seed bank since the seeds can not be stored for long like those of cereals.

III. Conclusion

Generally, information gathered from all the research activities (social, economic, biological, ecological and chemical) on *Prunus africana* reflects its importance at local, national and international as a medicinal plant used by traditional healers some centuries ago and of present and also by pharmaceutical industries in which they continue to extract the active ingredients used in treating the same ailment as the traditional healers. Its importance equally reflects that it is a source of income to people living around its native habitats and more especially bark traders. Therefore the use by traditional healers some centuries ago from which the medicinal merits was discovered by colonists indicates that the Prunus was sustainably used.

In addition to the information gathered, the species is in the Appendix II listing of endangered species but with huge stands in the North West and South West provinces of Cameroon owned by poor farmers (or villagers) who have vision for having cash from their own plantation in the near future from harvesting barks from where they planted Prunus decades ago. This vision of the poor farmers versus the proposed ban is a cause for concern and if one could safely ask, the trade decades ago did it follow the role of equity and fair play? Of course no.!! Larger and better resourced individuals and companies exploited these poor farmers during the marketing process as they exploit from the wild. They now decided to have their own plantation to form a group and fix prices for their products and the just issue of Prunus ban came into play.

Overall, it may suffice to say that many changes are happening, the level of awareness is increasing and many international efforts are being geared in sustainably managing the resource and develop their own industrial base.

Thus, the strategy for completely banning the trade in a highly commercialized species that now occupy thousands of hectares in the lands of thousands of poor farmers may not produce encouraging results if we have to eradicate poverty and accomplish the millennium development goal by 2015.

ANNEX I: List of some publications on *Prunus africana* in Cameroon

Cunningham, A. B. and Mbenkum, F. T. 1993. *Sustainability of harvesting* Prunus africana *bark in*

Cameroon: A medicinal plant in international trade

A.B. Cunningham, E. Ayuk, S. Franzel, B. Duguma & C. Asanga 2002. An economic evaluation of medicinal tree cultivation: Prunus africana in cameroon. People and Plants Working Paper 10, July 2002

Cunningham, A.B. and F.T. Mbenkum. 1993. Sustainability of harvesting *Prunus africana* bark in Cameroon: a medicinal plant in international trade. People and Plants Working Paper 2. Paris, UNESCO.

Cunningham, M., Cunningham, A.B. and Schippmann, U.1997. Trade in *Prunus Africana* and the implementation of CITES. Bundesamtfür Naturschutz, Bonn, Germany.

Dawson, I.K. and Powell, W. 1999. Genetic variation in the Afromontane tree *Prunus africana,* an endangered medicinal tree species. Molecular Ecology 8 : 151 - 156.

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ANNEX II: Organizations that have funded projects and/or activities on *Prunus africana*

ICRAF	International Centre for Research in Agroforestry
BI	Bioversity International
FAO	United Nations Food and Agriculture Organization
CIFOR	Center for International Forestry Research
IRAD	Institute of Agricultural Research for Development through an ADB project
ADB	African Development Bank
SNV	Netherlands Development Organization
GTZ	The German Technical Corporation
LBZG	Limbe Botanic and Zoological Garden
MCP	Mount Cameroon Project
BFW	Federal Research and Training Centre for Forests, Natural Harzards and Landscapes, Department of Genetics Unit of gene conservation and nurseries, Government of Austria