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CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES

OF WILD FAUNA AND FLORA

Twenty-second meeting of the Plants Committee

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INFORMATION DOCUMENT

ANALYSIS OF THE INTERNATIONAL TRADE IN *PTEROCARPUS ERINACEUS* AND ITS CONSEQUENCES IN WEST AFRICA

1. This information document has been submitted by Senegal.
2. The Draft Proposal for inclusion of *Pterocarpus erinaceus* in Appendix II of CITES (see Appendix 3 of this information document) has been submitted by Senegal for consideration by the Committee under Agenda item 24: Any other business

1. Introduction to the Information Document

The Government of Senegal wishes to bring to the attention of the Committee the very serious situation with regard to illegal and unsustainable harvesting of West African rosewood (*Pterocarpus erinaceus*) for international trade.

Pterocarpus erinaceus is a rosewood species (« 红木 » or « hongmu » according to the Chinese classification) native to the semi-arid Sudan-Guinea savanna forests of West Africa, including those of Senegal. Thanks to its multiple utilizations (fodder, fuel, pharmacopoeia, lumber, timber, etc.), the species plays a key role for human populations (particularly rural) of its range.

However, the last few years have seen a dramatic increase in trade of *Pterocarpus erinaceus* timber. The quarterly value of China's imports of rosewood from West Africa, which totaled just 12,000 dollars (USD) in the first quarter of 2009, exceeded 180 million dollars (USD) during the third quarter of 2014, a 15,000-fold growth. The same explosive trend is obviously reflected in the volumes of rosewood exported from West Africa to the Asian continent and especially China.

There is strong evidence to indicate that a series of illegal practices were implemented in order to meet this growing demand, including in particular, the illegal harvesting and unsustainable exploitation of specimens as well as complex phenomena of smuggling at the regional level. As for the special case of Senegal, despite the existence of specific regulation and its proper implementation, the country is currently facing the rapid growth of illegal exploitation and large scale smuggling of the *Pterocarpus erinaceus* along its borders (especially in the South). Similar phenomena have been observed at the regional level. To address this situation, many countries in the region have adopted and implemented at, an early stage, regulatory measures to protect the species (through total bans on harvesting and export, or very strict control of them). Unfortunately, it is clear that these national measures often remain inadequate and fail to address regional and intercontinental drivers of illegal and unsustainable exploitation of the species.

The first signs of overexploitation of the species due to multiple local utilizations have been described in several West African, especially in Benin, Burkina Faso, Ghana and Togo. In the absence of a rapid and appropriate response, there is concern that the illegal and unsustainable exploitation of the *Pterocarpus erinaceus* across its range leads to extremely harmful consequences for the species, the fragile forest ecosystems in which it grows and West African human populations which depend on it.

Given the situation which is getting worse every day and following various sub-regional intergovernmental meetings during which neighbouring countries have clearly expressed their willingness to stop trafficking in wildlife and especially of *Pterocarpus* erinaceus, Senegal has resolved to act. Therefore, the country recently sent a letter signed by the Minister of Environment, to the General Secretariat of CITES requesting the listing of all populations of the *Pterocarpus erinaceus* in Appendix III of CITES with annotation # 1 (see Appendix 2). Building on the regional awareness about illegal and unsustainable exploitation of the *Pterocarpus erinaceus* for international trade, Senegal also intends to submit a proposal to include the species on Appendix II of CITES at the Seventeenth Meeting of the Conference of the Parties (COP17) to be held in Johannesburg (South Africa) in 2016. A draft

proposal is attached to this information document (see Appendix 3). The document summarizes existing information and justification (recalling the criteria of the Convention) for the listing of the West African rosewood in Appendix II of CITES.

Senegal requests that the Plant Committee calls on Parties, particularly other states of *Pterocarpus erinaceus* range, to consider the attached document, provide comments and additional information, and consider becoming joint proponents.

2. *Pterocarpus erinaceus*: an Important Species for West African Countries

Pterocarpus erinaceus belongs to the Fabaceae (legumes) family and Papilionaceae subfamily. Adult specimens are medium sized trees (12-15m high) with a trunk diameter averaging between 1.2 and 1.8m.[1] The bark, rough, which covers the trunk is dark gray while the branches are usually light gray.[2] The yellow flowers, visible from December to February in its natural range, cover the full canopy during flowering.[3] The fruit which presents winged outgrowths has in fact given its name to the species since "*pterocarpus*" literally means "*winged fruit*" in Greek. The species which has also been described as the *Pterocarpus angolensis DC* and *Pterocarpus echinatus DC*, is known under various common names: *Kosso/Keno/Palissandre du Senegal/African Barwood/African teak*/African kino tree in English speaking countries, *Vêne/Ven*/*Palissandre du Senegal*/ Kino de Gambia/*Santal rouge d'Afrique/Hérissé* in Frech speaking countries and *Pau de Sangue* in Portuguese speaking countries.

The species is found in open dry forests of West African semiarid and subhumid lands where mean annual rainfall is between 600 and 1200 mm. *P. erinaceus* is drought tolerant. Once established, adult specimens can survive long dry seasons that characterize the range (up to 9 months). The species is one of the species that survived the disappearance of former dense dry forests that covered the Sudanian zone.[4]

The range covers the West Africa and parts of Central Africa, from Senegal in the west to the Central African Republic to the east. Specimens have been described up to the 14ºN (from this natural limit, *Pterocarpus lucens* takes over and becomes more abundant).[5] Southward, the native range extends to the limit of the humid forest in Cote d'Ivoire and up to the humid coastal savannas in Guinea, Togo, and Benin. (*Pterocarpus santalinoides* is then found in the gallery forests common along rivers and temporary watercourses).[6] The species is not known to have been introduced outside its native region.[7]

In the various regions where it grows naturally, the species is known for its multiple utilizations. *P. erinaceus* timber is one of the most sought-after in West African dry forests, both for its color (varying

[1] Lely, H. V. 1925. *The useful trees of northern Nigeria*. Crown Agents for the Colonies, London.

[2] Arbonier, M. *Arbres, arbustes et lianes des zones sèches d'Afriques de l'Ouest*, deuxième édition, CIRAD/MNHN/UICN, Paris.

[3] World Agroforestry Centre (ICRAF). 1998. *Agroforestry tree database* (CD ROM). ICRAF, Nairobi.

[4] Aubreville, A. 1950. *Flore forestière soudano-guinéenne. A.OF – Cameroun-AEF*. Société d'Editions Géographiques, Maritimes et Coloniales, Paris.

[5] Hutchinson, J., et al. 1958. *Flora of west tropical Africa*. Vol. 1, part 2. Crown Agents for Overseas Governments and Administrations, London.

[6] *Ibid.*

[7] Adjonou, K., et al. 2010.É*tude de la dynamique des peuplements naturels de Pterocarpus erinaceus Poir. (Fabaceae) surexploités au Togo*. Bois et forêts des tropiques n° 306 pp 45-56.

from pink-red to dark brown, with dark streaks) and its technological qualities that make it an ideal wood for furniture manufacturing, decorative panels, flooring and various utensils.[8] The species has also been used locally as construction lumber (heavy construction) and for exterior joinery (including doors and windows).[9] It is worth noting that the resin is used for dyeing traditional fabrics, giving them a dark purplish color much appreciated. The species *P. erinaceus* is also harvested to be transformed into coal because of its excellent calorific value. The species also plays a key role in animal feeding. Indeed, the leaves, once dried, provide fodder of high nutritious quality (energy-rich, rich in proteins and minerals such as phosphorus). For this reason, farmers usually prune trees and integrate leaves in their agropastoral system, enabling the livestock to survive the dry season. This fodder is highly sought in the major urban markets of the region. Thus, in Bamako (capital of Mali), more than 1400 tons of *P. erinaceus* fresh leaves are reportedly sold each year to feed livestock in urban areas, especially sheep. This supply does not meet the high demand, which was estimated at about 8,000 tonnes per year.[10] Finally, it should be noted that there are also several pharmacological utilizations. A number of studies demonstrated the importance of *P. erinaceus* in yellow fever and antimicrobial treatments.[11] The leaves, in particular, are used to treat fever, the bark would help to fight against oral infections and the resin would overcome severe diarrhea and dysentery.[12]

Due to its various local utilizations and despite the plasticity of the species, the first signs of overexploitation of the populations of *Pterocarpus erinaceus* have been described in several countries in the region, including Benin,[13] Burkina Faso,[14] Ghana [15] and Togo.[16] However, despite the importance devoted to this multi-purpose species, many countries of the range do not have adequate information on the current state of natural populations, especially in order to develop appropriate management strategies of the resource.

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[8] National Academy of Sciences (NAS) 1979. *Tropical legumes: Resources for the future*. National Academy of Sciences, Washington, D.C.

[9] K.N. Segla, et al. 2014. *Variation de la densité et la couleur du bois de Pterocarpus erinaceus (Poir) en fonction des conditions environnementales en Afrique de l'Ouest*. Conférence Matériaux 2014, Montpellier.

[10] Anderson, J., et al. 1994. *Le fourrage arboré à Bamako: production et gestion des arbres fourragers, consommation et filières d'approvisionnement*. Sécheresse nº5:99–105.

[11] Ouedraogo, A., et al. 2006. *Diagnostic de l'état de ressources génétiques forestières du Togo*. Atelier sous-régional FAO/IPGRI/ICRAF sur les ressources génétiques forestières. Document FGR/13F. Département des forêts. FAO, Rome.

[12] Karou. D., et al. 2005. *Antimalarial activity of Sida acuta, Burm F.(Malvacease) and Pterocarpus erinaceus poir. (Fabaceae).* J. Ethnopharmacol. (2005) 89: 291-294.

[13] Glèlè, K. R. L. et al. 2008. *Étude dendrométrique de* Pterocarpus erinaceus Poir*. des formations naturelles de la zone soudanienne au Bénin*. Agronomie africaine,20 (3) : 245-255.

[14] Ouedraogo, A., et al. 2006. *Diagnostic de l'état de dégradation des peuplements de quatre espèces ligneuses en zone soudanienne du Burkina Faso*. Sécheresse, 17 (4) : 485-491; Sawadogo, L. 2006. *Adapter les approches de l'aménagement durable des forêts sèches aux aptitudes sociales, économiques et technologiques en Afrique*. Le cas du Burkina Faso. CIFOR, Bogor ; Devineau, J.L., 1999. *Seasonal rhythms and phenological plasticity of savannah woody species in a follow farming system (southwest Burkina Faso)*, J. Trop. Ecol. 15 (1999) 497–513.

[15] Dumenu, W. K. and W. N. Bandoh. 2014. Situational Analysis of Pterocarpus erinaceus (Rosewood): Evidence of Unsustainable Exploitation in Ghana? First National Forestry Conference 16-18 September 2014, Kumasi.

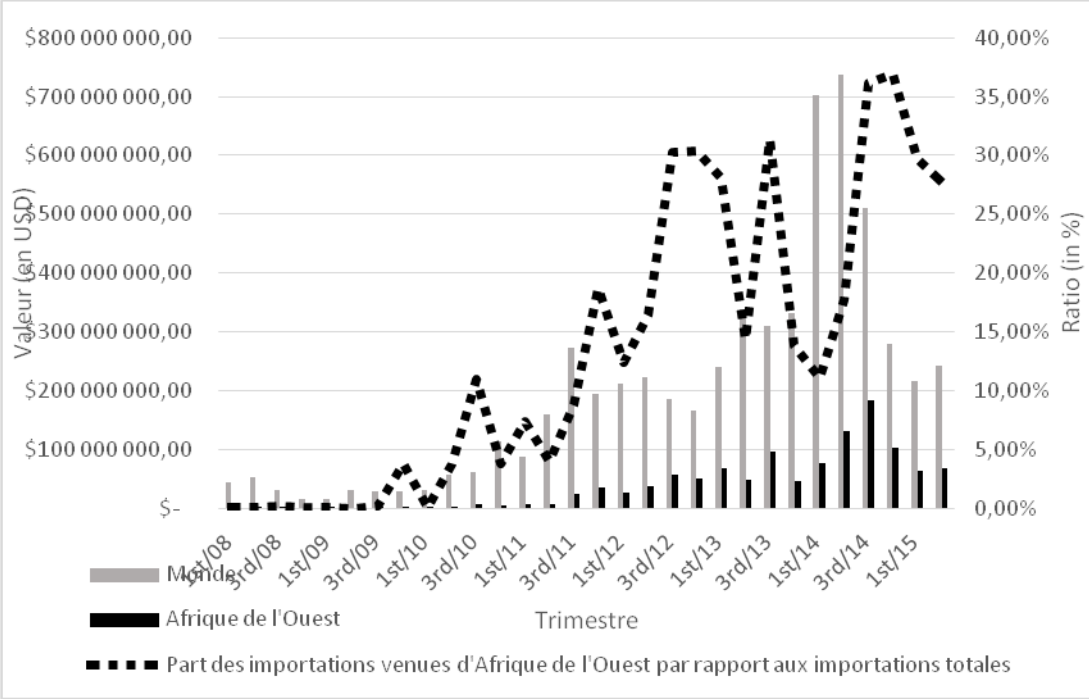
[16] Adjonou (*Op. cit*.) ; Kokou, K. et al. 2009. *Impact of charcoal production on woody plant species in West Africa: A case study in Togo*. Scientific Research and Essay, 4 (8): 881-893.

3. Explosive Growth in Asian Demand

Asian imports of "rosewood" ("红木" or "Hongmu ') native to West Africa have increased dramatically in recent years. Between the first quarter of 2010 and the first quarter of 2015, Chinese imports increased by more than 3,000-fold in value: from 21,250 US dollars (total of Chinese imports during the first quarter of 2010) to 63,943,732 US dollars (total Chinese imports during the first quarter of 2015) (Figure 1). These imports increased by more than 1,700 in volume: from 50m^3 (total Chinese imports during the first quarter of 2010) to 89,301 m^3 (total Chinese imports during the first quarter of 2015) (Figure 2). During the first quarter of 2015, nearly 30% of the total value of China's imports of rosewood and nearly 55% of the volume of Chinese imports of rosewood came from West Africa. This quantity was negligible four years ago. West Africa is now competing the Southeast Asia as the main exporting region of rosewood to China. Available information indicates that Chinese imports of rosewood from West Africa are in fact presently focused on a single species: *P. erinaceus*.[17]

However, all the countries of the region do not have the same export-related weight of rosewood to China. As illustrated in Figure 3, the major exporting countries of West Africa from September 2014 to August 2015 are (in descending order): Nigeria (38% of total regional exports in value), Ghana (18%), Gambia (11%), Côte d'Ivoire (11%), Guinea-Bissau (8%), Benin (7%) and Togo (5%).

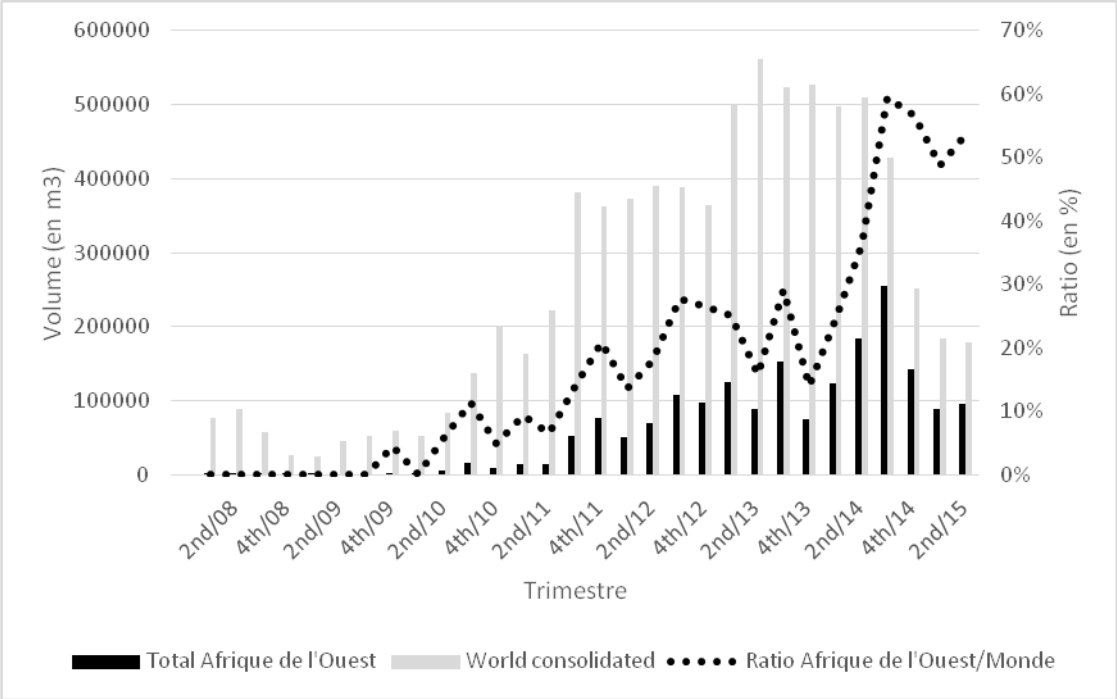
Figure 1. Evolution of Chinese imports of rosewood from West Africa, in value



Source: Analysis made based on Chinese customs data (2015)

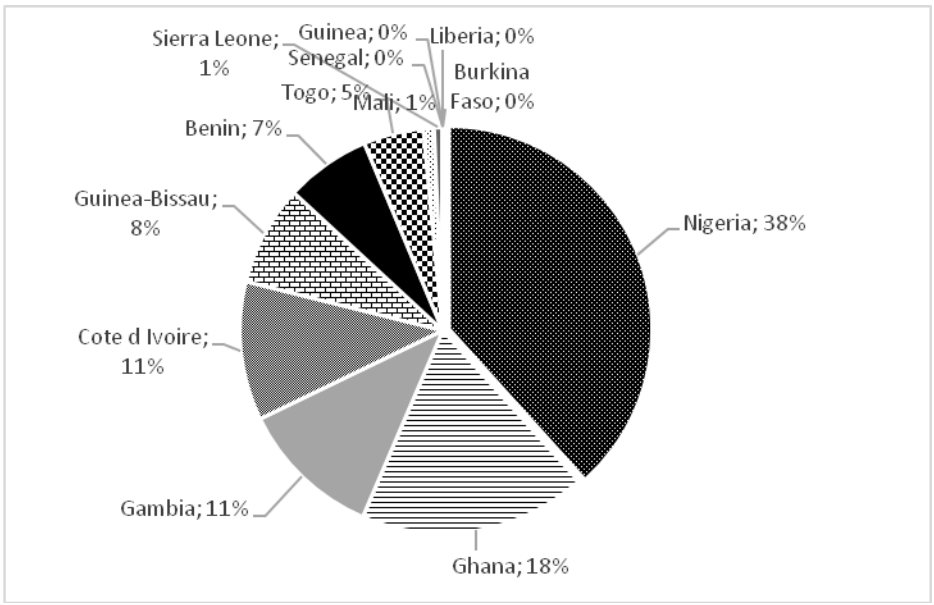
[17] Lawson, S. 2015. *The illegal rosewood boom in West Africa*. Paper presented at the Chatham House Workshop. 25-26 June, 2015, London.

Figure 2. Evolution of Chinese imports of rosewood from West Africa, volume



Source: Analysis made based on Chinese customs data (2015)

Figure 3. National shares of rosewood imports from West Africa

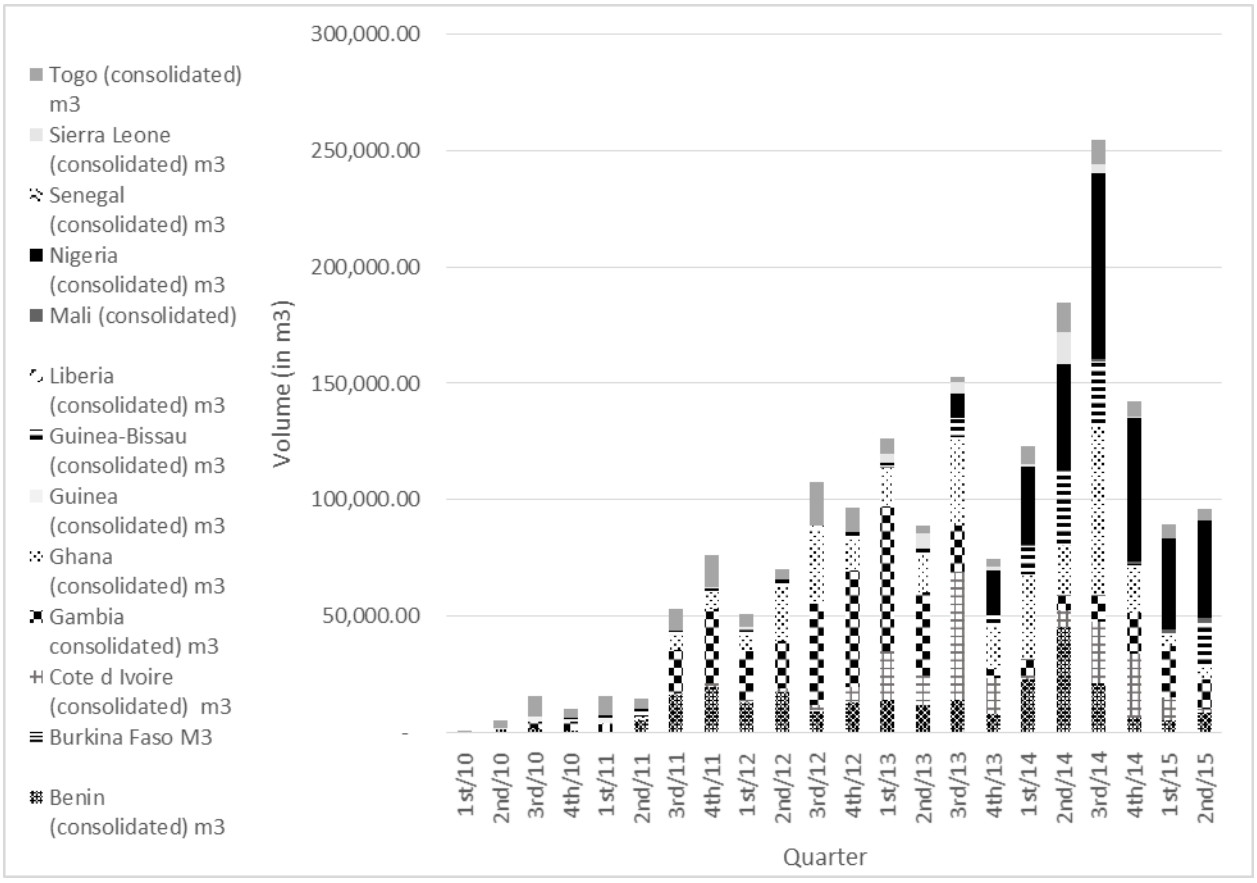


Source: Analysis made based on Chinese customs data (2015)

In order to better understand the magnitude and stakes of the phenomenon facing West Africa, it is appropriate to adopt a chronological reading of exports. Thus, as shown in Figure 4, the various

countries of the region were exposed to "boom and bust" cycles. The first country affected by the increased exploitation of rosewood was Gambia (2011-2012), followed by Benin (2012-2013) and Côte d'Ivoire (2103-2014), before the commercial pressure is felt in Ghana (2013-2014) and finally Nigeria (2014-2015). Field information obtained and discussions held with representatives of forest administrations in the countries of the sub-region seem to indicate the same phenomenon: commercial networks move extremely quickly and flexibly from one country to another depending on control measures put in place and depending on accessibility (exhaustion) of the resource.

Figure 4. Evolution of Chinese imports of rosewood per West African country, in volume



Source: Analysis made based on Chinese customs data (2015)

Thus, once the various populations of *Pterocarpus erinaceus* are commercially exhausted at the regional level, there is concern that commercial networks will focus on other endemic rosewood species, such as *Diospyros crassiflora* or *Dalbergia melanoxylon*, triggering new vicious cycles of intensive exploitation of the resource and expansion of illegal practices, before the commercial depletion of existing stocks that will stimulate interest in new species.

The main drivers of the strong Asian demand and especially Chinese for rosewood are now well known.[18] This is particularly the growing appetite of the new Chinese middle class for traditional furniture, including Ming and Qing.[19]

To satisfy these luxurious tastes, since rosewood furniture can be sold in China for several thousand dollars, hundreds of processing plants were developed especially in the provinces of Jiangsu, Zhejiang, Fujian, Guangdong, Hebei, Tianjin and Beijing.[20] Each of these plants would employ nearly one hundred and fifty to three hundred skilled workers, supervised by a handful of very experienced supervisors.[21] These plants would obtain supplies from wholesalers often located in major import ports (Guangzhou and Zhangjiagang in Jiangsu Province). These wholesalers would be directly in contact with traders in charge of import from major local ports. In the case of West Africa, it would include the ports of Dakar (Senegal), Abidjan (Côte d'Ivoire), Lome (Togo), and Lagos (Nigeria).

4. National Regulatory Frameworks Overwhelmed by the Scale of Illegal Practices

To understand the scale and nature of the impact of the increasing demand from Asian markets, it should be recalled that in many countries of the sub-region, *P. erinaceus* is specifically protected (see Table 1). When this is not the case, its exploitation is most often strictly and clearly governed by forest codes (and implementing decrees) in force that incorporated the sustainable management of forest resources and their multifunctional character as the foundation of national regulatory frameworks.[22] It should also be noted that West African forest laws and codes have frequently been cited as normative models of forest resource management across the African continent.[23]

Table 1. Protection and export prohibition measures taken by West African States

Countries	Special measures for the protection or management of the species	Export-related regulation
Benin	According to the Forest Code in force (Law No 93-009 of 2 July 1993 laying down forest regime in the Republic of Benin) and its implementing decree (Decree No 96-271 of 2 July 1996, Article 25), *P. erinaceus* is a protected species belonging to the "List of protected forest species"	"Decree No 2005-708 of 12 November 2005 on procedures for the exploitation, transportation, trade, industry and control of forest products in the Republic of Benin." In Article 21, the export of all woody species in their raw form is prohibited in Benin. This provision

[18] Wenbin, H. and S. Xiufang. 2013. *Tropical Hardwood Flows in China: Case Studies of Rosewood and Okoumé*. Forest Trends/ICRAF/CIFOR. Washington DC, Nairobi, Bogor; Basik, N. 2015. *China's Hongmu Consumption Boom: Policy Responses and Recommendations*. Présentation à Chatham House.

[19] Lu J.F., Wen M. and Zhu P.L. 2010. *The Heritage and Innovation of Rosewood Furniture*. Journal of Jiangnan University. 2010(4): 120-125 (in Chinese); Lin Z.J. 2010. *Industrial Development of Xianyou Style Furniture*. South China Today. 2010(08): 99-100 (in Chinese).

[20] Environmental Investigation Agency (EIA)/Global Witness. 2010. *Rapport d'enquête sur le commerce mondial des bois précieux malgaches: bois de rose, ébène et palissandre*. Washington, DC., London; EIA. 2014. *Routes of extinction. The corruption and violence destroying Siamese rosewood in the Mekong*. London.

[21] *Ibid.*

[22] FAO. 2003. *Code régional d'exploitation forestière à faible impact dans les forêts denses tropicales humides d'Afrique Centrale et de l'Ouest.* FAO, Rome ; Djoumbe-Bille, S. 2004. *Le droit forestier en Afrique Centrale et Occidentale : analyse comparée*. Etude juridique en ligne#41. FAO, Rome.

[23] FAO. 1998. *Forestry policies of selected countries in Africa*. FAO Forestry Paper 132. FAO. Rome; Texier, J. and B. Kante. 2005. *Tendances du droit forestier en Afrique francophone, hispanophone et lusophone*. Etude juridique en ligne #47. FAO, Rome.

	(P. erinaceus appears under its common name "Vene").	has been taken up in Article 3 of the "Interministerial Decree-Year2007-0053/MEPN/MIC/DC/SGM/DGFRN/SEB on procedures for the exploitation, transportation, trade, industry and control of forest products in the Republic of Benin"
Burkina Faso	*P. erinaceus* is specifically protected by Order No 2004-019/MECV of 7 July 2004, establishing the list of forest species which benefit from special protection measures. The Order is related to the implementation of the Forest Code adopted in 1997 (Law No. 006/97/ADP on the Forest Code in Burkina Faso). The implementing decree related to the protection of species within the framework of the new Forest Code (Law No 003-2011/AN on the Forest Code in Burkina Faso) has not yet been published. The forest code in force states in its Article 44 that "Some forest species, due to their specific ethnobotany interest or risk of extinction threatening them, benefit from special protection measures. The list is established by the order of the Minister of Forests."	Export of logs and processed products is prohibited under Decree No 2005 - 003/MECV/MCPEA of 9 March 2005 which suspends all operations and the trade of timber at the national level. The decree is still in force today.
Côte d'Ivoire	*P. erinaceus* species cannot be exploited pursuant to Decree No. 2013-508 of 25 July 2013 relating to "banning of exploitation, harvesting, transportation, trade and export of Vene timber".	*P. erinaceus* species cannot be exported pursuant to Decree No. 2013-508 of 25 July 2013 relating to "banning of exploitation, harvesting, transportation, trade and export of Vene timber".
Ghana	A ban has been placed on the harvesting and export of rosewood timber, since July 2014.	A ban has been placed on the harvesting and export of rosewood timber, since July 2014.
Guinea-Bissau		Moratorium on all timber exports passed in July 2014
Mali	*P. erinaceus* is on the list of protected species mentioned in the Forest Code (Law No. 95-004 laying down conditions of forest resources management, Article 17). According to Article 16: "Protected species are those which benefit from social protection due to their economic, socio-cultural or scientific interest. Their felling and uprooting are prohibited unless expressly authorized. "Express authorizations are issued by the Director of Forest Service.	Decree No. 00-505/P-RM of 16 October 2000 on foreign trade regulations specifies the prohibited products for export such as unprocessed wood. The Inter-ministerial interdiction No 2014 -1856 / MC-MEF-SG-MEEA of 10 July 2014 relating to the interdiction of the export of timber, service wood (construction wood), firewood, bamboo, raphias of a raw state and charcoal', bans all export of timber.
Nigeria	In Nigeria, forestry laws are under the remit of states. Thus, *P. erinaceus* is a protected species in Taraba State, and given this status, felling and export status are strictly prohibited. In Cross River State, logging is prohibited in all natural forests and for all woody species.	
Sénégal	*P. erinaceus* species is protected by the current legislation namely the Forest Code (Law No 98-03 of 8 January 1998) and Decree No 98-164 of 20 February 1998, Article 63.	*P. erinaceus* Export is strictly prohibited pursuant to the current legislation namely the Forest Code (Law No 98-03 Act of 8 January 1998) and Decree No 98-164 of 20 February 1998, Article 63.

Togo	The forest code in force since 2008 (Law No 2008-09 on the Forest Code) identifies species fully protected as "species subtracted from any sampling, except for scientific reasons." No implementing decree for plant species has been adopted to date.	However, the Forest Code clearly states, in its Article 54, the required conditions for export, "Import, export and re-export of timber and non-timber forest products are regulated by decree in the Council of Ministers." The applicable decree is Decree No. 2011-142/PR which regulates import, export, re-export and transit of timber forest products. It establishes, in its Article 8, that authorized operators must obtain a written authorization issued by the administration in charge of forest resources for the import, export or re-export of all forest products. Article 15 of the same Decree also specifies that only forest products resulting from sustainable forest management, as defined in Togo, and which abide by traceability rules as defined by the decree of the Ministry in charge of forest resources.

Source: FAOLEX 2015

In order to meet the growing international demand and the sharp increase in the prices being offered for shipments of freshly felled specimens of timber from West African forests, many commercial networks have chosen to work on the fringes of legality. This situation is obviously reminiscent of the way the trade of rosewood gradually anchored around illegal felling, transportation and export practices in Southeast Asia.[24]

Specific information has been provided on how operators of rosewood sector *(P. erinaceus)* in Ghana do not respect, in their daily practices, legal frameworks in force.[25] Widespread illegal harvesting of rosewood (*P. erinaceus*) under the guise of 'salvage permits' for road and dam construction projects led the Ghanaian authorities to re-impose a ban on all harvesting, processing and export of the species in July 2014. The ban included a prohibition on transhipment of rosewood from other countries, included in response to evidence of laundering of Ghanaian rosewood in neighbouring countries.[26] In April 2014, the Paramount Chief of the town of Buipe in Gonja had appealed to the government to halt the illegal harvesting, saying that it was having a devastating impact on the local environment and water sources. He estimated that more than 200 articulated trucks were leaving the Gonja area with illegal rosewood

[24] EIA. 2012. *Rosewood Robbery, The Case for Thailand of List Rosewood on CITES*. EIA, London; Forest Trends. 2013. *The Socio-Economic Context of Illegal Logging and Trade of Rosewood Along the Cambodian-Lao Border*. Forest Trends Report Series. Washington, DC; Environmental Investigation Agency (EIA)/Global Witness. 2010. *Rapport d'enquête sur le commerce mondial des bois précieux malgaches: bois de rose, ébène et palissandre*. Washington, DC, London; EIA. 2014. *Routes of extinction. The corruption and violence destroying Siamese rosewood in the Mekong*. London; Hance, J. 2012. *Blood rosewood: Thailand and Cambodia team up to tackle illegal logging crisis and save lives*. Mongabay, 11 April 2012; TRAFFIC. 2012. *Precious Woods: Exploitation of the Finest Timber*. Paper presented at the Chatham House Workshop: Tackling the Trade in Illegal Precious Woods, 23-24 April, 2012, UK.

[25] Bosu, D. 2013. *Draft Report on the Dynamics of Harvesting and Trade in Rosewood (Pterocarpus erinaceous) in Bole, Central, West and North Gonja Districts of the Northern Region*; Coleman, H. 2014. *Situation of global rosewood production and trade – Ghana rosewood case study*; Hoare, A. 2014. Ilegal Logging and Related Trade. The response in Ghana. Research Paper. Chatham House, London.

[26] Ghana Broadcasting Corp. 2014. *Government Bans Harvesting & Export of Rosewood from Bui Dam Catchment Area With Immediate Effect*, 16 Jul 2014.

every week.[27] All of the illegally harvested rosewood in Ghana in recent years is bound for export. In 2012, sixty shipping containers of *P. erinaceus* were seized at Tema port in Ghana.[28] In August 2014, a further 51 shipping containers of illegal rosewood logs were seized at the same port; the timber was valued at an estimated $800,000.[29] Thus, despite the adoption of a ban on exports of precious wood logs in 1979, its extension to all species in 1994,[30] and the establishment of specific repressive operations ("*task force*"), the rosewood continues to be exploited and exported illegally.[31]

The smuggling of *P. erinaceus* between Senegal and Gambia has also been described several times in recent years.[32] During 2010-14 China reported importing over 360,000 m^3 of rosewood logs from The Gambia. It is estimated that 99% of these rosewood logs actually originated in Senegalese forests and are illegal re-exports (all log exports from Senegal are prohibited). The Senegalese government classifies much of the African rosewood illegally traded into The Gambia as 'conflict timber' since it originates in parts of the Cassamance region held by rebel forces.[33] Most of the logs were also shipped in contravention of a ban on rosewood export implemented by the government of The Gambia in November 2012.[34] Since the breakdown of law and order which followed a coup in April 2012, large-scale illegal harvesting and export of *P. erinaceus* has also been taking place in neighbouring Guinea-Bissau.[35] In July 2014, the new Guinea-Bissau government declared a moratorium on all timber exports in an attempt to halt rosewood trafficking.[36]

The majority of *P. erinaceus's* natural range in Côte d'Ivoire is north of the 8th parallel of latitude, where all logging has been prohibited since 1982.[37] UN reports have documented how illegal logging and associated trade in this zone have provided an important source of funding to rebel groups engaged in civil conflict in the country in recent years. The same reports cite evidence of collusion by corrupt officials in the trade.[38] There have been a number of significant seizures of illegal rosewood in Côte d'Ivoire in recent years, including one in January 2012 involving 30 containers seized at the ports of San Pedro and Abidjian in which senior officials were implicated.[39] During January 2012 - September 2013, the government reported seizing a total of 6051 m^3 of illegal timber, worth $1.25 million USD, and

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[27] Ghana Chronicle. 2014. *Chainsaw Operators Raid Gonja Forest*, 29th Apr 2014.

[28] Bosu, D. 2014. *Rosewood, the most expensive and fastest selling commodity in Ghana today*, 12th Jun 2014: https://www.linkedin.com/pulse/20140612161048-43734495-rosewood-the-most-expensive-and-fastest-selling-commodity-in-ghana-today

[29] Ghana News Agency. 2014. *Customs impounds 51 containers of rosewood*, 14th Aug 2014.

[30] Bird, N., T. Fometé and G. Birikorang, 2006. *Ghana's experience in timber verification system design*. VERIFOR. Country Case Study 1, ODI, London.

[31] Hoare (*Op. cit.*); Franck, M. and C.P. Hansen. 2014. How effective are task forces in tackling illegal logging? Empirical evidence from Ghana. International Forestry Review 16(3): 354-362.

[32] Forest Trends. 2014. *The Gambia's Exports of Rosewood*; Guey, B. S. 2015. Illegal logging and trade of rosewood: case study of Senegambia. Paper presented at the Chatham House Workshop. 25-26 June, 2015, London.

[33] Guey (*Op. cit*.).

[34] Forest Trends (*Op. cit*.).

[35] IRIN. 2014. *Rosewood plunder in Guinea-Bissau*, IRIN Africa, 22 July 2014.

[36] *Ibid.*

[37] ITTO. 2008. *Mission en appui au Gouvernement de la Côte d'Ivoire en vue d'atteindre l'Objectif 2000 de l'OIBT et l'aménagement forestier durable Rapport de mission de diagnostic Côte d'Ivoire du 25 août au 5 septembre 2008*, 5th Oct 2008.

[38] UN. 2014. Group of Experts on Côte d'Ivoire, report, S/2014/266, 14th April 2014.

[39] AllAfrica. 2012. *Côte d'Ivoire: Illicit timber trade exposes the north to drought*, AllAfrica.com, 24th Feb 2012.

arresting 74 individuals for illegal logging north of the 8th parallel.[40] Given its pre-eminent position in trade in the region, it is likely that most of this wood was *P. erinaceus*.

Unfortunately, Ghana, Senegal, Gambia and Ivory Coast are not isolated cases. Several reports highlighted the persistent flow of illegal forest products or at least suspicious practices at the regional level.[41] Widespread illegal harvesting and export of rosewood led the Malian government to ban all cutting and trade in the species in 2014.[42] In Burkina Faso, where illegal rosewood is reportedly being harvested in National Parks, the Director of Forestry was suspended during 2014 for alleged involvement in illegal rosewood export.[43] Rosewood is also being cut illegally in National Parks in Benin, and rosewood logs exported illegally hidden in shipping containers behind sawn wood.[44] In Sierra Leone, there has been illegal cutting in National Parks, while the President's Chief-of-Staff was recently sacked for rosewood-related alleged corruption.[45]

5. Towards a Dynamic and Coordinated Regional Approach

Senegal has participated, in the last few months, in a series of intergovernmental meetings in which the neighbouring countries have clearly expressed their willingness to stop trafficking in wildlife, especially *P. erinaceus*. One of these regional initiatives was particularly promoted by the International Criminal Police Organization (ICPO - INTERPOL), which aims at strengthening regional cooperation in West Africa in order to combat more effectively the illegal trade of timber and timber products. During regional coordination meetings, administrations in charge of implementing forest laws and customs of the various West African countries shared information about their *modus operandi* and legal documents required for the export of forest products. Several times, the need for a better understanding and ownership by the countries in the region of available tools for the control of the international trade which affects forest endangered species (or about to be), such as those of the convention on international trade in endangered species of wild fauna and flora (CITES), was raised by the parties present (see Appendix 1).

Conscious of the regional nature of key factors underlying the negative impact of the international trade on the survival of *P. erinaceus* populations, Senegal is strongly committed towards the listing of the species in Appendix III of CITES. As stated in Article II of CITES, Appendix III shall include all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties in the control of trade. Having implemented specific protection measures in the country ("Forest Code, Law No. 98-03 of 8 January 1998 and Decree No. 98-164 of 20 February 1998", Article R63), Senegal hopes thanks to CITES to

[40] UN (*Op. Cit*.)

[41] Blackette, H. and E. Gardette. 2008. *Cross-border of timber and wood products in West Africa*. Final report. European Commission, Bruxelles; Alison, H. 2015. Tackling Illegal Logging and Related Trade. What Progress and Where Next? Chatam House Report, London.

[42] Lawson, S. 2015. *The Illegal rosewood boom in West Africa: How Chinese demand is driving conflict, corruption and human rights abuses*, Presentation to Chatham House Illegal Logging Stakeholder Update Meeting, 25th June 2015.

[43] *Ibid.*

[44] *Ibid.*

[45] Office of the President. 2014. Press Release from the Office of the President, Sierra Leone, 9th June 2014, available at http://news.sl/drwebsite/publish/printer_200525549.shtml, accessed 20th Sept 2015

encourage the regulation of imports, exports and re-exports at the regional level through permits or certificates checked at borders. Thus, Senegal has recently required from the Secretariat of the CITES the listing of *P. erinaceus* species, for all populations and under annotation # 1 (see Appendix 2).

The listing of all populations of *P. erinaceus* in Appendix III of CITES undeniably represents a major step towards sustainable management and conservation of the species. However, as experience has shown, the listing in Appendix III of CITES does not always give the opportunity to address the scale of regional issues related to the unsustainable and illegal exploitation of timber resources for international trade. Based on the listing in Appendix III of *P. erinaceus* and strong regional awareness about the illegal and unsustainable exploitation of *P. erinaceus* for international trade, Senegal also intends to submit a proposal to include the species on Appendix II of CITES at the Seventeenth Meeting of the Conference (COP17) to be held in Johannesburg (South Africa) in 2016. There is evidence in fact that *P. erinaceus*, although not necessarily now threatened with extinction, may become so unless trade in their specimens is subject to strict regulation. The draft proposal for the listing of *P. erinaceus* in Appendix II of CITES is attached to this information document (see Appendix 3). This document summarizes existing information and justification (recalling the criteria of the Convention) for the listing of *P. erinaceus* in Appendix II of CITES. Senegal considers that *P. erinaceus* species meets all the criteria that support and justify the inclusion in Appendix II of CITES (see Res. Conf 9.24. Appendix 1).

Senegal considers that measures governing the export of any specimen of a species included in Appendix II of CITES would effectively enable to address regional pressure factors affecting *P. erinaceus* and its habitat. In particular, the issuance and prior presentation of an export license for any export of *P. erinaceus* would limit the phenomena of smuggling, since the said license must meet the following conditions:

- The Scientific Authority of the State of export must have issued a notice that the export is not detrimental to the survival of the species. The national scientific authority will thus continuously monitor the issuance of export licenses by the said Party and the actual exports of specimens.[46]
- The management body of the State of export must have proof that the specimen was not harvested in violation of the laws on the protection of fauna and flora in force in the State.

An Appendix II listing will empower importing countries to assist range states by blocking shipments of illegally harvested and illegally traded wood, and make it easier to distinguish legal from illegal wood. In doing so, it can be expected to result in a significant reduction in illegal trade.

6. Conclusion

Asian demand for African rosewood focused during the past years on one species: *Pterocarpus erinaceus*. In five years, the volume of rosewood exports from West Africa increased by 1,700-fold. A series of indications show that these exports are largely based on illegal practices at the harvesting,

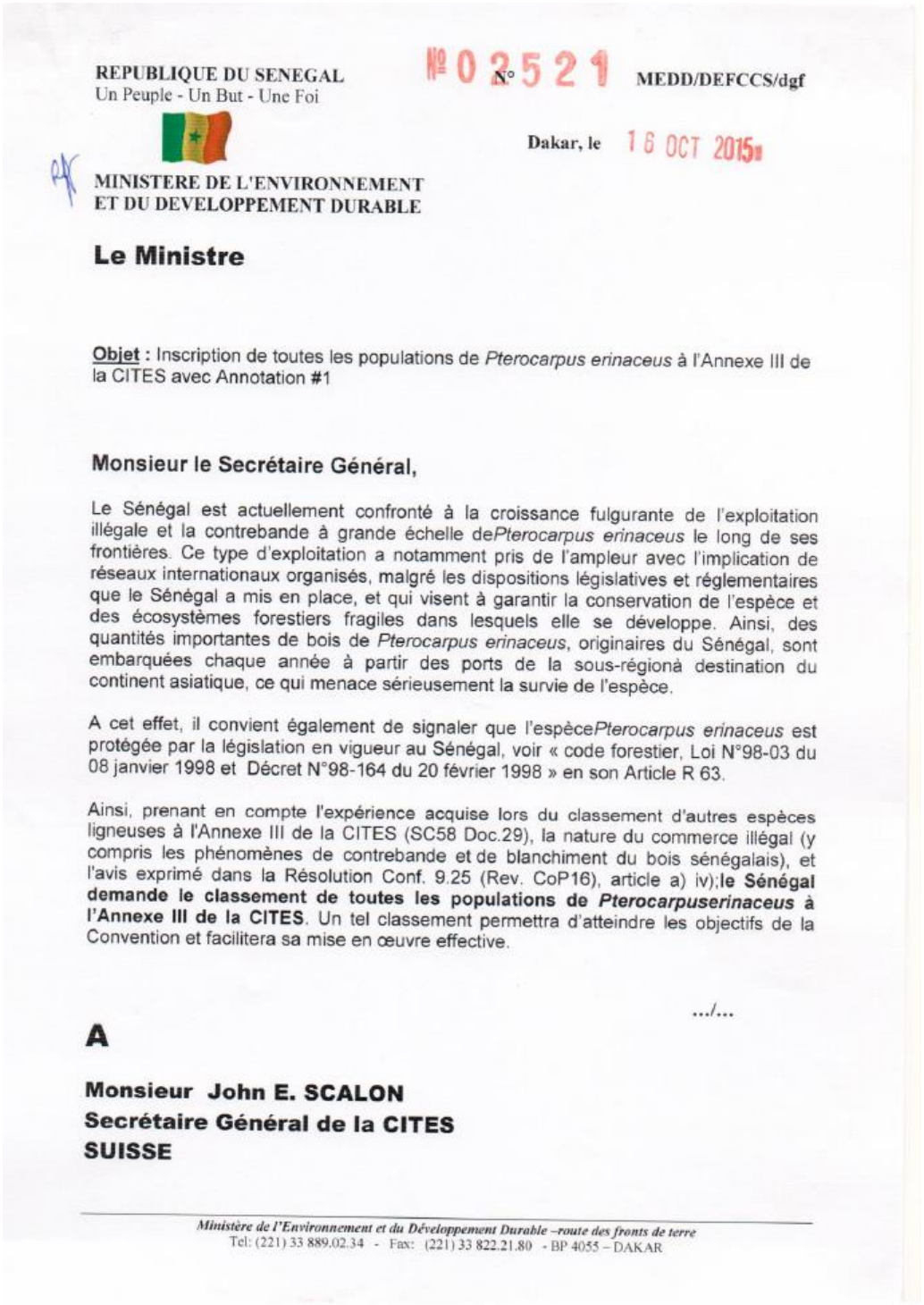
[46] When the scientific authority notes that the export of specimens of any such species should be limited in order to preserve it throughout its range, at a level which is consistent with its role in the ecosystems where it grows and significantly higher than that which would result in the inclusion of this species in Appendix I, it shall inform the management authority of suitable measures to be taken to limit the issuance of export permits for trade in the specimens of that species.

transportation or export level. Complex phenomena of smuggling at the regional level have also been recorded. National regulatory frameworks and police operations carried out within national territories often prove powerless against regional and intercontinental trade dynamics. In the absence of a rapid and appropriate response, there is concern that the illegal and unsustainable exploitation of *Pterocarpus erinaceus* across its range will lead to extremely serious harmful consequences for the species, ecosystems where it grows and human populations from West Africa whose subsistence depends on it.

Given the situation which is getting worse every day, Senegal has resolved to act. Therefore, Senegal has recently submitted a request to include all *Pterocarpus erinaceus* populations on Appendix III of CITES. This request echoes the numerous intergovernmental meetings held in the last few months during which many neighbouring countries have clearly expressed their willingness to end trafficking in regional wildlife and especially *Pterocarpus erinaceus*. Building on this regional awareness, Senegal is also planning to submit a proposal to include *Pterocarpus erinaceus* in Appendix II of CITES at the seventeenth meeting of the Conference of Parties (COP17) to be held in Johannesburg (South Africa) in 2016. A draft proposal is also attached to this information document (see Appendix 3). This document summarizes existing information and justification (recalling the criteria of the Convention) for the listing of the West African rosewood in Appendix II of CITES.

Senegal requests that the Committee call on Parties, particularly other States of *Pterocarpus erinaceus* range, to consider the attached document, provide comments and additional information, and consider becoming joint proponents.

Appendix 1. Letter signed by the Minister of Environment of Senegal and addressed to CITES Secretariat requesting the inclusion of *Pterocarpus erinaceus* species in Appendix III of CITES



REPUBLIQUE DU SENEGAL
Un Peuple - Un But - Une Foi

№ 02521 N° MEDD/DEFCCS/dgf

Dakar, le 16 OCT 2015

MINISTERE DE L'ENVIRONNEMENT
ET DU DEVELOPPEMENT DURABLE

Le Ministre

Objet : Inscription de toutes les populations de *Pterocarpus erinaceus* à l'Annexe III de la CITES avec Annotation #1

Monsieur le Secrétaire Général,

Le Sénégal est actuellement confronté à la croissance fulgurante de l'exploitation illégale et la contrebande à grande échelle de*Pterocarpus erinaceus* le long de ses frontières. Ce type d'exploitation a notamment pris de l'ampleur avec l'implication de réseaux internationaux organisés, malgré les dispositions législatives et réglementaires que le Sénégal a mis en place, et qui visent à garantir la conservation de l'espèce et des écosystèmes forestiers fragiles dans lesquels elle se développe. Ainsi, des quantités importantes de bois de *Pterocarpus erinaceus*, originaires du Sénégal, sont embarquées chaque année à partir des ports de la sous-régionà destination du continent asiatique, ce qui menace sérieusement la survie de l'espèce.

A cet effet, il convient également de signaler que l'espèce*Pterocarpus erinaceus* est protégée par la législation en vigueur au Sénégal, voir « code forestier, Loi N°98-03 du 08 janvier 1998 et Décret N°98-164 du 20 février 1998 » en son Article R 63.

Ainsi, prenant en compte l'expérience acquise lors du classement d'autres espèces ligneuses à l'Annexe III de la CITES (SC58 Doc.29), la nature du commerce illégal (y compris les phénomènes de contrebande et de blanchiment du bois sénégalais), et l'avis exprimé dans la Résolution Conf. 9.25 (Rev. CoP16), article a) iv);**le Sénégal demande le classement de toutes les populations de *Pterocarpuserinaceus* à l'Annexe III de la CITES**. Un tel classement permettra d'atteindre les objectifs de la Convention et facilitera sa mise en œuvre effective.

.../...

A

Monsieur John E. SCALON
Secrétaire Général de la CITES
SUISSE

Ministère de l'Environnement et du Développement Durable –route des fronts de terre
Tel: (221) 33 889.02.34 - Fax: (221) 33 822.21.80 - BP 4055 – DAKAR

Par ailleurs, s'appuyant sur l'expérience acquise en matière de classement d'espèces ligneuses à l'Annexe III de la Convention, conformément à la Décision 14.149, 15.35 et 14.148 (Rev. CoP15) et prenant acte du « Report of the Secrétariat (Décision 15.35) intitulé « Annotations for specieslisted in the CITES Appendices » programmé à l'ordre du jour de la prochaine réunion du comité des plantes (PC22 Doc. 6.1), **le Sénégal demande que le classement susmentionné se fasse avec l'annotation #1** qui inclut l'ensemble des parties et dérivés, à l'exception: des graines, des spores et du pollen; les plants ou les cultures tissulaires obtenus *in vitro*; et les fleurs coupées des plantes reproduites artificiellement.

Il convient de préciser que face à l'urgence de mettre un terme à ce trafic néfaste, les consultations préalables avec les autres pays de l'aire de répartition de l'espèce n'ont pas pu se tenir. Cependant, deux aspects fondamentaux méritent ici d'être soulignés. D'abord, de nombreux pays de la sous-région ont adopté et mis en œuvre de récentes mesures d'interdiction d'exploitation ou d'exportation de l'espèce*Pterocarpus erinaceus*(en particulier la Côte d'Ivoire, le Ghana, la Guinée-Bissau, le Mali, certaines provinces du Nigeria et laSierra Leone). Ensuite, le Sénégal aparticipé, durant ces derniers mois, à plusieurs réunions intergouvernementales au cours desquelles les pays voisins ont clairement manifesté leur volonté de faire cesser le trafic d'espèces sauvages et en particulier de *Pterocarpus erinaceus*. Ces éléments attestent de l'intérêt que portent la grande majorité des pays de l'aire de répartition à la conservation de l'espèce.

En espérant que la communauté internationale appuiera le Sénégal dans la gestion durable de ses ressources forestières, je vous prie de recevoir, **Monsieur le Secrétaire Général**, l'assurance de ma considération distinguée.

Abdoulaye BALDE

Ministère de l'Environnement et du Développement Durable –route des fronts de terre
Tel: (221) 33 889.02.34 - Fax: (221) 33 822.21.80 - BP 4055 – DAKAR

Appendix 2. Final Statement of the Regional Meeting for improving technical cooperation as regards the exploitation of forest resources

Réunion quadripartite entre le Benin, la Côte d'Ivoire, le Ghana et le Togo pour l'amélioration de la coopération technique en matière d'exploitation des ressources forestières

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Déclaration finale

1. La réunion pour l'amélioration de la coopération technique entre le Bénin, la Côte d'Ivoire, le Ghana et le Togo en matière d'exploitation des ressources forestières, s'est tenue à l'Hôtel SANCTA MARIA à Lomé les 10 et 11 février 2015.

2. Elle a regroupé les hauts responsables en charge de la gestion du bois, du contrôle du respect et de l'application des lois environnementales issues des administrations des ressources forestières, de la sécurité et des douanes. Le Burkina Faso a activement pris part à la rencontre et a adhéré au processus. Le Mali et le Sénégal invités, n'ont pas pu y prendre part.

3. La réunion a été organisée à l'initiative du Gouvernement du Togo en collaboration avec l'Organisation Internationale de la Police criminelle (OIPC-INTERPOL).

4. Elle a permis aux parties prenantes d'avoir une compréhension commune de la problématique de la lutte contre le commerce illégal du bois notamment:

   - La maîtrise des procédures d'importation et d'exportation du bois dans chaque pays et la connaissance des documents authentiques afférents;
   - La nécessité de créer un cadre de coopération entre les institutions techniques en matière d'importation, d'exportation et de transit du bois;
   - L'évaluation des cadres légaux et politiques de collaboration existants entre les pays;
   - Le rôle et l'appui nécessaire de la sous-direction de la sécurité environnementale d'INTERPOL dans la lutte contre le commerce illégal de bois

5. A l'issue des travaux, les participants ont fait les recommandations suivantes:

INTERPOL

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❖ A l'endroit des Etats

➢ **Dans le domaine de la maîtrise des procédures**

- Poursuivre les initiatives en faveur de la lutte contre la criminalité forestière à travers le soutien des projets en vue dans le domaine de la sécurité environnementale;
- Harmoniser la qualification des délits et des peines en matière de Gestion des Ressources Forestières de façon à rendre les sanctions beaucoup plus dissuasives,
- Harmoniser les textes en matière de la gestion des ressources forestières en l'occurrence les procédures d'exportation et d'importation du bois;
- S'inspirer de l'expérience de la CITES pour la délivrance des titres d'exportations sécurisés,

➢ **Dans le domaine de la coopération**

- Désigner pour chaque pays un point focal institutionnel à un niveau décisionnel élevé qui devra être confirmé au plus tard le 2 mars 2015 ;
- mettre en place un comité directeur national composé de tous les acteurs institutionnels intervenant dans la lutte contre la criminalité environnementale;
- Doter les points focaux de moyens adéquats pour le travail;
- mettre en place un cadre de concertation sous régionale. A cet effet, les participants ont confié à la République togolaise, le leadership pour la coordination du processus avec le groupe d'experts nationaux y compris le point focal qui sera désigné par les Etats partie à la réunion de Lomé, en vue de l'élaboration et de l'adoption d'un document d'accord de coopération qui sera ouvert aux autres pays intéressés de la sous-région.

❖ A l'endroit de l'OIPC -INTERPOL, de l'ONUDC et des autres partenaires

- Poursuivre l'appui technique et financier aux Etats pour la mise en œuvre des engagements pris par la présente réunion dont la conduite du processus devant aboutir à l'adoption et la mise en œuvre de l'accord de coopération;

- Entreprendre une opération de Police dénommée « OPERATION LOG » courant 2015 qui est un des projets prévus dans le cadre du programme CONNEXUS d'INTERPOL pour la lutte contre les crimes environnementaux dont ceux liés à la déforestation.

INTERPOL

Norad

6- Les participants se sont félicités de la bonne conduite des travaux de la réunion et ont remercié le Gouvernement de la République togolaise pour l'accueil chaleureux et authentique réservé aux participants venus des pays de la sous-région et d'ailleurs.

Fait à Lomé, le 11 février 2015

Ont signé :

Pour le Bénin,

Colonel Théophile KAKPO
Directeur Général des Forêts et des
Ressources Naturelles

Pour le Burkina Faso,

Monsieur Urbain BELEMSOBGO
Chargé de mission auprès du Ministre
de l'Environnement et des Ressources Halieutiques

Pour la Côte d'Ivoire,

Monsieur SORO Doplé Claude
Directeur de Cabinet du Ministre des Eaux et Forêts

Pour le Ghana,

Monsieur Alexander A. BOADU
Director of Operations Forestry Commission

Pour le Togo,

Monsieur SAMA Boundjouw
Secrétaire Général du Ministère de l'Environnement
et des Ressources Forestières

INTERPOL

Norad

Appendix 3. Draft Proposal for the inclusion of Pterocarpus erinaceus in Appendix II of CITES

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of Pterocarpus erinaceus in Appendix II, with annotation #1 designates all parts and derivatives, except:

a) seeds, spores and pollen (including pollinia)
b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers; and
c) cut flowers of artificially propagated plants.

in accordance with Resolutions Conf. 9.24 (Rev. CoP16), Appendix 2 a, paragraph B.

The proposal is for the listing of the species under Annotation #1 (all parts and derivatives). Though most illegal and unsustainable international trade is currently of logs and sawn timber, experience with CITES listings of other rosewood species has demonstrated that other Annotations can be easily circumvented (Government of Thailand 2015).

B. Proponent

[Senegal and?]

C. Supporting Statement

1. Taxonomy

1.1 Class:	Magnoliopsida
1.2 Order:	Fabales
1.3 Family:	Fabaceae
1.4 Species:	Pterocarpus erinaceus
1.5 Scientific synonyms:	Pterocarpus erinaceus Poir. (GBIF 2013)
1.6 Common names:	Anglais: kosso, African rosewood
	Français: bois de vène, palissandre du Sénégal
	Portugais: pau de sangue

Ghana: krayie / kpatro

Gambie: keno / kino

Fulfulde (B.Faso): bani / banuhi

Bambara: gwani / n'gueni

Djerma: tolo

Gourmantché: bu natombo

Moré: noega, noeka, pempelaga

Sérer: ban

Wolof: ven, yirk

Autres: muninga, barwood, mukwa

2. Overview

Pterocarpus erinaceus is a rosewood species native to the semi-arid Sudan-Guinea savanna forests of West Africa (Section 3.1). The last few years have seen a dramatic increase in trade of Pterocarpus erinaceus timber, in response to rising demand in Asia for rosewood furniture and increasing scarcity of other officially recognised 'rosewood' species (many of which are listed on the CITES Appendices). Exports of the species to China have risen 500-fold, from less than $1 million per year in 2009 to over $500 million in 2014 (Section 6.2). Widespread illegal and unsustainable harvesting of the species across its range has led many range states to enact total bans on harvesting and trade of the species in recent years, in an attempt to prevent commercial extinction, yet trade continues (Sections 6.4 and 7.1). Pterocarpus erinaceus is a keystone fire-resistant nitrogen-fixing species within fragile semi-arid habitats (Section 3.5), and an important source of livestock fodder for traditional pastoral communities across its range (Section 6.1). Unless rapidly checked, unsustainable exploitation of the species for international trade is therefore likely to have serious negative impacts on the environment and human population of the West African savanna. To help prevent this, it is proposed that the species is listed on Appendix II of CITES. Such a listing will empower importing countries to assist range states by blocking shipments of illegally harvested and illegally traded wood, and make it easier to distinguish legal from illegal wood.

3. Species characteristics

3.1 Distribution

The species is native to the Guinean Forest Savanna Mosaic ecoregion of West Africa, which lies between the Guinean rainforest and the Sudanian savannah (WWF 2015). It has been recorded as occurring across the region, including in Senegal, Gambia, Guinea-Bissau, Guinea, Mali, Côte d'Ivoire, Burkina Faso, Ghana, Niger, Benin, Togo, Nigeria and Cameroon (GBIF, 2013). It is distributed up to 14ºN but is a stunted, small tree at this latitude, where another species, Pterocarpus lucens, takes over and

becomes more abundant. Southward, the range extends to the limit of the humid forest in Cote d'Ivoire and the humid coastal savannas in Guinea, Togo, and Benin, where a gallery-forest species, Pterocarpus santalinoides, is common along rivers and temporary watercourses. The species is not known to have been introduced outside its native region (Winrock, 1999).

3.2 Habitat

Le *Pterocarpus erinaceus* is found in open dry forests of semiarid and subhumid lands with mean annual rainfall of 600–1200 mm and a moderately to very long dry season that can last 8–9 months. Mean annual temperature in the tree's natural range is 15–32ºC, but it tolerates high temperatures reaching over 40ºC. The tree grows at low altitudes (0–600 m) and thrives even on shallow soils. It is drought tolerant and once established it survives yearly dry seasons. It also survives the yearly savanna bush fires and readily colonizes fallow lands*. Parkia biglobosa* and *P. erinaceus* are believed to be surviving species of the former dense, dry forest of the sudanian zone (Aubreville 1950).

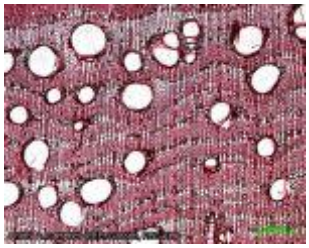
3.3 Biological characteristics

Pterocarpus erinaceus is a slow-growing deciduous species. The trees flower when leafless at the end of the dry season, usually in December–February, before developing new leaves, but sometimes inflorescences develop together with young leaves. The flowers are much visited by bees, which are probably responsible for pollination. The tree may produce so many fruits that when the fruits are green it looks as if the tree is covered with leaves. Young leaves normally develop after the fruits have ripened and have become brown. Natural regeneration is often abundant and the species may be quite invasive if protected from grazing for some years (Duvall 2008).

3.4 Morphological characteristics

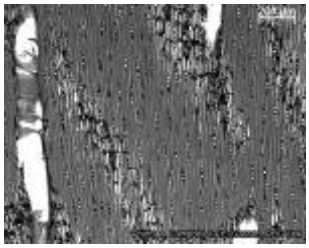
L'écorce *Pterocarpus erinaceus* bark is stiff, blackish and scaly. The branches have long shoots which bend downwards. The first golden-yellow flowers appear in January when the tree is quite leafless. Fruit body is bristly, fruits orbicular, broadly winged. Leaves 10-15 foliolate. Branchlets not prickly; leaflets mostly oblong-elliptic, gradually and very shortly acuminate, 6-11 cm. long, 3-6 cm. broad. Light green fruits suborbicular, 4-7 cm diameter. *Pterocarpus erinaceus* timber is yellowish in colour, with an attractive fine-grained appearance (Orwa 2009). The heartwood is yellowish brown to reddish brown, often with purplish brown streaks, and distinctly demarcated from the 2–5(–8) cm thick, yellowish or pale cream-coloured sapwood. The grain is straight to interlocked, texture fine to moderately coarse. Fresh wood has an unpleasant smell.

The wood is moderately heavy to heavy, with a density of (560–) 800–890(–940) kg/m³ at 12% moisture content (Duvall 2008).



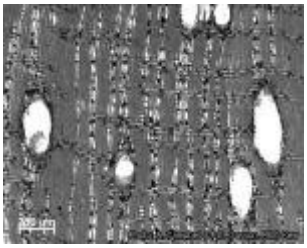
Pterocarpus erinaceus

Wood in transverse section



Pterocarpus erinaceus

Wood in tangential section



Pterocarpus erinaceus

Wood in radial section

Source: Duvall, 2008.

3.5 Role of the species in its ecosystem

Pterocarpus erinaceus is an important legume species within its habitat: the species fixes atmospheric nitrogen through a symbiotic relationship with Rhizobium soil bacteria (Winrock, 1999). The species is one of the main components within its wooded savannah habitat (Orwa 2009) and can survive annual bush fires (Aubreville 1950). By helping reduce the current unsustainable and illegal exploitation of the species for international trade, an Appendix II listing will help protect the unique habitats of *P.erinaceus* by protecting this important keystone species.

4. Status and trends

4.1 Habitat trends

The Guinean Forest-Savanna Mosaic ecoregion of which *Pterocarpus erinaceus* is a keystone species has been classified as having Critical/Endangered status (WWF 2015). There has been very little attention to this ecoregion, and thus very little data is available on how much the habitat has changed. However, given that the species' range includes areas of significant and rapidly rising human population, with associated demands for agricultural land, grazing, firewood and charcoal, it can be expected that anthopogenic degradation is extensive. One 2013 study of a small area of this habitat in Nigeria found that it had been influenced significantly by anthopogenic disturbance (including illegal logging) and that drastic measures were needed to reverse the trend and mitigate the far reaching ecological consequences of the degradation highlighted (Jibrin 2013).

4.2 Population size

There is no quantitative information available on the total population of the species or other indices of population abundance. There are no firm data on either the total area of relevant habitat or the average density of stems per hectare.

4.3 Population structure

No information available. However, given that the largest specimens are disproportionately targeted for timber production, it can be expected that the recent boom in illegal and unsustainable harvesting will be leading to a skewing of the population structure towards immature specimens

4.4 Population trends

No data is available on population trends of the species, but suggestions of increasing scarcity even prior to the recent boom in harvesting for international trade can be inferred from the actions of range states. As long ago as the late 1990s, more than 10 range countries reported the species as among highest priorities for management and conservation (Eyog et al, 1999). Niger already classified the species as endangered before 2006 (Garzuglia 2006), while in Senegal it has been given special protection since 1993 (Guey 2015). In Mali, cutting for livestock fodder had already resulted in extirpation within 50km of the capital city of Bamako by 1998 (Bonkoungou 1998). That many other countries have been compelled to prohibit all harvesting of the species in recent years (see Section 7.1) is also suggestive of concerns on the part of relevant forestry authorities regarding rapidly declining populations. In 2014 China alone imported approximately 750,000 cubic metres of West African rosewood (Lawson 2015); given a typical yield of 0.8 cubic metres for a relatively large tree (Duvall 2008), such a volume would have required the harvesting of more than 1 million trees.

4.5 Geographic trends

No information available.

5. Threats

In the past, the main threat to the species has been overharvesting of branches for animal fodder (Winrock, 1999). In recent years, uncontrolled and illegal harvesting and trade of the species for its valuable timber have become the principal threat (see Section 6).

6. Utilization and trade

6.1 National utilization

P.erinaceus P.erinaceus is an important traditional source of animal leaf-fodder to pastoralist communities in West Africa, who lop wild trees to feed their livestock during the dry season. Increasingly, this fodder is brought to urban and semi-urban markets for sale. Supply falls far short of demand, leading to increasing rarity of the species near to urban centres (Winrock, 1999). The species is also an important source of firewood and charcoal. The gum/resin of the species is blood-red in colour, and is used in dyeing cotton. The species is an important source of traditional medicine: the leaves are used in abortifacient mixtures and as a febrifuge. Bark is used for ringworm of scalp, dressing for chronic ulcers, blennorrhagia and in a gargle for tooth and mouth troubles. Bark and resin used for urethral

discharge and as an astringent for severe diarrhoea and dysentery. The grated root is mixed with tobacco and smoked in a pipe as a cough remedy (Orwa 2009)

Timber of *P.erinaceus* is extremely hard-wearing and has a beautiful colour; as a result it has traditionally been used for production of local furniture, artisanal crafts and traditional musical instruments such as xylophones (Winrock 1999).

All harvesting of the species is from wild specimens. Usage of branches, leaves, bark and resin for fodder, firewood, handicrafts or medicine, if carried out correctly, is potentially sustainable, since the species recovers well from coppicing (Orwa 2009).

Stockpiles of illegal rosewood, stemming from seizures or lying unclaimed following changes to regulations, have been documented in Ghana, Côte d'Ivoire (Agence Ecofin 2014), and Gambia (Forest Trends, 2014) in the past, but most such stockpiles appear to have been disposed of already.

6.2 Legal international trade

Until recently, wood of *P.erinaceus* was virtually unknown in commerce outside of its native range (Winrock, 1999). However, in recent years there has been a dramatic increase in trade of the species to Asia for rosewood furniture manufacturing. The species is a formally recognised 'rosewood' in the official Chinese Rosewood National Standard, and from 2010 onwards, the high prices and limited supplies of more traditional Southeast Asian rosewood species led to dramatic growth in imports of rosewood from West Africa (Forest Trends, 2013).

Between 2009 and 2014, annual Chinese imports of rosewood logs from West Africa increased by 500 times in value, from $1 million to $500 million (see Figure 1). As a result, sparsely forested West Africa now exports more timber to China than the densely-forested Congo Basin (Lawson 2015). Though relevant Chinese trade data also captures small volumes of African ebonies (*Dalbergia melanoxylon* and *Dalbergia crassiflora*), nearly all of this increase is believed to be made up of *Pterocarpus erinaceus*. Though small volumes are also shipped to other countries, including Vietnam and India, most exports of the species from the region are destined for China. In Ghana in 2013, for example, 99 per cent of exports were to China (Coleman 2014). Large volumes (including all of those from landlocked range states) are traded across borders within the region before being exported to China (Lawson 2015).

Of the 11 known range states, at least four have total bans in place on harvesting of the species, while a further three have prohibitions on exports of all logs (see Section 7.1). Of the seven main source countries for West African rosewood log imports to China in 2014 (Lawson 2015), only Nigeria and Togo have legal harvesting of the species and allow log exports. By helping tackle illegal harvesting and trade, the proposed Appendix II listing should result in increased prices for legal supplies.

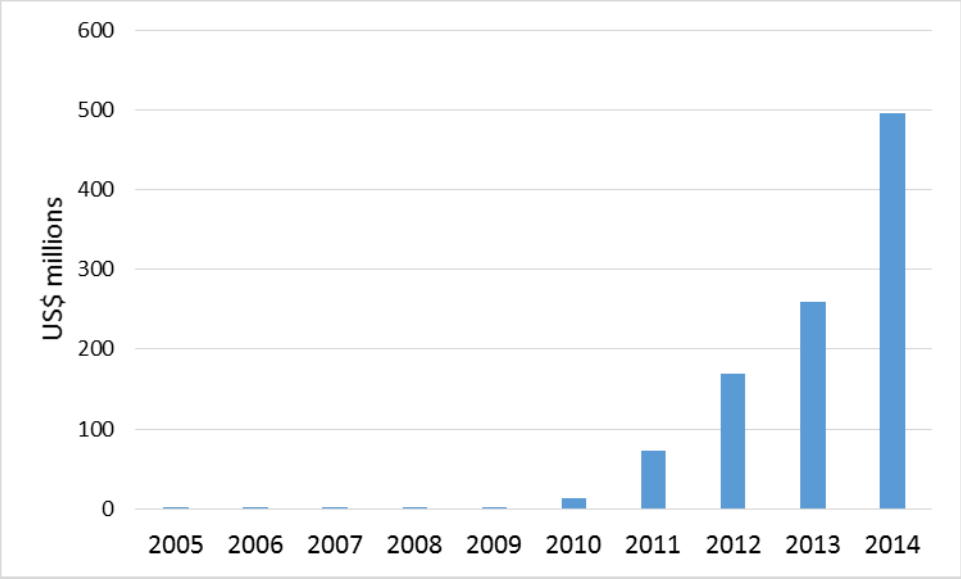


Figure 1: Chinese imports of logs from West Africa under the 'padauk/rosewood' customs code (China General Administration of Customs)

6.3 Parts and derivatives in trade

Les The principal products in international trade are round and roughly squared logs (HS Code 4403) and rough sawn timber (HS Code 4407). The majority of the trade is destined for China (which has a Customs code specific to rosewood/padauk), though significant volumes are also imported by Vietnam. The largest West African exporters of rosewood logs and lumber to China during 2014 were Nigeria, Ghana, Benin, Côte d'Ivoire, Guinea-Bissau, Gambia and Togo (Lawson 2015). As with all rosewood, the main usage is for decorative furniture, most of which is consumed in China (Wenbin & Xiufang, 2013). There is no information available on re-exports of furniture or secondary processed products from China.

6.4 Illegal trade

Information from a number of range states (see subsections below) suggests that a large percentage of the *P.erinaceus* timber being exported to China and elsewhere is illegally harvested and/or illegally exported. Rosewood is exported illegally as a result of corruption, or is smuggled. Smuggling has involved forged documents, mis-declaration as other goods (such as scrap metal), concealment behind other goods and mis-declaration of goods as transit cargo (Lawson 2015). In addition to large-scale illegal export outside of the region, intra-regional illegal trade is also common (ibid; Ghana Broadcasting Corporation 2014). At present, there is no legal mandate for importing countries such as China to halt shipments of illegal African rosewood, even if clear evidence of illegal origin is available (Hoare 2015). There is also confusion within the region among importing or transit countries regarding the legal status of the species in other countries or the proper documentation which should accompany legal shipments.

An Appendix II listing will empower importing countries to assist range states by blocking shipments of illegally harvested and illegally traded wood, and make it easier to distinguish legal from illegal wood. In doing so, it can be expected to result in a significant reduction in illegal trade.

Senegal / Guinea-Bissau / Gambia

During 2010-14 China reported importing over 360,000 cubic metres of rosewood logs from The Gambia. It is estimated that 99% of these rosewood logs actually originated in Senegalese forests and are illegal re-exports (all log exports from Senegal are prohibited). The Senegalese government classifies much of the African rosewood illegally traded into The Gambia as 'conflict timber' since it originates in parts of the Cassamance region held by rebel forces (Guey 2015). Most of the logs were also shipped in contravention of a ban on rosewood export implemented by the government of The Gambia in November 2012 (Forest Trends 2014). Since the breakdown of law and order which followed a coup in April 2012, large-scale illegal harvesting and export of *Pterocarpus erinaceus* has also been taking place in neighbouring Guinea-Bissau (IRIN 2014). In July 2014, the new Guinea-Bissau government declared a moratorium on all timber exports in an attempt to halt rosewood trafficking (ibid).

Ghana

Widespread illegal harvesting of rosewood (*P.erinaceus*) under the guise of 'salvage permits' for road and dam construction projects led the Ghanaian authorities to re-impose a ban on all harvesting, processing and export of the species in July 2014. The ban included a prohibition on transhipment of rosewood from other countries, included in response to evidence of laundering of Ghanaian rosewood in neighbouring countries (Ghana Broadcasting Corp, 2014). In April 2014, the Paramount Chief of the town of Buipe in Gonja had appealed to the government to halt the illegal harvesting, saying that it was having a devastating impact on the local environment and water sources. He estimated that more than 200 articulated trucks were leaving the Gonja area with illegal rosewood every week (Ghana Chronicle 2014). All of the illegally harvested rosewood in Ghana in recent years is bound for export. In 2012, sixty shipping containers of P.erinaceus were seized at Tema port in Ghana (Bosu, 2014). In August 2014, a further 51 shipping containers of illegal rosewood logs were seized at the same port; the timber was valued at an estimated $800,000 (Ghana News Agency, 2014).

Côte d'Ivoire

The majority of *P.erinaceus's* natural range in Côte d'Ivoire is north of the 8th parallel of latitude, where all logging has been prohibited since 1982 (ITTO 2008). UN reports have documented how illegal logging and associated trade in this zone have provided an important source of funding to rebel groups engaged in civil conflict in the country in recent years. The same reports cite evidence of collusion by corrupt officials in the trade (UN 2014). There have been a number of significant seizures of illegal rosewood in Côte d'Ivoire in recent years, including one in January 2012 involving 30 containers seized at the ports of San Pedro and Abidjian in which senior officials were implicated (AllAfrica 2012). During January 2012 - September 2013, the government reported seizing a total of 6051 cubic metres of illegal timber, worth $1.25 million, and arresting 74 individuals for illegal logging north of the 8th parallel (UN, 2014). Given its pre-eminent position in trade in the region, it is likely that most of this wood was *P.erinaceus*.

Other range states

Widespread illegal harvesting and export of rosewood led the Malian government to ban all cutting and trade in the species in 2014 (Lawson 2015). In Burkina Faso, where illegal rosewood is reportedly being harvested in National Parks, the Director of Forestry was suspended during 2014 for alleged involvement in illegal rosewood export (ibid). Rosewood is also being cut illegally in National Parks in Benin, and rosewood logs exported illegally hidden in shipping containers behind sawn wood (ibid). In Sierra Leone, there has been illegal cutting in National Parks, while the President's Chief-of-Staff was recently sacked for rosewood-related alleged corruption (Office of the President 2014). Benin, Burkina Faso, Mali and Sierra Leone also have long-standing bans on the export of raw logs, yet Chinese customs authorities reported significant imports of rosewood logs from these countries during 2014, indicating probable illegal trade; the same is true of Ghana and Côte d'Ivoire (Lawson 2015).

6.5 Actual or potential trade impacts

There is very little information available regarding the impact of the increased trade in the species on populations in relevant range states, but anecdotal evidence suggests that the species is already commercially extinct in many areas, and that illegal harvesting is proving damaging to the fragile semi-arid environments in which the species grows (Lawson 2015). The fact that so many range states have imposed total bans on harvesting of the species is also suggestive of increasing scarcity. Given the importance of the species as a source of dry-season fodder for traditional pastoral communities across its range, the impacts of increasingly unsustainable trade in *Pterocarpus erinaceus* timber on the livelihoods of these people is potentially very serious. Domestic demand for *Pterocarpus erinaceus* timber is now inconsequential compared with international demand, which presents by far the greatest threat to the species.

7. Legal instruments

7.1 National

The species is subject to general legislation and regulations governing land tenure, forestry and timber trade in the relevant range states. This includes prohibitions on cutting of trees in protected areas or other zones, regulations governing permits required for harvesting elsewhere, regulations relating to processing and export, minimum diameters of trees permitted to be harvested, and limits or prohibitions on the forms in which timber may be exported (FAOLEX 2015). The latter includes general prohibitions on export of raw, unprocessed logs from many relevant range states (including **Senegal, Guinea-Bissau, Sierra Leone, Mali, Burkina Faso, Côte d'Ivoire, Ghana** and **Benin**).

The failure of these general forestry regulations to halt illegal and unsustainable harvesting and trade of African rosewood, and subsequent threats to the species' future, has led many range states to enact additional regulations specific to rosewood. In November 2012, The **Gambia** banned export of *Pterocarpus erinaceus* (Forest Trends 2014). In **Ghana**, export bans were imposed during January-May 2012 and again since January 2014 (Coleman, 2014). The latter ban was temporarily lifted for specific companies, but was re-imposed in July 2014, when all harvesting, processing, transport, transhipment and export of the species was prohibited (Ghana Broadcasting Corp, 2014). The bans were put in place because of evidence of illegalities in harvesting and trade (Coleman, 2014). The species is specifically protected and all harvesting illegal in **Burkina Faso**, while in **Mali** all harvesting and export was also banned in 2014. Cutting of *Pterocarpus erinaceus* is also prohibited in some **Nigeria**n states (Lawson 2015). In **Côte d'Ivoire**, all harvesting, processing, transport and export of *Pterocarpus erinaceus* was prohibited by a Decree of the Council of Ministers in July 2013, with an allowance of three months for existing stocks to be exported (Council of Ministers 2013); in March 2014 the ban was lifted for three further months to allow additional pre-ban stocks to be exported (Agence Ecofin 2014). *Pterocarpus erinaceus* is listed as a semi-protected species under the **Senegal**ese Forest Law, which restricts cutting of the species to limited national quotas intended only for local processing (Guey 2015). In direct response to the new challenge of illegal rosewood trafficking, in May 2015 Senegal revised its forest law to increase relevant penalties (Guey 2015).

The failure of the controls mentioned above to halt illegal and unsustainable harvesting is evidenced by major seizures in relevant countries (see Section 6.4), and by Chinese customs statistics, which record continued imports of rosewood logs from range states which have banned log exports in general and/or banned all harvesting and export of rosewood in particular (Lawson 2015; Guey 2015).

7.2 International

There are no current international controls in place on the species. Imports to the USA, European Union and Australia are subject to national legislation in those jurisdictions prohibiting the import and/or sale of wood which was illegally sourced in the country of origin (Hoare 2015). However, little or no African rosewood is traded to these countries. In June 2015, Senegal stated an intention to list the species on Appendix III of CITES (Guey 2015).

8. Species management

8.1 Management measures

General management measures in range states are defined by relevant Forestry legislation (including minimum diameter cutting limits), though it does not appear that any legal harvesting of the species takes place in specific zones managed under sustainable forest management plans. Specific management measures for the species take the form of blanket prohibitions on harvesting and trade, and are in place in a number of countries (see Section 7).

8.2 Population monitoring

No information available

8.3 Control measures

8.3.1 International

See Section 7.2

8.3.2 National

See Section 7.1

8.4 Captive breeding or artificial propagation for commercial purposes

At present all harvesting of this species appears to be from wild sources, though there is some indication of small-scale planting in Ghana and Senegal in the past (CABI 2013).

8.5 Habitat conservation

The protected areas system within the Guinea Forest-Savanna Mosaic is reportedly underfunded and covers only two percent of the area of the ecoregion (WWF 2015). No additional specific information is available on the number, size and type of protected areas relevant to the habitat of the species, or specific habitat conservation programmes outside protected areas.

8.6 Safeguards

Not applicable

9. Information on similar species

[Give the names of species of which specimens in trade look very similar. Provide details on how they may be distinguished, including, in particular, details on those commodities or parts and derivatives most common in trade, and explain whether or not it is reasonable to expect an informed non-expert to be able to make a firm identification. Provide details on how to resolve potential difficulties in distinguishing specimens of the species proposed for listing from those of similar species, in particular those specimens most common in trade.]

10. Consultations

This draft proposal is being shared as part of a consultation effort. Additional information and comments, especially from range states, would be welcomed.

11. Additional remarks

None

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