## Inclusion of *Guibourtia demeusei*, *G. pellegriniana* and *G. tessmannii* in Appendix II with annotation #4

## Proponents: Gabon and European Union

**Summary:** The genus *Guibourtia* is currently considered to comprise between 14 and 16 species[1,2]; 13 occur in tropical Africa, and one in the Neotropics[1]. All three species in the current proposal are African forest trees.

***Guibourtia tessmannii*** grows to 65m with a trunk that can exceptionally reach 2m in diameter at breast height (DBH) but is generally smaller. It is found at very low population density on firm ground in evergreen forest in Cameroon, Equatorial Guinea and Gabon. It is also believed likely to occur in southeast Nigeria, the Republic of Congo and extreme southwest Central African Republic, being present in logging concessions in Cameroon near these countries. It has not been confirmed in the Democratic Republic of the Congo[3].

***Guibourtia pellegriniana*** grows to 30m, with a trunk typically around 40cm DBH. It also occurs at very low population density. Its known distribution is considerably smaller than that of *G. tessmannii*. Herbarium specimens originate from a narrow strip of coastal forests in Cameroon, Equatorial Guinea, Gabon and possibly the Republic of Congo. Recent work indicates it may be more widespread than this, also occurring in forests further inland where *G. tessmannii* is found, although at much lower density.

***Guibourtia demeusei*** grows 25 to 40m tall with a trunk up to one metre DBH. It occurs in periodically flooded and swampy forest and gallery forest, often in pure stands[4]. It has a much larger range than the other two species, extending into the central Congo basin. It occurs in Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, and the Republic of Congo[5].

There is a general lack of biological data for these species, which are all from closed forest and have historically been problematic to study[6]. *G. tessmannii* and *G. pellegriniana* are said to be difficult to distinguish from each other in the field. Increment rate (increase in trunk diameter) of ca. 0.35cm per year has been estimated for *G. tessmannii* in Gabon and of ca. 0.4cm per year for managed populations of *G. demeusei* in the Republic of Congo[7]. Frugivorous animals are thought to play an important part in seed dispersal.

Some inventory data are available. Historic estimates for Gabon (of a probable stock of three to seven million $m^3$ of *G. tessmannii* and *G. pellegriniana* combined made in 1975 and of seven to 13 million $m^3$ made in 1995) are not considered reliable. More recent assessment in forestry concessions in Gabon found extremely low stocks of the two species combined that could be harvested on a sustainable basis (annual harvests from effectively zero to 0.0045$m^3$ per ha). Inventories in Cameroon have found similarly low stocking densities, between 0.002 and 0.06 trees with DBH >20cm per ha. A considerably higher density of *G. demeusei*, of 0.4 stems per ha, has been reported in the Central African Republic[5].

The timber of all three species is commonly used locally and has a high socio-cultural value[8]. *G. tessmannii* and *G. pellegriniana* in particular are reportedly highly sought-after as timber for furniture-making within their range, although there is no information on quantities used.

All three species are traded internationally as Bubinga but are also known under other names, such as Kevazingo. *G. tessmannii* and *G. pellegriniana* are commonly referred to as Rose Bubinga and are reportedly indistinguishable in trade. *G. demeusei,* or Red Bubinga, can be distinguished and is generally considered of inferior quality, but reportedly may be easily confused with or substituted for that of the other two on the international market. Historically most exports were to Europe; more recently China has become the main market as the timber is used for the making of Hongmu-type (rosewood and blackwood or ebony) furniture, demand for which has increased greatly in the past decade. *Guibourtia* species are not a part of the recognised Hongmu standard in China, but their timber is a category A2 hardwood that is used as a substitute for Hongmu timbers[9].

Trade data, often reported under trade (i.e. non-scientific) names, may refer to one or other of the three species, or some combination of them. Reported exports of *G. tessmannii* and *G. pellegriniana* combined from Gabon have increased over time. Until 2009 all recorded export was of roundwood (logs), rising from an average annual export of ca. 25,000$m^3$ in 1987 to 1992, to ca. 60,000$m^3$ in 1993 to 1999 and just under 70,000$m^3$ in 2000 to 2009. From 2011 onwards, only sawnwood has been officially recorded as exported.

Using a conversion factor from sawnwood to roundwood of three, on average the equivalent of 65,000m$^3$ roundwood was exported annually in 2011 to 2014.

Recorded exports from Cameroon do not distinguish between the three species. Exports are at a much lower level than those for Gabon, amounting for ca. 13,000m$^3$ roundwood per year in 1995 to 1998 and roundwood equivalent of around 6000m$^3$ in sawnwood per year for 1999 to 2014 with little discernible overall trend. Data from logging requests submitted by forest management units indicates that during the period 2008 to 2012, around 75% of logged volume of *Guibourtia* in Cameroon was of *G. demeusei*, with volumes requested for this species for 2011 to 2013 considerably higher than those requested in previous years. At the same time requested volume of *G. tessmannii* (probably including *G. pellegriniana*) halved.

Recorded exports of Bubinga from Equatorial Guinea are at a low level, although have risen from virtually zero in 2007 to ca. 400 m$^3$ in 2011[5]. The species involved are not identified, nor is it clear if the volume is for roundwood or sawnwood.

Bubinga exported from Democratic Republic of the Congo is *G. demeusei* (the other two species do not occur there); it is likely that all Bubinga exported from Central African Republic (where *G. demeusei* is known to occur and the other two have not been confirmed) is also *G. demeusei*. Reported exports from the Central African Republic rose sharply from zero or nearly zero in 2005 to 2009 to ca. 600m$^3$ in 2010 and 1700m$^3$ in 2011 (again, it is unclear if this is roundwood or sawnwood). Recorded exports from the Democratic Republic of the Congo also increased, from very low levels in 2005 to 2008 to ca. 700m$^3$ in 2009 and 2000m$^2$ in each of 2010 and 2011.

Roundwood of *G. tessmannii* and *G. pellegriniana* is advertised on the internet, indicating that it is available on the international market despite the fact that the two countries known to export these species prohibit export of roundwood. It is suspected that declared exports represent only a proportion of the actual volume exported, although exactly what proportion remains unknown. There are narrative accounts of extensive illegal and unauthorised logging of these species in Cameroon[5].

Current low population densities of *G. tessmannii* and *G. pellegriniana* have been ascribed to past exploitation[10]. However, there is an absence of baseline information on which to assess the effects of exploitation.

Minimum felling diameters have been set in some range States. The export of Bubinga logs has been prohibited in Cameroon since 1999 and Gabon since 2010. In November 2012 Cameroon suspended its harvest of *G. tessmannii* in the national forest domain.

*Guibourtia ehie* and *G. arnoldiana* are distributed in the same region as the proposed three species, and are also in international trade but are easily distinguished due to their brown wood.

The listing of these species is proposed with an annotation (#4) that would include all parts and derivatives, except seeds, seedlings or tissue cultures obtained in vitro and cut flowers of artificially propagated plants.

**Analysis:** Information on the status of *Guibourtia tessmannii*, *G. pellegriniana* and *G. demeusei* is sparse. There is very little information on recruitment rates or age and size at maturity. The species, particularly *G. tessmannii* and *G. pellegriniana,* are known to be in demand internationally for their rosewood-type timber, the market for which has grown very rapidly in Asia, particularly China, in recent years.

Populations of *G. tessmannii* and *G. pellegriniana* are of low density, although it is not known if this is a natural state or a result of past exploitation. Where there is information on trade in these species it appears to be at a low level. There are indications of illegal offtake and trade, the volume of which is not quantified but which may be relatively high. Given the evident scarcity of harvestable-sized *G. tessmannii* and *G. pellegriniana* it is likely that current harvest, including illegal offtake, for export is exceeding the rate at which such trees are entering the population, leading to probable commercial extinction of these species. It is unclear, however, whether this will lead to the species themselves becoming threatened by harvest or other influences, or becoming eligible for inclusion in Appendix I in the near future

*G. demeusei* is a widespread species that can be locally abundant. Reported harvest and export in a number of its range States increased around 2009 and 2010, which may be associated both with increasing demand for rosewoods in general at that time, and declining availability of *G. tessmannii* and *G. pellegriniana*. However, recorded harvest and export remain at a relatively low level, indicating that the species is unlikely to meet the criteria for inclusion in Appendix II in Annex 2 a of *Res. Conf. 9.24 (Rev. CoP16)*.

Given the difficulties in distinguishing between *G. tessmannii* and *G. pellegriniana*, if either were to be included in Appendix II, then the other would meet the criteria in Annex 2b A of the Resolution (lookalike criteria). Information regarding the similarity of these two species to *G. demeusei* is conflicting. By some accounts the principal part in trade (timber) is relatively straightforward to distinguish, although all three may be traded under the same generic trade name. It is unclear, therefore, whether *G. demeusei* does meet the criteria in Annex 2b A of the Resolution.

**Reviewers:** D. Mahonghol and T. Osborn.

**References:**

Information not referenced in the Summary section is from the Supporting Statement.

[1] Royal Botanic Gardens, Kew (2016). *Guibourtia ehie* (Black hyedua). Available at: http://www.kew.org/science-conservation/plants-fungi/guibourtia-ehie-black-hyedua. Viewed on 6th July2016.
[2] Royal Botanic Gardens, Kew (2016). *Guibourtia*. Available at: http://www.theplantlist.org/browse/A/Leguminosae/Guibourtia/. Viewed on 6th July 2016.
[3] *Contra to the following report which is in error*: Mahonghol, D. & Osborn, T. (2015) Review of trade in selected African timber species threatened by international trade from major range States (Cameroon, Congo, Democratic Republic of Congo and Gabon) to Germany and the EU: A preliminary assessment of Guibourtia tessmannii (Bubinga) and Millettia laurentii (Wenge) (A preliminary draft information document prepared by TRAFFIC and WWF Germany for the 21st Meeting of the CITES Plants Committee).
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[5] Betti, J. L. (2012) Background information on the conservation status of Bubinga and Wenge tree species in Africa countries. Report prepared for the international tropical timber organization (ITTO).
[6] Jongkind, C. (2016) *In litt.* to IUCN/TRAFFIC Analyses Team, Cambridge, UK.
[7] Mpati (2015) Review of trade in selected African timber species threatened by international trade. Unpublished report.
[8] Mahonghol, D. (2016) *In litt.* to IUCN/TRAFFIC Analyses Team, Cambridge, UK.
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[10] van der Burgt, X. (2016) *In litt.* to IUCN/TRAFFIC Analyses Team, Cambridge, UK.