Madagascar's rosewood (*Dalbergia* spp.) stocks as a political challenge

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Abstract

Background. Malagasy rosewood (*Dalbergia* spp.) has attracted international attention for centuries due to the high quality and intense coloration of the wood. Rosewood was sourced from the time of the colonial era during the early 20th century. Extraction continued after the country's independence in 1960. The sourcing of rosewood—almost exclusively from protected areas—escalated to unprecedented levels during the 2000s, which coincided with the political crisis from 2009–2013. It continues unabated. Following pressure by the international community and spearheaded by the World Bank, the Malagasy government started to confiscate and stockpile the precious timber. In 2013, all 45 Malagasy rosewood species were uplifted to CITES Appendix II. In June 2018 the stockpiles were the subject of an internationally-attended workshop in Antananarivo, facilitated by the World Bank. **Survey methods**. The focus of this study is the period from 2009 to the present. Based on structured literature review and grey literature, we examine the forest governance context, analyse ongoing deforestation, and look at how traders continue to take advantage of 'loopholes' created by a combination of semantics and the lack of taxonomic knowledge about the target genera. **Results**. In this paper we provide an update surrounding the confiscated Malagasy rosewood stocks. With presidential elections scheduled for November and December 2018, we examine plans under way to sell off at least some of the stocks. Forest governance mechanisms are complicated and management is rendered all the more difficult by a lack of technical, human and financial resources. Deforestation remains unchecked, with 2017 levels having been the worst during the past decade. Since 1982, the trading of rosewood has spiked significantly prior to presidential elections. Additionally, corruption escalated during recent years. **Conclusions**. We argue that, in order to ensure increased transparency and reduce the risk of corruption, the best option to deal with the rosewood stocks, is to hold off on any plans to sell the

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stocks until such time that uplifting the status of CITES- listed species to Appendix I, has been achieved so as to ensure that the proper mechanisms are put in place to handle the stocks.

Introduction

In countries with abundant natural resources but where institutions have low levels of democracy, corruption is often-times encouraged, because leaders will tend to favour sources of guaranteed income (Bhattacharyya & Holder, 2009). Angeles & Neanidis (2009) evaluated the critical role of local elites in effectively eliciting foreign aid in developing countries. There is a greater likelihood of aid misuse if the ruling class has significant economic and social power along with scant regard—if not utter contempt—for the lower classes, and if the ratio of European settlers to the indigenous population was high during the colonial period (Angeles & Neanidis, 2009; Razafindrakoto et al., 2014).

In Madagascar, a similar situation prevails; the allocation of wealth has deep roots in its colonial history (Razafindrakoto et al., 2014; Razafindrakoto et al., 2015). The country suffers from its chronic political instability (cf. Randrianja, 2012a; Randrianja, 2012b). Since the 2009 coup d'état, increased political uncertainty has further undermined economic development, amid a global financial crisis that has accentuated impacts on the poor, leading to increased food insecurity and corruption (Randrianja, 2012a; Figure 1). Poor governance and a lack of clarity in forest regulations have aided timber trafficking during at least three periods (1992, 2006 and 2009–2010). Escalation of rosewood exportation has been facilitated by government decrees issued prior to elections, or,

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during challenging political periods, in each instance accompanied by 'exceptional' government orders, which allowed a select few, powerful operators to export massive quantities of wood. The near-silence of the international donors and NGOs is linked to their loss of influence following suspension of all but humanitarian aid since 17 March 2009 (Schuurman & Lowry, 2009; Randriamalala & Liu, 2010)—international aid resumed its financial support right after the official presidential elections early 2013 under Hery Rajaonarimampianina. A new Madagascar government (N. 4 under the same mandate) was formed on 11 June 2018, after Prime minister Christian Ntsay assumed his post on 6th June 2018. Only eight ministers out of 30 were retained in this interim government; Guillaume Venance Randiatefiarison is the new Minister of Environment, Ecology and Forest (MEEF). The current situation in Madagascar is politically unstable with presidential elections scheduled to happen on 7th November 2018 and 19th December 2018.

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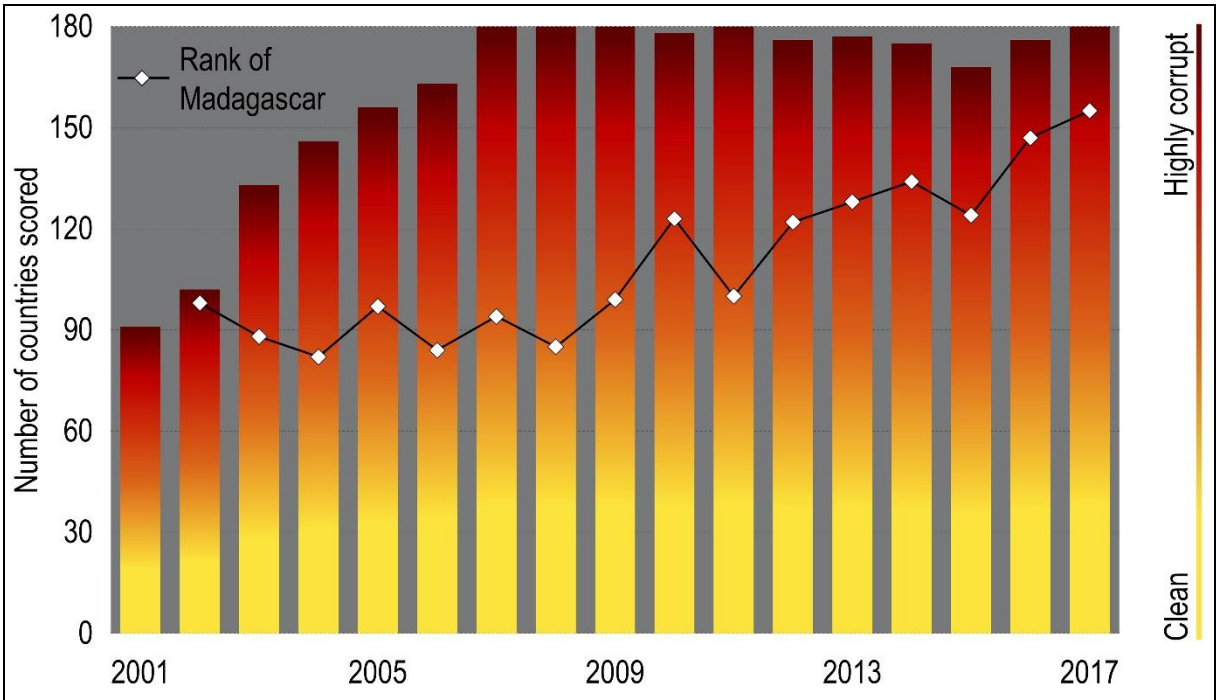

Figure 1. Corruption Perceptions Index and the rank of Madagascar in the Global World. The best rank has been achieved in 2008 when Madagascar was 85th out of 180 countries scored (Transparency International, 2018).

78

79 Logging and trade of rosewood

80 Despite an international ban on export and trading, the timber has been exported unceasingly to the
81 present day. As is the case with most tropical precious timber, the bulk of the rosewood has been
82 shipped to China, where demand for it is enormous (Innes, 2010). On the Chinese market, 2014
83 prices often exceeded US$17,000 per ton—ten times more than that of other tropical hardwoods
84 (Cerutti & Gumbo, 2018). In 2011, Malagasy rosewood stocks were estimated to be in excess of
85 500,000 tons. In 2013, the international community, spearheaded by the South African
86 Development Community (SADC) prepared new presidential elections, expected to put an end to
87 the political and economic crisis of an increasingly beleaguered nation (Waeber et al., 2016). In
88 the same period, the World Bank implemented a project (#PO93271) aimed at finding a solution

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of how to deal with the controversial rosewood stocks. Additionally, in 2013 all species of *Dalbergia* and *Diospyros* were placed in CITES Appendix II and embargoed from international trade until Madagascar made sufficient progress on the Precious Wood Action Plan presented at CITES 16th Conference of Parties." [Mason et al., 2016, p15]. This measure meant that stocks could not leave Madagascar and were split into three categories: (a) seized; (b) declared and unseized and (c) hidden. It may be worth mentioning 'stockpile elasticity'—an example of which is illustrated in the stockpiles, which were declared in 2011 but were never verified. As the stockpiles were not verified, there was 'room' within them to serve as 'buffers': movement could occur by means of newly- sourced timber being shifted into and out of an undeclared stockpile, to facilitate opportunistic sales. The afore-mentioned World Bank project ended in December 2015. In the same year the government undertook an audit of seized stocks (in-country only, not stocks seized abroad, nor stocks declared in-country but not seized), as questions surrounded their integrity. The database with the details of marked logs, is under the ownership of the Ministry of the Environment.

International collaboration resulted in seizures by authorities in several countries, of containers filled with Malagasy rosewood. These occurred in Kenya, Mauritius and in Singapore (Butler, 2014; Mason et al., 2016). Mason and collaborators (2016, p.12) note, "Yet, despite these bans and enforcement activities outside Madagascar's borders, illegal harvesting and trade persists, and the accelerated extraction of rosewood has degraded the landscape and depleted the resource even further." The report alludes to instances of loggers returning to exploited forests in order to retrieve stumps of previously felled rosewood trees. Note a parallel here, which serves to illustrate the unstoppable determination with which the suppliers will go to, in order to obtain the commodity:

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in the crisis facing rhinos in Africa, poachers have killed many dehorned animals for the sake of harvesting just the stumps of their horns (Lindsey & Taylor, 2011).

Survey Methodology

The results and analyses of this study are founded on a structured literature search of both published peer-reviewed publications and unpublished grey literature. We targeted both, English and French publications for the years 1990 to 2018; this work was undertaken in June and July 2018 using the online catalogue google scholar. Key search terms were "forest governance/ management/ policy/ rosewood/ tropical timber" and a Boolean combination of these with the term "Madagascar". We further searched international repositories of CITES, the World Bank, UNEP, Transparency International, and the WRI for reports and indices on poverty, human development, deforestation, governance, and corruption.

Results

World Bank

As a global player, the World Bank is involved in many tropical countries. "The overarching mission of the World Bank Group is a world free of poverty. Ambitious but achievable goals are being established to align the World Bank Group's diverse activities to this mission. The first goal is to end extreme poverty." (International Monetary Fund & World Bank, 2013). The World Bank's

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activities and impacts have however, been extremely widely publicised and its efficacy debated. Ana Eiras, in her 'IMF and World Bank Intervention: A Problem, Not a Solution', (2003) described how sending money to countries with misdirected policies and weak rule of law increases their debt and does not result in visible economic growth. "Debt is an efficient tool. It ensures access to other peoples' raw materials and infrastructure on the cheapest possible terms", wrote Susan George in 'A Fate Worse Than Debt' (1990, p. 143). Anup Shah (2013) wrote: "In effect, the IMF and World Bank have demanded that poor nations lower the standard of living of their people." Ana Eiras (2003): "According to the Index of Economic Freedom, the Bank's money has done nothing to improve economic freedom in recipient countries." She continues: "Predictably, those countries are still just as poor as they were 40 years ago when they started receiving World Bank loans." In the conclusion, Eiras states "One of the main causes of continued poverty in the world is the work of the World Bank and IMF." Among the world's most respected economists, Joseph Stiglitz is also former chief economist at the World Bank, which he left after having launched criticism about it and the IMF. According to Nobel prize winning Stiglitz, assistance strategies put into place by the World Bank after using country-specific investigations, amounted to little more than the World Bank representative/s inspecting 5-star hotels and meeting with a desperate finance minister who would 'voluntarily' sign a pre-drafted 'restructuring agreement' (Shah, 2013). During the period 2009–2018, Madagascar has been ranking amongst the world's poorest countries (Figure 2).

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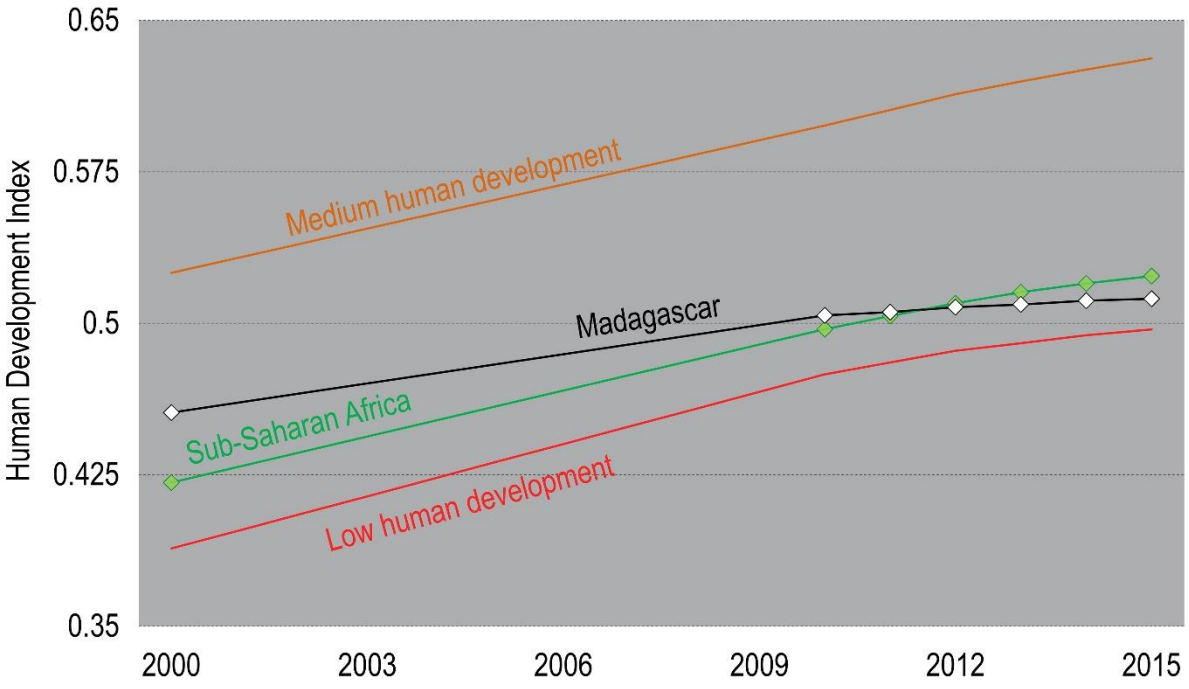

Figure 2. Trends in the Human Development Index for Madagascar and Sub-Saharan Africa between the lines of Low and Medium human development. Starting in 2012, Madagascar's index falls below the mean value of Sub-Saharan Africa (UNDP, 2016).

Just during a period of highest political uncertainty, i.e., the phase leading up to new presidential elections, the World Bank organized a 3-day workshop in Antananarivo (from 19–21 June 2018) "to discuss implementation of Madagascar's use plan ("Business Plan") for disposing of stockpiles of rosewood and other precious woods." Delegates present at the workshop included representatives from USAID Madagascar; AFD, TRAFFIC Madagascar; EIA WWF Madagascar, World Bank (naturally), ITTO and various parties keen on trading in rosewood and ebony including companies such as Stardust Materials and Hearne Hardwoods. On the first day, after the workshop's opening ceremony presided over by the Minister of the Environment, ITTO and World Bank, there was a review of the status of CITES' deliberations on Malagasy *Dalbergia* and *Diospyros* species. This is an interesting topic when taking into consideration parameters such as

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lack of knowledge and the projected time to study them being 2–2.5 years: Mason and colleagues (2016, p16) begin with "Little if any reliable information is available on which species of *Diospyros* are exploited in Madagascar". For a better understanding, we need to consult with botanists. According to Lowry & Schatz (2016), more than 60% of the ca. 215–230 species currently recognized by specialists working on the genus, remain to be named and described. On Page 22 of the above report, there is a clear photograph captioned "Figure 3: Twelve species of *Diospyros* fruiting simultaneously on [the small uninhabited] Nosy Mangabe in north-eastern Madagascar, seven of which are new to science." Additionally, it is written, "The population status of *Diospyros* species in Madagascar remains almost totally unknown." "When it comes to the Malagasy *Dalbergia*, "the current taxonomic information and the available identification tools are both *seriously inadequate*." [emphasize added] (Lowry & Schatz, 2016, p24). Currently, "a protocol for collecting the necessary material and compiling the associated data in an integrated database platform has been established and is now being initiated, tested and refined in the field." Thus, while our understanding of the target species and taxonomic diversity remains minimal, we are simultaneously running out of time to actually and effectively halt further logging; this has become more accentuated since the 2009 political events (Randriamalala & Liu, 2010). There is an interesting statement in Mason et al. (2016, p23), referring to the printed booklet to help guide identification of logs of ebony, palisander, or rosewood 'TRAFFIC wood identifier': "In its current implementation, the TRAFFIC wood identifier can only classify wood as ebony, palisander or rosewood in the field and cannot identify the corresponding *Dalbergia* or *Diospyros* species", making the job of monitoring and control almost impossible. (How should a non-botanist be expected to identify a wooden log accurately?). We happened on an interesting 'loophole', which has been taken advantage of in order to traffic plenty of timber not only from Madagascar, but from

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185 elsewhere in the world. The 'loophole' in question is that of 'semantics', which we shall revisit
186 later.

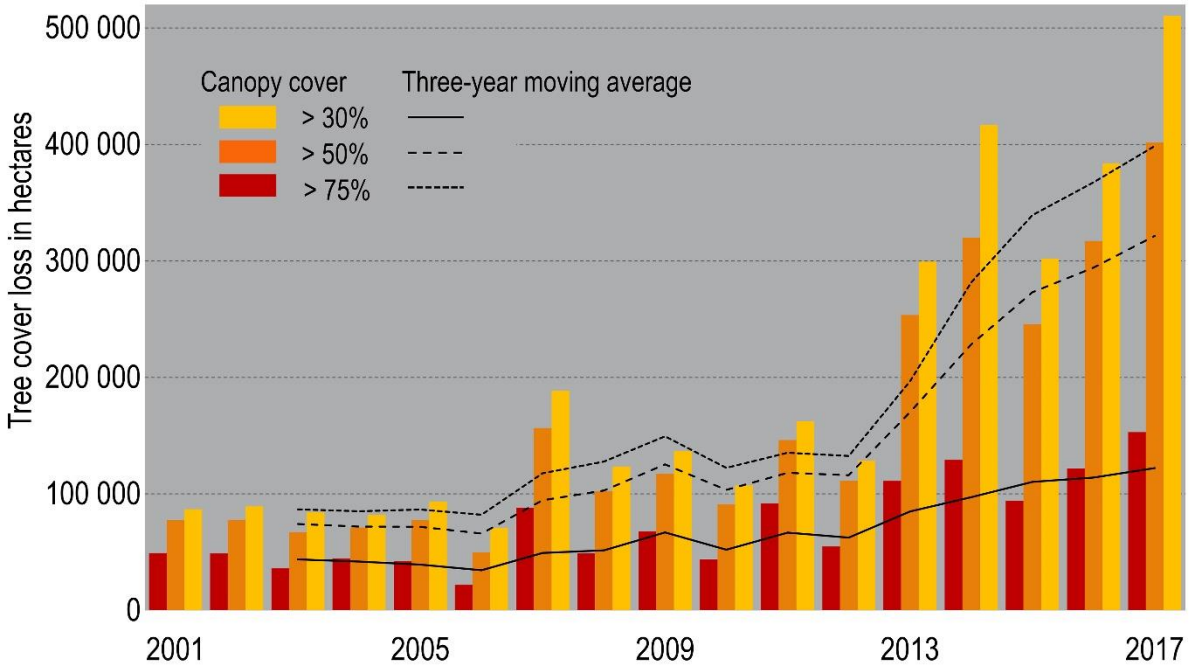

Figure 3. Cumulative tree cover loss with different canopy cover; the three-year moving average may represent a more accurate picture of the data trends to uncertainty in year-to-year comparisons. (Global Forest Watch, 2018)

187

188 Much time at the June 2018 workshop in Antananarivo was allocated to the Government of
189 Madagascar's 'Stockpile Verification Mechanism and Business Plan', published by the Ministry
190 of Environment, Ecology and Forests in the same month (Revision 2 of Phase 1 and Phase 2) in
191 June 2018 (MEEF, 2018). The aim of this business plan is to 'liquidate' all stockpiles of Malagasy
192 rosewood and ebony to 'zero'. In the introductory section is written "Businesses cannot function
193 without a roadmap for success and we are benchmarking this Business Plan roadmap on the
194 mandates by the CITES Standing Committee from COP17 and CITES Action Plan requirements

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for addressing the longstanding issues caused by the rosewood crisis" (MEEF, 2018, p4). The intention is clarified: "The mandate is to audit 'stockpiles' in all forms and establish a precedent for reporting on 1/3 of the total (not disclosed in the report) for review and consultation for approving a partial sale through a pragmatic, transparent and controlled programme." It is claimed shortly thereafter that the "first step to developing a viable forest management regime for precious woods in Madagascar, is to solve the 'stockpiles' issues'.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) structured a multi-pronged Action Plan (2013a) to back the implementation of the inclusion of all *Dalbergia* and *Diospyros* species onto Appendix II. Its aims are centred around management of known stocks; control of future trade of the target species and to determine the most appropriate method for earning revenue for the existing stockpiles that are in the country. When taking into consideration the current rate of destruction of the country's remaining forests coupled with the fact that *Dalbergia* and *Diospyros* classification remains a subject on which a considerable amount of work still remains to be carried out in order to provide us with a reasonable understanding of the Malagasy representatives of these two genera, there is a significant risk that certain species of these trees may disappear before, or just as we get to learn of, their existence.

The convenience of semantics

The term rosewood represents hardwood trees of the family of Fabaceae. For centuries, people have admired these precious woods. Malagasy rosewood (*Dalbergia* spp.)—currently thought to comprise of some 45 species—is especially appreciated for its fine qualities in woodwork and

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217 furniture production. Malagasy rosewood has been sourced since the colonial period (early 20th
218 century) and continued after the country's independence in 1960. The sourcing of rosewood
219 escalated to unprecedented levels in the 2000s, coinciding notably with the political fallout from
220 2009–2013 (Randrianja, 2012b). It has since continued unabated. Most Malagasy forests are within
221 protected areas from which sourcing of precious timbers is illegal. The wood (logs with a dbh—
222 diameter at breast height bigger than 25 cm)—has been extracted for the most part from protected
223 areas in humid eastern Madagascar. This is difficult—not to mention dangerous—work since
224 rosewood with 1t per m^3 is one of the densest woods on earth (the log needs to be cut into
225 'manageable' pieces of 2–3 m, and then dragged by manpower out of the forest, often on steep
226 terrain, to a river. Rosewood cannot float, so it needs the support of other, lighter logs. Once
227 extracted out the forest, the logs are stockpiled, mostly in well-concealed localities.

228

229 Contemporary wooden crafts in any Malagasy urban centre are made exclusively using what
230 craftspeople call 'palisander', something which has replaced rosewood everywhere in recent years.
231 In the past, artisans would have tinted wood in a dark reddish tone and referred to it as 'rosewood'.
232 However nowadays, they invest effort in darkening the wood, albeit keeping it browner, without
233 any red tones. These carved pieces are sold under the label of palisander. This language detail has
234 its origins in the 2009 'rosewood crisis' when the international community was appalled by the
235 events taking place in Madagascar, while there was political turmoil. In English, the French word
236 'palissandre' translates to rosewood, as does the French 'bois de rose'. Hence, there is no proper
237 distinction between palisander and rosewood, in any language: both belong to the same tree genus,
238 *Dalbergia*. The confusion or lack in clarity—coupled with the afore-mentioned paucity of
239 knowledge about the genera *Dalbergia* and *Diospyros,* has benefited the timber traffickers in

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240 francophone countries for years. They have cunningly used it to their advantage. Timber traders
241 interpret a ban on rosewood as a signal to export 'palisander' and they quickly apply the misnomer
242 of palisander to any logs which they want to export. This vernacular French term never existed in
243 English and there are no scientific nor practical, reasons to adopt it in English, other than to aid and
244 abet timber trafficking, or be able to manipulate or circumvent regulations.

245

246 Something similar has been identified in the rosewood trade between Zambia and China: according
247 to Cerruti & Gumbo (2018), the most common name for rosewood in Zambia is 'mukula', "(…)
248 but because several different species are categorised as mukula, and because comprehensive
249 inventories are lacking, current rosewood stocks are not known." They add that "this means Zambia
250 doesn't benefit much from the rosewood trade." And that, as is the case in Madagascar, "its forests
251 are being decimated, causing serious environmental degradation."

252

253

254 Understanding the forest governance context

255 The use of natural resources like forests is bound to become increasingly complex while values
256 and the nature of stakeholders undergo change. This poses growing challenges to the forest
257 governance regime, whose efficiency or 'success' can be assessed through environmental and
258 social criteria and indicators (e.g., Duffy, 2006; Phelps et al., 2010; Horning, 2012). In Madagascar,
259 prior to the National Environmental Action Plan NEAP, forest governance was characterized by
260 the existence of two types of stakeholders: the first, the managers, was comprised of the Malagasy
261 State and the financial backers (i.e. International ENGOs). An interesting note here: at the time,

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262 there was only WWF international with less than 10 employees in Madagascar; the other big NGOs
263 joined later during the NEAP phases). A second category of stakeholders, the forest resource users,
264 consisted of operators and base communities (Rabesahala Horning, 2008).

265

266 During the period of the NEAP spearheaded by the World Bank—including three phases, 1990–
267 2008 (Mercier, 2006)—there was a strong push to accomplish forest conservation in Madagascar,
268 as elsewhere in Africa, through the process of formal decentralization of forest resource governance
269 (Waeber et al., 2016). This led to an increase in structural complexity and stakeholders: The
270 Malagasy State consisted of the public authorities and ministries: Ministry of Environment and
271 Forests MEF, with minister, cabinet and secretary general for the political aspects who regulated
272 the general management of forest finances and set out the rules of forest access and forest use. The
273 General Director of the MEF and its decentralized (regionally organized) structure presided over
274 technical management of the forest resources. Another stakeholder comprised of the financiers who
275 attempted to influence the allocation of the forest resources. National NGOs and related executive
276 structures were responsible for the implementation of actions on the ground. A separate group, the
277 Operators, were interested in the timber products from forests. They competed with local
278 communities, who are the stakeholders with the least political power, making a living from the use
279 of timber and non-timber products.

280

281 New policies like the GELOSE (10 September 1996, law No. 96 - 025, and in 1997, the law was
282 incorporated into the new national forestry policy (Law 97 - 107 and Decree 97 – 1200) have not
283 yet proved to be sustainable (Antoine et al., 2004; Raik & Decker, 2007; Rasolofoson et al., 2016).

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As forest governance in Madagascar encounters growing challenges, we are seeing what could be described as a game of 'pinball' in the higher echelons of the political arena: the chair of the Ministry of Environment, for one, seems to be most volatile of all, undergoing frequent changes and replacements. These changes have implications further down the ladder as each new Minister is bringing his/her own staff, which translates in slowing down forest regulation policies at the cost of efficient forest management and monitoring. Forest governance has proven to be less effective than hoped and mapped out in the NEAP roadmap. Deforestation has proven to be unstoppable, with 2017 being a disastrous year for the remaining forests and its unique biodiversity (Figure 3). The years 2009 and 2010 have been the worst from a rosewood trafficking perspective (Randriamalala, 2010; Mason et al., 2016), while escalation of forest cover loss at national level has increased markedly from 2013, with a peak in 2017 (Figure 3).

Discussion

It is somewhat disconcerting to observe how forcefully the World Bank has been acting when it comes to dealing with this complex issue (see Waeber & Wilmé, 2013) that has all characteristics of a typical wicked problem (sensu Rittel & Webber 1973). Is facilitating the sale of the stocks—as per the Government of Madagascar's recently published Business Plan (see Anonymous 2018)—really the best solution for the Malagasy nation as a whole? The World Bank remains silent about the fact that Malagasy rosewood stocks are illegally sourced (Schuurman, 2009; Schuurman & Lowry, 2009; Randriamalala & Liu, 2010; Wilmé et al. 2009) while all *Dalbergia* spp. are CITES II listed. Selling the stocks can only be made possible if the government, with the support

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306 of national and international institutions, legalizes the illegal. This process of legalizing is mostly
307 achieved in the form of a meeting not dissimilar than that described by the economist Stiglitz, i.e.
308 where a few representatives are invited to sign an attendance list—and in most cases, the
309 representatives lack any power to counteract the 'solution' already put in place and presented by
310 the institution organizing the meeting (as was the case of the June 2018 workshop). There is a high
311 risk that it will swiftly prompt loggers to re-enter the forests to fell and sell more precious wood.
312 A vulnerable, volatile political setting is the perfect time, from a trafficker's perspective, to sell
313 timber. If this happens now, following the World Bank workshop that has preceded the upcoming
314 election, it will be a case of history repeating itself: the same process has been occurring for decades
315 (Randriamalala& Liu, 2011; Figure 2, p. 16).

316

317 Burning or destroying the stocks by any means are seemingly the best alternative to selling them
318 off in order to avoid further corruption at the expense of people and biodiversity. However, there
319 are various reasons for speaking against this alternative: (i) most Malagasy citizens do not want to
320 destroy their natural resources, as a matter of principle; (ii) burning the stocks is ecologically
321 inappropriate; there will be a cost linked to any kind of destruction of the stocks ensuring proper
322 management and transparency; and (iv) probably the most important one, it may trigger demand
323 for more timber (similar as to selling the stocks).

324

325 Conclusion

326 The intense pressure on fast diminishing natural resources such as rosewood and other precious
327 timber in Madagascar and elsewhere will increase the value of such stocks within the coming

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decades. We need to learn from the story of ivory stocks, of which the burning did not help wild populations of African elephants (e.g., Biggs et al., 2016), and where selling of the stocks, despite CITES Appendix I listing, did not slow down further slaughtering of wild elephants. Traders generally sit on their stocks, waiting for better market conditions. We believe there is a case for the controversial stocks to be secured somewhere in Madagascar—for example, deep in an artificial lake. Therefore, this option may be a way for the rosewood stocks to truly benefit future generations of Malagasy people. If such an alternative is not adopted, China for the most part, will take the lion's share, just as has happened in the past—but see parallels to the case of ivory. We have to question if postponing the same issues for some decades, can be a viable future solution. If the timber is sold in 30 years from now, would it be a by means of a transparent process that benefits the Malagasy people and the island's biodiversity? Would the same institutions again, sit together only to have the same discourse as just happened in June? Given our paucity of knowledge on the delineation of the various Malagasy rosewood and ebony species, their ecology, distributions and conservation status, is it not completely premature to take risks, which would further put additional pressure on the remaining wild populations of these tree species? In the situation we have outlined, there is concern that Malagasy rosewoods may even be removed off the CITES Appendix II, when actually, up-listing them to Appendix I, seems to be the best way forward in this typical case of wicked problems. It would facilitate a more transparent handling of the stocks and render the current rosewood situation less politically motivated.

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Caption for figures

Figure 1. Corruption Perceptions Index and the rank of Madagascar in the Global World. The best rank has been achieved in 2008 when Madagascar was 85th out of 180 countries scored (Transparency International, 2018).

Figure 2. Trends in the Human Development Index for Madagascar and Sub-Saharan Africa between the lines of Low and Medium human development. Starting in 2012, Madagascar's index falls below the mean value of Sub-Saharan Africa (UNDP, 2016).

Figure 3. Cumulative tree cover loss with different canopy cover; the three-year moving average may represent a more accurate picture of the data trends to uncertainty in year-to-year comparisons. (Global Forest Watch, 2018)

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