

1 Lions in the modern arena of CITES

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20 **Abstract**

21 Lions have often been discussed under the Convention on International Trade in Endangered Species
22 of wild flora and fauna (CITES). While CITES decisions on species trade regimes are ostensibly based
23 on science, species data are often inconclusive and political considerations inevitably determine
24 outcomes. We present the context of lion conservation and the technical and political processes of
25 CITES to illuminate how a failed uplisting proposal nonetheless resulted in an unprecedented trade
26 restriction as well as conservation initiatives beyond the CITES trade function. We conclude on the
27 limitations of science to guide future directions of CITES debates, leaving politics and ethics to shape
28 decision making.

29 **Introduction**

30 The lion (*Panthera leo*) is listed as Vulnerable in the IUCN Red List of Threatened Species (Bauer et al.
31 2015b); the regional population of West Africa as Critically Endangered (Henschel et al. 2014) and
32 the sole remaining population outside Africa, in India, is listed as Endangered (Breitenmoser et al.
33 2008). Severe reductions in range and numbers have been reported (Bauer et al. 2015a), and many
34 authors have argued for increased conservation investments for this species (Lindsey et al. 2016;
35 Packer et al. 2013a). There is growing political engagement in lion conservation, through national
36 and international policy instruments (Trouwborst et al. 2017).

37 Lions have also been much discussed under the Convention on International Trade in Endangered
38 Species of wild flora and fauna (CITES)¹. CITES categorises species in three appendices² by the level
39 of protection afforded from international trade. Species in Appendix I are threatened with

¹ Throughout the text, we use conventional CITES reference style in [square brackets] for official texts related to Conferences of Parties (Conf, CoP) and their Committees I or 2 (Com I, Com II) and Working Groups (WG), Resolutions (Resolution Conf.), Decisions (Dec), Animals and Standing Committee documents (AC, SC), Information documents (Inf), Reports (Rep.) and Revisions (Rev.). These are all archived and searchable on www.cites.org

² Species are included on Appendix III unilaterally by countries to establish national export restrictions; Appendix III is not discussed in this paper.

40 extinction and no commercial international trade is permitted for wild specimens. Species in
41 Appendix II are not necessarily threatened with extinction but may become so unless trade is
42 regulated; commercial international trade is permitted at the discretion of the exporting Party,
43 which must determine scientifically that such trade will not be detrimental to the species' survival
44 and issue a permit for each shipment. Populations may be 'split-listed' as is the case with lions; since
45 1977 African populations fall under the family-wide Appendix II listing for all Felidae not listed on
46 Appendix I, where the lion population in India is included³.

47 At the 13th Conference of Parties (CoP 13) in 2004, Kenya proposed an uplisting of all lion
48 populations in Africa from Appendix II to Appendix I [CoP 13 Prop. 6], and nine African countries led
49 by Niger again proposed the same uplisting at CoP 17 in 2016 [CoP17 Prop. 4]. Neither proposal ever
50 made it to the floor for voting; instead they were replaced by alternatives emerging from processes
51 of negotiation that are bound by the intricacies of CITES. Based on our own and our colleagues'
52 experiences at CITES meetings but duly observing confidentiality⁴, we show how the outcome can be
53 understood in the context of CITES jurisprudence and its intersections with science, stakeholders,
54 diplomacy and advocacy in international lion conservation.

55 **Threats to the lion**

56 Threats to lions are well documented; the top three are not trade-related: prey depletion, habitat
57 encroachment and conflict over livestock depredation. Two additional threats are trade-related:
58 trophy hunting and lion bone and parts trade, but their impact is debatable and doubtless varies
59 from place to place.

³ The taxonomy of the Felidae has recently been revised by IUCN, whereby the Asian lion was clustered with the lion in North (extinct), West and Central Africa into *P. leo leo*; if this revision is accepted by CITES this listing can be changed from a taxonomic to a geographic designation (i.e. *P. leo leo* populations in Asia); CITES has mechanisms to deal with such technicalities.

⁴ Plenary sessions are public, but working groups are not and as participants we can only describe the outcome, without giving detail on process or quoting other participants.

60 Trophy hunting can secure lion habitat and provide community benefits (Lindsey 2008; Macdonald
61 et al. 2017), but regulations are often inadequate or poorly enforced (Lindsey et al. 2013; Packer et
62 al. 2011). Despite some detailed studies (Bauer et al. 2017; Loveridge et al. 2016; Packer et al. 2009)
63 there are knowledge gaps regarding the consequences of trophy hunting for lion conservation, and
64 irreconcilable differences of opinion on ethical aspects (Macdonald et al. 2016b; Macdonald et al.
65 2017). Ethical arguments are not part of CITES criteria, but they are part of the wider discussions on
66 sustainable use from both perspectives (duty to protect animal life vs. duty to provide human
67 livelihoods).

68 The situation is radically different for trade in parts and derivatives, which is poorly understood.
69 Illegal under national legislation in all African range states, under the Appendix II listing international
70 trade could have occurred legally, but it has not as indicated by an absence of records from the
71 CITES Trade Database. Nonetheless, trafficking of lion body parts for African traditional medicine has
72 occurred throughout the continent; the level is not possible to quantify but it may be on the rise
73 (Williams et al. 2017a, b). International trade in lion bone to Asia has emerged recently, with a legal
74 component, involving mainly farmed South African lions, totalling over 6,000 skeletons since 2008,
75 and an illegal component that could develop into a threat to wild populations (Williams et al. 2017a).
76 Williams et al. (2015) suggest that the rise in lion bone trade was stimulated by CITES efforts in 2007
77 to curtail the farming of tigers (*Panthera tigris*) for their bones in Asia. Lion bone has been used since
78 2005 as a covert⁵ substitute for tiger bone in expensive exotic wines made in China (Nowell and Xu
79 2007). Demand was met with the by-product of the 'canned hunting industry' in South Africa (trophy
80 hunting of captive bred lions in confined spaces), with no evidence for supply from free ranging
81 populations (Williams et al. 2015). Lion bone products could threaten tigers through perpetuating
82 demand and continuing to stimulate poaching, and could also establish a similar dynamic for lions

⁵ Covert meaning that consumers are given the impression that lion ingredients are tiger ingredients – tiger use in traditional medicine has a long history but has been prohibited by the Chinese government since 1993.

83 which otherwise has no cultural history of use in Asia. The first mention of this trade called it
84 'potentially catastrophic' (Nowell and Bauer 2006) and many conservationists suspect that it drives
85 increased lion poaching (ALWG 2016), but a recent study provides little evidence as yet (Williams et
86 al. 2017b).

87 South Africa is unique in that it has a captive breeding industry with an estimated 8,000 lions, used
88 in the tourist industry for cub-petting, walking with lions and canned hunting (Moorhouse et al.
89 2017). It has been criticised by elements of civil society and in an IUCN Resolution
90 (<https://portals.iucn.org/congress/motion/009>), but when the government attempted to end
91 canned lion hunting the Supreme Court of Appeal ruled that lion farming had nothing to do with
92 conservation and cannot be regulated by conservation authorities
93 (http://www.justice.gov.za/sca/judgments/sca_2010/sca10-151.pdf accessed 8/9/2017). South
94 Africa has two large and viable wild populations that are effectively protected (Limpopo ~2000 lions
95 and Kgalagadi ~1100 lions), but the rest of its lions are in fenced reserves that are increasingly
96 managed as a metapopulation (Miller and Funston 2014; Miller et al. 2015). Fencing, translocation,
97 population control and other intensive management practices are common in South Africa's lion
98 conservation, in striking contrast to other African countries where lion management is considerably
99 less intensive. South Africa was also the host of CITES CoP 17 in September 2017; the proceedings
100 were actively covered by national media and it became an event of national concern. This influenced
101 the negotiating position of their delegation and possibly the outcome as described below.

102 **The technical and political workings of CITES**

103 With 183 government signatories ('Parties'), nearly every country in the world is a member of CITES,
104 including all lion range countries except South Sudan. CITES is stronger than many other
105 environmental conventions because it can impose restrictions (such as trade sanctions) on any Party.
106 It is essentially a trade convention by enforceable 'hard law,' but it is also recognised as an

107 important policy instrument for wildlife conservation by affecting domestic trade and non-trade
108 conservation issues through 'soft law' - Resolutions, Decisions, and other mechanisms agreed by
109 consensus or by two-thirds majority vote. Although CITES is legally binding on States it is not self-
110 executing; it can only be fully implemented when specific national (also called 'domestic' in CITES
111 parlance) measures have been adopted for that purpose. CITES is based on the principles that
112 wildlife trade is beneficial for human well-being, that trade is not detrimental to the traded resource,
113 and that sustainable use should be the norm, unless evidence suggests otherwise. This assumption
114 of 'innocent until proven guilty' is somewhat modulated by the precautionary principle, but for the
115 many species that are not threatened by trade, CITES is irrelevant to their conservation.

116 Species must meet trade and biological criteria for listing on CITES Appendix I; the trade criterion is
117 that the species 'is or may be affected by trade'. The biological criteria are partly aligned with the
118 IUCN Red List criteria for Endangered; they use very similar thresholds [Resolution Conf. 9.24 (Rev.
119 CoP17)], but they do not reflect IUCN's elaborate, structured and transparent guidance on how to
120 use data deficiency, uncertainty, the precautionary principle and projections of future declines.
121 These can be used in CITES proposals, and Parties are free to interpret such arguments as they see fit
122 'in the best interests of the conservation of the species' either for or against trade. IUCN and
123 TRAFFIC refer only to CITES criteria in the scientific evaluation of every proposal that they publish
124 before every CoP [e.g., CoP17 inf. 11]⁶. One of the Appendix I biological criteria is a documented
125 decline of more than 50% over three generations; however, that figure is only indicative and listing
126 remains a political decision and is not automatic. CITES biological criteria do allow for the listing of
127 species in the absence of reliable documentation of a decline of this magnitude⁷, but the fact that

⁶ At CoP17 the IUCN delegation made a statement ('intervention') that included the following: 'Parties have never provided any clear guidance on how to implement a precautionary approach in the application of the CITES listing criteria; nor have they given guidance on how to handle information of uncertain quality' and 'IUCN and TRAFFIC have never considered it appropriate to apply our own views on risk tolerance or precaution when carrying out the Analyses' (D. Challender, pers. comm.).

⁷ Some species with declines below threshold are uplisted without Parties devoting their scarce resources to assiduous review of the science, but even high-trade high-profile species with known declines of around 40%

128 lion decline was inferred at 43% (Bauer et al. 2015b) made the decision making process less
129 technical and more political; Parties had to evaluate additional arguments.

130 While it was important to map the technicalities that brought us here, we now turn to a more
131 political analysis of stakeholders to understand how things unfolded.

132 **Stakeholders' roles at the CITES CoP**

133 At CoPs, Party delegations sit in the front of the large meeting space from which observers are
134 excluded. Observers are arrayed behind the Parties and can ask to speak (time permitting); they are
135 sometimes included at the discretion of the session Chair when forming working groups where most
136 of the negotiations take place. However, while separate in appearance in practice observers wield
137 considerable influence at CITES. Some States have large delegations of seasoned diplomats
138 supported by experts and trainees, others have only a few civil servants led by a Director of Wildlife.
139 Most delegations will have had voting instructions on topics of interest to their State; their freedom
140 to manoeuvre is limited and depends on their ability to communicate with decision makers back
141 home. For other topics they follow their own judgement, partly relying on other Parties and
142 observers to inform them.

143 Among the observers there is a similar diversity; most have strong opinions and lobby Parties to
144 adopt their views. Activities start long before the CoP when lobbyists work in countries where they
145 have a vested interest to influence national position statements and voting instructions, but it
146 reaches frenzy at the CoP. Their advocacy is sometimes directly aimed at Party delegates, but more
147 often indirectly by addressing their constituencies through events, reports and media.

148 Many NGOs imply to the public that wildlife trade is generally bad; sometimes they mix their
149 communication about CITES with issues tangential to international trade, e.g. animal welfare,

have been uplisted; the Vulnerable African pangolin species were uplisted along with the (Critically)
Endangered Asian species, even without going through a working group and with thresholds only implicitly and
lookalike issues only briefly discussed in plenary (see [Resolution Conf. 17.10]).

150 poaching, pollution or domestic trade. User groups (e.g., associations involved in trade, hunting or
151 medicinal use) also use CITES for their agendas to promote trade, arguing that trade restrictions
152 distort market forces that give monetary value to species that in turn can be used to support their
153 conservation. However, this 'kill to save' message is complex and less easily communicated through
154 mass media. In the CITES context, it is not uncommon for organisations to draft interventions or
155 ghost-write documents submitted by Parties; documents submitted by governments are not given
156 individual authorship, and government authorities with limited resources and many other duties
157 often rely upon civil society to assist them with the many burdens placed upon them by the
158 Convention.

159 On the users end of the lion stakeholder spectrum, two industries participate in CITES debates: the
160 trophy hunting industry (led by organizations such as Safari Club International and professional
161 hunters' associations) and the South African lion breeding and canned hunting industry (led by the
162 South African Predator Association). This creates a strong alliance between these organisations and
163 States where trophy hunting is part of their economies and wildlife conservation management
164 regimes (including South Africa and Tanzania among others).

165 Many animal welfare organisations oppose lion trophy hunting on ethical grounds (e.g., Humane
166 Society International and the Campaign Against Canned Hunting) and have developed close
167 relationships with some States that prohibit lion trophy hunting (including Kenya and Botswana).
168 They are aware that ethical arguments do not carry weight in CITES and their technical support to
169 States is focused on biological and trade information (Brels 2017).

170 Some conservation organizations take a neutral position, assisting policymakers to make science-
171 based decisions (to the degree that is possible in the absence of conclusive data). In the CITES
172 context, IUCN and TRAFFIC are the leaders of this group; together they produce analyses of
173 proposals to change trade rules for species, as well as many other reports and contributions. The

174 work of these organizations is perhaps most relied upon by the major Western governments, among
175 others the US and European Union. The US and EU have tended to play a mediating role in CITES
176 lion debates, but individually each has taken stricter measures on lion trade than they have argued
177 for at CITES.

178 Arguments from interest groups are couched in scientific terms but use differences in data sets and
179 methodologies to reach opposite conclusions. Rebuttals in scientific literature proposing alternative
180 views based on similar data are common and include polemics around lion management (e.g. (Creel
181 et al. 2013; Packer et al. 2013a; Packer et al. 2013b). The data on lion declines (Bauer et al. 2015a)
182 were also challenged scientifically (Riggio et al. 2015), but the challenges were dismissed and never
183 undermined the conclusions in the first place (Bauer et al. 2016). The use of uncertainty in
184 advocating opposite policies is well known from climate change literature (e.g. (Anderegg et al.
185 2010; Freudenburg and Muselli 2013); in a biodiversity context it has focused on the uncertainty
186 paradox and the precautionary principle (Prato 2005; van Asselt and Vos 2006; Vardas and
187 Xepapadeas 2010). The case we present provides examples of two published aspects of CITES
188 procedure; (1) contradictory recipes on weighing precaution against countervailing reasons
189 (protection vs sustainable use) and on uncertainty about threats and the best response to them
190 (Dickson 1999), and (2) the conclusion of Gehring and Ruffing (2008) that ‘the listing procedure is
191 capable of depriving stakeholders of their bargaining power.... but it reaches its limits where
192 sufficient convincing information is lacking’.

193 The ‘elephant in the room’ at CITES is the African elephant; struggles over ivory trade have spilled
194 over to affect the outcomes of debate concerning other African species. The 1989 uplisting of the
195 African elephant to Appendix I ([https://cites.org/sites/default/files/eng/cop/07/E07-Amendments-
196 to-Appendices.pdf](https://cites.org/sites/default/files/eng/cop/07/E07-Amendments-to-Appendices.pdf)) led to bitter divisions between those African States which have healthy elephant
197 populations and see ivory sales as a national right and a key way to support their elephant
198 management and those which typically have suffered catastrophic poaching and remain steadfastly

199 opposed to any trade opening (Biggs et al. 2017). Subsequent failed downlisting attempts and
200 approved modifications of the ivory trade ban have further exacerbated these divisions, and this has
201 provoked a tendency, where other African species are concerned, to seek consensus even though
202 the same fundamental tensions remain. Similar tensions have also dominated debates at the
203 International Whaling Commission (Clapham 2015), with NGO's playing an important but sometimes
204 counterproductive role (Sakaguchi 2013). Wary of an 'elephant scrum', stakeholders in African lion
205 conservation went to great lengths to negotiate the consensus compromise that we next describe.

206 **Lions at CITES: two uplisting proposals for one annotation**

207 At CoP 13, in 2004, Kenya proposed an uplisting of all African lion populations to Appendix I;
208 proponents knew it would face strong opposition from Parties with significant lion trophy hunting
209 but probably hoped to find middle ground. Behind the scenes, Range States and major stakeholders
210 negotiated alternatives that Kenya presented in its withdrawal statement [CoP13 Com. I. Rep. 13
211 (Rev. 1)]. It consisted of agreement on a process of Lion Conservation Strategy formulation to
212 reverse or at least halt lion declines, later published as IUCN (2006a, 2006b) and on a Periodic
213 Review; a long process that never reached a full conclusion before being made redundant by the
214 decisions at CoP 17.

215 After 2004 there was initial optimism, but over time it became clear that the conservation strategies
216 were not adequately implemented, that the Periodic Review was not coming to conclusion and that
217 lion populations continued to decline. Where subsequent IUCN Red List assessments had been
218 slightly modified versions of a Vulnerable categorization in 2008, the 2015 re-assessment was a fresh
219 look based on new methodology and presenting substantial new evidence of declines (Bauer et al.
220 2015b). Finally, the killing of 'Cecil' created important momentum to review lion status (Macdonald
221 et al. 2016a; Nelson et al. 2016). The momentum and the new evidence prompted a coalition of
222 Range States to submit a new proposal to transfer all African lion populations to Appendix I for CoP

223 17. Although Kenya supported the proposal it was felt that other perhaps less polarizing countries
224 should take the lead and so Niger, together with Chad, Côte d'Ivoire, Gabon, Guinea, Mali,
225 Mauritania, Nigeria and Togo, submitted [CoP17 Prop. 4].

226 The proposed uplisting would not have affected captive lion bone exports, as Appendix I species
227 bred in captivity for commercial purposes are treated under CITES as belonging to Appendix II⁸. Also,
228 wild-caught trophy-hunted specimens could still be exported since such trade is considered non-
229 commercial. However, the major trophy exporting States and their allies in the hunting industry felt
230 strongly that uplisting would lead to curtailment of lion trophy hunting. Parties have in the past
231 restricted trophy exports through quotas for Appendix I species (e.g., leopard, *Panthera pardus*), and
232 there was a distinct possibility domestic legislation of some Parties would trigger similar lion trophy
233 import restrictions. Parties may enact 'stricter domestic measures' for CITES-listed species at any
234 time, and in the two years prior to CoP17 the major importers in Europe and the US had banned
235 trophy imports from West and Central African countries and tightened conditions for allowable
236 imports from East and Southern African countries, and the US banned imports of lion trophies from
237 captive origin completely⁹.

238 Before CoP 17, both the US and the EU had published their negotiating positions. The US supported
239 the proposal [[https://www.fws.gov/international/pdf/CoP17-Final%20Notice-WEB-tentative-US-](https://www.fws.gov/international/pdf/CoP17-Final%20Notice-WEB-tentative-US-positions_9-23_16.pdf)
240 [positions_9-23_16.pdf](https://www.fws.gov/international/pdf/CoP17-Final%20Notice-WEB-tentative-US-positions_9-23_16.pdf) accessed 9/1/17); the EU opposed but was supportive of split-listing,
241 transferring lion populations of West and Central Africa to Appendix I
242 (<http://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-437-EN-F1-1-ANNEX-2.PDF>

⁸ One example is that several Appendix I alligator and crocodile species are bred commercially for the skin trade.

⁹ US policy is possibly in flux with current decisions 'on hold' as per presidential tweet of 17/11/17 (<https://twitter.com/realdonaldtrump/status/931685146415255552?lang=en> accessed 9/1/18), but this pertains to the inclusion of certain countries on the list of countries where trophy hunting enhances the survival of the species and from where trophy imports are therefore allowed. It is unclear if this will ultimately affect lion policy as set out in the Endangered Species Act listing (https://www.fws.gov/endangered/what-we-do/pdf/Lion_FL_FAQs_Final.pdf accessed 9/1/2018).

243 accessed 9/1/17). The EU delegation was bound by this European Council decision to vote against
244 the proposal, but within that stricture free to find compromises. Knowing that the criteria were met
245 only under certain interpretations, and knowing that a block with 28 votes did not support the
246 proposal, most informed participants anticipated that a compromise would be negotiated. Indeed,
247 at the CoP the uplisting proposal was only briefly discussed in plenary and then referred to a working
248 group consisting of proponent countries, other Range States, major trophy importing States and
249 NGO observers, a typical process for high-profile proposals. Since the original proposal did not
250 emphasise the potential link to Asian big cats, the working group did not include key actors in tiger
251 conservation or in lion bone trade.

252 The working group found limited support among Parties for uplisting and rejected split-listing as too
253 unwieldy¹⁰. The group looked for other protection instruments under the current Appendix II listing,
254 and with a great deal of unofficial input from NGO observers came up with a consensus approach
255 comprised of two components. The first was a set of Decisions intended to stimulate various
256 conservation initiatives, including initiatives unrelated to trade such as surveys and conflict
257 mitigation, all of which had been previously discussed at a Range State meeting convened by the
258 Convention on Migratory Species in Uganda
259 (http://www.cms.int/sites/default/files/document/African_Lions_Meeting_Communique_E.pdf
260 accessed 8/9/2017) . The second was an annotation to prohibit commercial trade in African lion
261 parts and derivatives, such as would have been accomplished under an uplisting. Initial discussion
262 favoured a zero quota for all lion parts, wild and captive-bred, but this was unacceptable to South
263 Africa, which argued that there is no evidence yet for an impact of trade in bones of captive origin on
264 wild populations. There may have been sufficient support for the annotation to pass if put to a vote,

¹⁰ CITES guidance states that split-listing should be avoided due to the enforcement problems it creates [Resolution Conf. 9.24 [rev. CoP17].

265 but for a variety of political reasons¹¹ and in pursuit of consensus the annotation was revised to a
266 zero quota for lion parts and derivatives (except skins¹²) of wild origin for commercial purposes, and
267 a quota to be set by South Africa and communicated to the CITES Secretariat for bones, bone pieces,
268 bone products, claws, skeletons, skulls and teeth for commercial purposes sourced from its captive
269 lions. South Africa set that quota about a year later at 800 skeletons
270 (https://www.environment.gov.za/mediarelease/lionexportquota_communicatedtocitessecretariat
271 accessed 8/9/2017), which roughly corresponds to the number of hunting trophies from captive
272 origin and therefore suggests implicitly that lions would not be purposely bred for their bones¹³. It is
273 noteworthy that no other Range State sought to retain an option on future quotas, presumably
274 indicating that none has any intention to start a captive lion industry.

275 Because of the potential threat it poses to wild lions, South Africa's quota allowance is the
276 controversial element in an otherwise broadly supported compromise to curtail trade through
277 Appendix II annotation instead of a less politically palatable Appendix I uplisting. Also, the
278 annotation permitting trade in commercially farmed lion bone is inconsistent with CITES language on
279 tiger farming [Dec. 14.69]: "Parties with intensive operations breeding tigers on a commercial scale
280 shall implement measures to restrict the captive population to a level supportive only to conserving
281 wild tigers; tigers should not be bred for trade in their parts and derivatives." Although the tiger is
282 listed on Appendix I and the African lion on Appendix II, the intermingling of the two trades suggests
283 a similar and consistent approach under CITES is warranted. The negotiators at CoP17 dealing with

¹¹ Although not a proponent, South Africa was defeated on elephant and rhino proposals it supported; Parties may have been reluctant to risk a repeat performance and may also have wished to avoid a plenary debate that could have undone the entire compromise. Finally, South Africa is widely admired for its domestic conservation achievements, and in the absence of compelling evidence of negative conservation impacts, Parties may have judged it impolitic to issue such a direct rebuke to the venue host.

¹² Such is the heat and pace of negotiations that even working group participants were not able to subsequently clarify why an exception was made to allow commercial trade in wild and captive lion skins.

¹³ The impacts of the US import ban on the South African lion breeding industry are not yet clear but it seems unlikely that lion bone supply will be disrupted. Captive lion trophy imports to the EU continue as under its policy they could only be curtailed if wild lions were being fraudulently laundered as captive-bred (<http://www.europarl.europa.eu/sides/getAllAnswers.do?reference=E-2017-001247&language=EN> accessed 9/1/18)

284 the lion listing were aware of this inconsistency, but in the absence of published evidence of a
285 negative impact trade in captive lion bones on wild lions, the compromise was considered the most
286 viable option at the time.

287 In parallel, lion trophy hunting was the subject of an EU proposal on ‘harvest and export of hunting
288 trophies’ [CoP17 Doc. 39.1 Annex 4] that was also sent to the lion working group. It emerged much
289 weaker, in the form of studies and capacity building among the subsidiary conservation initiatives.
290 Separately, a Resolution was adopted on “Trade in hunting trophies of species listed in Appendices I
291 and II” which sets out general guidelines for exporting Parties to improve sustainable management
292 of trophy hunting [Resolution Conf. 17.9].

293 On the last day of CoP17, in the final plenary session, the Decisions drafted by the working group
294 were adopted without further debate [Dec. 17.241-17.245]. The annotation is historic in two ways: it
295 is the first successful attempt to revise a felid listing under CITES since listing guidance was adopted
296 in 1994, and it is the first to restrict trade in captive-bred specimens.

297 **Conclusion**

298 Lions are back where they were two millennia ago: centre stage of the arena, where the crowd tries
299 to influence the decision of the modern senators to turn their thumb up or down to trophy hunting
300 or bone trading *venatores*¹⁴. Intriguingly, for observers of conservation realpolitik, the debate about
301 lion conservation began with a momentum that focused on regional differences and trophy hunting,
302 but then veered towards a consensus impacting commercial trade with unknown, perhaps perverse,
303 consequences on lion conservation. Ironically, while intended to move away from elephant trophy
304 hunting politics, the lion is now in a position where its bones have become an ivory-like asset
305 potentially leading to more elephant analogy and deadlock (Biggs et al. 2017). However, lion
306 stakeholders have demonstrated the capacity to compromise and reach consensus that Biggs et al.

¹⁴ That subset of gladiators who fought animals not people

307 (2017) found lacking, and in contrast to ivory lion bone is a new product for which consumer
308 awareness has not yet fully developed (Williams et al. 2017b). In practice, the prior prevailing
309 patterns of legal lion trade will hardly be affected. Legally, but less so practically, the annotation
310 restricts a trade that was not targeted at all: international trade in artefacts from wild lions
311 (souvenirs and objects for cultural or traditional use). The greatest conservation benefits for the
312 African lion may derive from other decisions agreed at CoP17 that fall outside its trade-regulating
313 function.

314 It is doubtful whether many Parties at CoP 17 had read the draft lion Decisions in their entirety; Asia
315 especially will have a more prominent role in future. India, as lion Range State and outspoken
316 opponent of tiger farming and trade, is likely to add its considerable weight to the debate. Shifts in
317 China's attitudes and actions towards wildlife and broader environmental issues (viz. climate) may
318 also be key to the geopolitical arena.

319 The impact of policy changes on lion conservation status is hard to measure due to the inherent
320 difficulty of counting lions, time-lag in population response to threats, Red List assessment
321 periodicity and problems of attribution in a sector with complex and dynamic cause-effect relations.

322 If any, impact of CITES decisions on lion conservation status would be measured over a period that
323 spans two or three CoPs, by which time policy may already have changed. Market fluctuations are
324 easier to monitor than lion numbers, but data on illegal trade are inherently problematic and even if
325 we had reliable data these could still be used for opposite arguments in the absence of consensus
326 over causal links between trade and conservation status. The uncertainty in data and the ambiguity
327 in interpretation are unlikely to be resolved by science within a policy relevant time frame; politics
328 and ethics are likely to remain dominant forces in lion policy formulation.

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