An expert opinion from the IUCN Species Survival Commission and its Cat Specialist Group in response to the request from the Government of the People's Republic of China for scientific input to its review of domestic tiger trade policy

The State Forestry Administration (SFA) of the People's Republic of China is currently reviewing China's policy regarding the ban in domestic trade in tiger products. The question under dispute is whether legalising the selling of derivatives from farmed tigers would encourage or depress the poaching of tigers in the wild and illegal trade in their parts. The SFA has invited the tiger Range States and international organisations to express their opinion, based on scientific evidence.

The IUCN Species Survival Commission (SSC) with its Cat Specialist Group welcomes the opportunity to be involved in this decision-making process, which is extremely important for the future of wild tiger populations. The species is listed as Endangered in the IUCN Red List, some subspecies are Extinct or Critically Endangered. However, we strongly doubt that the domestic trade decision can be based on available scientific evidence. Given the low resolution of all available data and the amount of uncertainty surrounding the impact of future developments, we see no way to assess the likely impact of the decision, whether positive or negative, scientifically and objectively. Therefore, we must rely on expert opinion as the next best option. The joint opinion of the Cat Specialist Group's tiger and Asian big cat experts is that re-opening the domestic market in China for derivatives from captive-bred tigers would pose too high of a risk on the wild tiger populations, and we strongly encourage the Chinese authorities to maintain the trade ban passed in 1993, at this time. Illegal killing and trade across international borders is such a fundamental threat to the remaining "critically endangered" wild tiger populations that we believe no Range State, alone, should take any decision that carries such a potentially high risk for others.

IUCN encourages all tiger Range States to work together and to develop, endorse, and implement a global tiger conservation strategy allowing effective conservation of the remaining wild tiger populations.

Background

At the International Tiger Symposium held at Kathmandu, Nepal, 16–18 April 2007, the Chinese delegation, spoken for by Mr Weisheng Wang, Director of the State Forestry Administration's Department of Wildlife Conservation, presented China's review of its domestic tiger trade policy. He stated that lifting the 1993 domestic trade ban to allow production and sale of products derived from captive-bred ("farmed") tigers is under consideration. Mr. Wang encouraged the tiger range states and the participating international organizations and experts to express their views on this. He explained that China is seeking international input on their domestic policy decision because the 1993 trade ban was originally imposed as part of an international cooperative effort to conserve the

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world's wild tigers. The ban led to the virtual elimination of what was once the world's largest consumer market for tiger bone medicines.

Legalisation proponents argue that a legal supply from captive tigers would satisfy consumer demand that is now being directed at wild tigers and lead to a reduction in poaching pressure. Mr. Wang reported that the basic principle that will be used to come to a decision on the proposal is that it must be demonstrated, based on scientific methods that lifting the trade ban would have a positive effect on wild tiger populations. A position paper reviewing tiger conservation in China, distributed by the Governmental Delegation of P. R. China at the CITES Conference of Parties 14 in June 2007 in Den Haag, Holland, confirmed that "current policy will not be changed unless it can be demonstrated that it will have a positive benefit for wild tiger populations internationally".

Scientifically-speaking, we see no way this question can be assessed in advance. Practical conservation very rarely allows for a scientifically robust experimental approach, and any ecological or economic modelling exercise would be based on limited or low-resolution input data and doubtful assumptions. No scientific assessment can eliminate the risk that pre-decision assumptions were wrong, and consequently, the decision must be based on weighing up the proposed benefit against the potential cost posed for wild tigers. In the absence of hard data, such a "risk assessment" is not truly a scientific process, but rather the combined judgment of the world's leading tiger and Asian big cat specialists, united in the IUCN Species Survival Commission's Cat Specialist Group, which we believe should be considered strongly in the final decision-making process. Our expertise and commitment is the conservation of tigers in the wild, and we therefore focus our comments on the possible effect of a lift of the trade ban on the remaining wild tiger populations. We understand that there are other aspects to consider, too, including the economic assessment of supply and demand, the viability and incentives of tiger farming and the humane and ethical considerations surrounding the practice of captive tiger breeding, but there are other, more competent experts to comment on these aspects.

Status and vulnerability of the world's remaining tiger populations

The crucial, though rhetorical question is whether legalisation of marketing derivatives and parts from tigers raised in captivity in China would increase or decrease illegal trade in wild tiger products and hence the poaching pressure on the remaining wild populations of tigers. The tiger is listed as Endangered in the IUCN Red List, three subspecies are already Extinct and another three Critically Endangered (www.redlist.org). It has been argued that the 1993 trade ban has not been able to stop illegal killing of tigers. This is true, but according to global tiger threat assessments, the trade ban has helped reduce poaching pressure on many tiger populations (Dinerstein et al. 1997; Sanderson et al. 2006; Dinerstein et al. 2007; Nowell and Ling 2007). This is particularly evident for the large tiger population in Russia, located on the border with northeast China (Darman 2007). In the early 1990s, the then-Chair of the Cat Specialist Group feared that Chinese demand for tiger parts would drive the tiger to extinction (Mills and Jackson 1994). That 87% of tiger range now consists of large, breeding populations shows that a measure of success has been achieved (Sanderson et al. 2006). Serious law enforcement is understood to be the key to reducing poaching and illegal trade, and there remains reasonable doubt that opening China's market for products from captive-bred tigers would support law enforcement in the tiger range countries.

The tiger's vulnerability to poaching pressure has been demonstrated by models developed by Cat Specialist Group members (Kenney et al., 1994; Damania et al., 2001). These models demonstrate that even low levels of poaching pressure (5–10%) can lead to the extinction of large, stable tiger populations. The impact of poaching pressure is worsened by other common threats, including poor wild prey base, and poaching can have longstanding deleterious consequences by increasing the vulnerability of small populations to loss of genetic diversity and stochastic catastrophic events.

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While there are still several large tiger populations remaining in the world, and these large populations comprise most of current tiger range, most tiger populations are categorized as small (Sanderson et al., 2006) and are highly vulnerable to poaching pressure.

On a global scale, the world's tiger population is estimated at approximately 5,000 (although tiger population estimations have improved in many countries, in others the estimates are less certain). Of these, probably only half (2,500) are mature breeding adults. We compiled estimates of annual tiger poaching from a variety of sources, with emphasis on statements by country delegates at the recent Global Tiger Forum meeting (Table 1). Poaching estimates are based on cases detected, and the true level of poaching is undoubtedly higher, because the detection rate is not 100%. The countries with the highest reported poaching levels are also those, which have invested the most resources in anti-poaching and trade monitoring: Cambodia, India, Indonesia, Nepal and Russia. Other countries with less investment are likely to suffer more poaching than they are able to detect.

Based on our limited data, it appears that a minimum of 2.3% of the global population is poached annually for trade. The poaching data does not include estimates of tigers killed to protect life and livestock, which further increases the rate of tiger mortality. It can be seen that the level of mortality is very close to and probably exceeds the 3% that has been estimated as the annual rate of increase for a healthy and well-protected tiger population in India (Karanth et al., 2006). The current level of tiger poaching appears to at least be a limiting factor for the global tiger population and is a major threat to many individual populations.

Table 1. Estimated tiger populations and annual numbers of tigers poached for commercial trade. Numbers in superscript refer to the table references. State = tiger range state; Population = estimated tiger population; Poaching = estimated annual numbers poached for commercial trade, Number = absolute numbers, % = percent of population estimated poached annually.

State	Population	Poaching		References
		Number	%	
Bangladesh	440	0	0	GTF 2007a
Bhutan	125	0	0	GTF 2004, 2007a
Cambodia	50	5	10	Chheang et al. 2006
China	50	0	0	GTF 2007a
India	1400[a]	50	2.5	WPSI 2007
Indonesia	400	40	10	GTF 2007a; Shepherd et al. 2004
Laos	No data	No data	-	-
Malaysia	500	0	0	GTF 2007a; Kawanishi et al. 2003; Govt. Malaysia 2007
Myanmar	350	7	2	GTF 2007a,b
Nepal	360	5	1.3	GTF 2007a
Russia	465	10	2.2	GTF 2007a; Darman 2007
Thailand	375	3	2.5	GTF 2007a,b; Tunikorn et al. 2004; Seidensticker et al. 1999
Vietnam	100	0	0	GTF 2007a,b
Total	4615	120	2.3	

[a]No recent number for the Indian tiger population has been published. The newest numbers will be released by end of 2007, and it is estimated that no more then 1200–1400 tigers are left in India (V. Thaper, pers. comm..).

There is consensus among tiger experts that the current level of commercial poaching threatens tiger population recovery and survival, and an increase would be extremely dangerous. The crucial question however is how legalizing domestic trade in captive-bred tiger products in China would affect tiger poaching – no change, increase or decrease?

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Opinion of tiger and other Asian big cat experts

It must be made clear from the outset that we do not have the necessary tools or data – whether from an economic or ecological perspective – to answer this question conclusively by means of modelling or any other scientific approach. Biological data are only available for a few populations, and economic data on the market for tiger products are lacking (i.e. a recent attempt by CITES to analyze tiger trade patterns failed due to lack of data; CITES, 2006). Models would thus suffer from dependence on unproven assumptions and rough estimation of parameters.

We could, therefore, only take an opinion poll among the Cat Specialist Group's leading experts in tiger conservation, regarding their views on the risk associated with a re-opening of China's domestic tiger trade. Following the Kathmandu symposium in April 2007 and at the request of the SFA, the Cat Specialist Group undertook this poll among the Asian big cat expert. We asked two questions which are relevant with regard to the trade ban lift:

1. In your opinion, how would the legalisation of marketing tiger products from tiger farms influence the poaching pressure on wild tiger populations?
2. Do you agree with the following statement: "The chance that legalizing domestic trade in captive-bred tiger products would reduce tiger poaching is worth taking the risk that it would increase tiger poaching, and therefore the government of China should legalise the market for captive bred tigers"?

To allow a quantitative representation, the answers were given in a relative scale from 1–6 (Fig. 1) and 1–5 (Fig. 2), respectively, also including a neutral or "impossible to judge" answer. Thirty-seven Asian big cat experts replied to the inquiry summarised in Fig. 1 and 2.

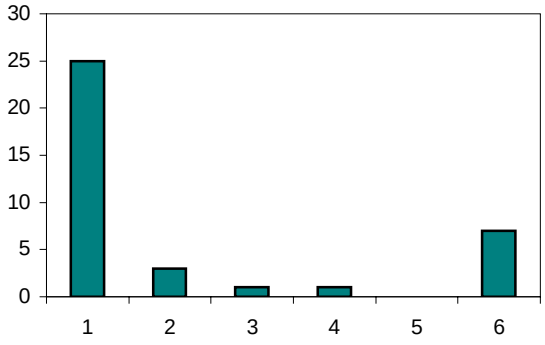

Fig. 1. Assessment of Asian big cat expert opinion of the most probable effect on wild tigers of legalizing domestic trade in captive-bred tiger products in China. Answers were: Poaching would strongly increase (1); slightly increase (2); not change (3); decrease (4); strongly decrease (5); plus impossible to predict (6). N = 37.

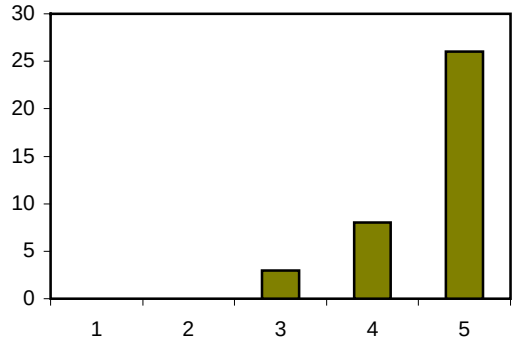

Fig. 2. Assessment of Asian big cat expert opinion that the chance that legalizing domestic trade in captive-bred tiger products would have a positive effect on tiger conservation is worth the risk that it could have a negative effect. Answers were: Strongly agree (1); agree (2); not possible to judge (3); disagree (4); strongly disagree (5).

The majority (75 percent) of the experts believe that a legalized tiger market in China would increase the poaching pressure on wild tigers (Answers 1 and 2 in Fig. 1). Seven experts (19 percent) said that the effect is impossible to predict. None believed that the result would be a major decrease in poaching pressure. In their comments, many experts stated that it is not possible to predict with certainty the reaction of consumer markets to a legal supply from captive-bred tigers, but that examples from other species such as bears, crocodiles, turtles, quails, etc. – of which products from

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farmed animals as well as supply from wild populations are on the market – demonstrate that in many cases demand for wild animals has increased rather than decreased.

Accordingly, not a single one of the Asian big cat experts believe that the chance that legalizing farmed tiger products would reduce poaching pressure is worth taking the risk that it would increase it (Fig. 2). Three experts said that it this is impossible to judge at the moment, but 34 (92%) advise that the risk of a negative effect is too high to be taken.

Conclusions and recommendations

Assessing the proposed benefit against the potential risk is indeed the crucial aspect in this debate, and this is as much a political as a scientific procedure. We are convinced that any scientific consideration in regard to the response of the domestic market in China to a re-opening will leave a range of uncertainty that makes a reconsideration of the trade ban a speculative endeavour. The experts of the Cat Specialist Group clearly and unanimously express their opinion that the potential risk that lifting the trade ban poses to wild tiger populations is too high to be taken.

The estimated current level of poaching across the tiger's range threatens to erode remaining tiger populations. To save the tiger, we must employ strategies that carry the least risk of increasing poaching pressure. China's domestic tiger trade policy inevitably has a large effect on conservation of tigers in other range states, and we appreciate the government's determination that its policy benefit global tiger conservation and be developed through international consultation. Commercial use of tiger products in China is only one threat to the survival of the tiger in the wild; but it carries a very high potential of negatively affecting the wild populations not only in China but, more importantly, in neighbouring countries, if it were to drive poaching and illegal trade. Considering the extreme fragmentation of the global tiger distribution and the small size of most of the remnant populations, the survival of the tiger will depend on the reliable cooperation between all range countries.

The IUCN's Species Survival Commission and its Cat Specialist Group recommend that the Chinese authorities maintain the ban on the domestic trade of tiger parts and continues to co-operate and collaborate with other countries fighting illegal trade. Upholding the ban will not make poaching disappear immediately, but we are convinced that the course taken in 1993 was the right one and that it must be continued. Not only China, but all Range States of the tiger and communities using tiger parts in other countries of the world bear a high responsibility for the survival of the tiger as a wild living species. The continued vigilance and commitment of all parties and rigorous implementation of conservation actions at all levels remains urgent and essential. Such co-operation must build upon a commonly agreed concept and on the principle of shared responsibilities. One of the recommendations of the fourteenth meeting of the CITES Conference of the Parties, The Hague (Netherlands), 3-15 June 2007, was that Range States and international partners should engage in the development of a tiger conservation strategy (CoP14 Com. II. 33).

IUCN's Species Survival Commission and its Cat Specialist Group welcome such a participative approach, and we are happy to offer our expertise, at any time, on issues and ideas concerning the conservation of tigers in the future.

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