Department
for Environment
Food & Rural Affairs

Call for evidence: non-elephant ivory trade

Summary of responses

November 2020

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Contents

Scope of this summary of responses

This document summarises the points raised by respondents to the call for evidence on non-elephant ivory trade. It is not a formal government response. We are still considering the evidence and views submitted in response to this call for evidence. We received a number of substantive responses from individuals and organisations. All research and evidence cited in the summary of responses was submitted by respondents. References to specific country examples in this document are those provided by respondents and do not represent the view of the Government.

Background to the call for evidence

The call for evidence was published following the passage of the Ivory Act 2018 through Parliament. The Ivory Act 2018 will bring into force one of the toughest domestic bans on elephant ivory sales in the world.

The Ivory Act contains a power that allows the government to seek to extend the ban on elephant ivory sales to other ivory bearing species through secondary legislation. During the Parliamentary passage of the Ivory Bill, Members of Parliament questioned the extent of the trade in ivory from species other than elephants. In response, the government committed to gather evidence on this issue, as set out in the call for evidence[1].

The species in scope of the call for evidence were:

- common hippopotamus (*Hippopotamus amphibius*)
- killer whale, also known as orca (*Orcinus orca*)
- narwhal (*Monodon monoceros*)
- sperm whale (*Physeter macrocephalus*)
- walrus (*Odobenus rosmarus*)
- common warthog (*Phacochoerus africanus*)
- desert warthog (*Phacochoerus aethiopicus*)
- mammoth (*Mammuthus primigenius*)

[1] Call for evidence: Non-elephant ivory trade https://www.gov.uk/government/consultations/non-elephant-ivory-trade-call-for-evidence

Individuals and organisations were invited to submit evidence on the trade in non-elephant ivory over a 12-week period ending on 22 August 2019. Respondents were asked for their views on fifteen questions, covering the following themes:

- the conservation status and threats to these species
- the use of non-elephant ivory
- global trends in the trade in non-elephant ivory
- UK imports and re-exports in non-elephant ivory
- the UK domestic market
- international examples of country-level restrictions on trade in non-elephant ivory

Evidence and views of respondents on each of these areas is summarised in later sections of this document.

Scale of responses

A total of 35 responses were received.

As this was a call for evidence we have analysed the responses on the basis of the evidence submitted and have not quantified the responses received on questions, topics or themes. We have also captured the views and remarks raised that were not supported by evidence.

The breakdown of responses by stakeholder type can be seen in Table 1.

Table 1. Responses received by stakeholder type

Stakeholder Type	**Number of responses**
Music Association or Music Shops	7
Conservation NGO	8
Art and Antique Association, Dealers or Auction Houses	5
Museum or Museum Association	3
All other organisations or national government	10
Individual responses	2
Total	35

The conservation status and threats to these species

Question 1 – Evidence on trade and threat to species

Please provide any evidence you have on whether the trade (legal and illegal) in ivory from these species threatens their survival. If so, does this interact with other threats to these species? If yes, in what way?

Hippopotamus

Hippopotamus are classified as vulnerable to extinction by the International Union for Conservation of Nature (IUCN) Red List assessment. IUCN Red List assessments are undertaken by experts in species conservation. The IUCN Red List assessment also identifies the hunting of hippopotamus for their meat and ivory to be a key threat to this species. There was a general consensus across responses from conservation NGOs that the hippopotamus is the species most at risk from the trade in its ivory in the short-medium term.

A conservation NGO: “In order to assess and monitor sustainability of the legal hippo trade, up-to-date scientific population estimates are required to inform trade and policy decisions. These are worryingly lacking. Furthermore, accurate trade data such as reliable and accurate country import and export quantities is also essential to monitor sustainability. However, gross discordances in such data is evident, and undermine regulatory measures, which therefore challenge the persistence of hippo populations in Africa.”

Contradictory evidence was submitted as to the population trend of hippopotamus. On one hand hippopotamus populations were viewed as precarious and at risk form human and natural impacts. Some respondents argued that global figures of hippopotamus populations have shown a downward trend since 2000, however IUCN Red List indicates a stable trend for the last ten years. Some respondents referred to the IUCN Red List assessment of a total of 42% of all hippopotamus populations being in decline, 23% the population trend is unknown, 23% of populations are stable and only 10% are increasing. Some responses also pointed to the lack of sufficiently robust population trends of the hippopotamus and trade data on its ivory. However, conversely another respondent argued that populations are large and sustainably managed. Another response acknowledged that robust and up to date population data is lacking, however they viewed that populations in East and Southern Africa are thought to be doing relatively well with Tanzania and Zambia respectively identified as regional strongholds; whilst populations in West and Central Africa are typically smaller, more fragmented and threatened. That respondent argued that at present it doesn’t appear that the ivory trade is a threat to the conservation status of the common hippopotamus population as a whole.

A conservation NGO: "Whilst at present it doesn't appear that the ivory trade is a threat to the conservation status of the common hippo population as a whole it is important that trade in hippo ivory is monitored, particularly as key domestic elephant ivory markets around the world close, to ensure that an increase in demand for hippo ivory as a substitute, leading to increased pressure on wild populations, doesn't occur."

Some responses explained that there is a lack of standardisation on trade quotas and hunting regulations in African range states. Evidence of illegal activity and data discrepancies between import and export data of hippopotamus ivory was submitted – see the summary of responses to question 2 for full details. Responses viewed this as undermining regulatory measures and challenging the persistence of hippopotamus populations in Africa [2, 3, 4] referencing recent reports. Evidence was submitted to suggest that a total of 771,000 kg of hippopotamus ivory has been traded internationally from 1975 to 2016. This equates to an estimated 146,857 hippopotamus; more than the number of hippopotamus remaining.

Conflicting responses but no specific evidence was received as to whether with the introduction of elephant ivory bans markets might see a substitution of elephant ivory for hippopotamus ivory. Some responses argued that the high degree of similarity between hippopotamus ivory and elephant ivory, and as hippopotamus ivory commands a relatively low price, is easier to obtain, transport and carve; could result in increased trade in hippopotamus ivory as a substitute with the incentive to poach hippopotamus being higher. Some responses drew on reports to argue that the 1989 global ban on the elephant ivory trade showed a surge in demand for hippopotamus ivory as a legal substitute[4,5]. Some responses argued that hippopotamus's sedentary nature makes them more susceptible to poaching and, that as hippopotamus and elephants are sympatric; infrastructure, trade routes and trade networks already exist because of the illegal elephant ivory trade. Conversely other responses considered that hippopotamus teeth are not a suitable replacement specifically in the UK as it is more brittle and does not lend itself as readily to carving. Another response viewed that the low value and small size of the tusk/tooth compared to elephant tusks alongside the continuing illegal trade in poached elephant ivory from Africa to East Asia means that it is not logical or practical for smugglers to make the switch.

Some responses viewed that hippopotamus seem especially vulnerable to declines associated with illegal and unregulated hunting in areas affected by conflict. For example, once a stronghold for hippopotamus, the Democratic Republic of Congo (DRC) and other West African countries have seen the sharpest hippopotamus population declines. One

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[2] Fisher, A. (2016). Fighting the underground trade in hippo teeth. National Geographic, 6 December 2016. http://news.nationalgeographic.com/2016/12/wildlife-watch-hippo-teeth-trafficking-uganda

[3] Andersson, A. & Gibson, L. (2017) Missing teeth: Discordances in the trade of hippopotamus ivory between Africa and Hong Kong, African Journal of Ecology, vol 56, issue 2, pp. 235–243.

[4]TRAFFIC - Williamson, D. F. 2004. Tackling the Ivories: The Status of the. US Trade in Elephant and Hippo Ivory. TRAFFIC North America. Washington

[5] Knights, P., Hofford, A., Andersson, A., & Cheng, D. (2015) The illusion of control: Hong Kong's 'legal' ivory trade. San Francisco, USA, WildAid.

respondent documented that a population crash in the DRC was as a result of hunting during a period of civil unrest.

A conservation NGO: "In the Democratic Republic of Congo in the early 2000s, the population of hippopotamus fell by 95% as a result of hunting, from 29,000 individuals to 1,300 during eight years of civil unrest. Armed groups sold hippo teeth and meat to fund themselves during the war. While hippo numbers are increasing in the DRC, with the current population at an estimated 5,000, ongoing violence in the region makes progress uncertain, and the population is classified as stable, but at only 17% of its 1970s peak."

It also documented how the population has increased but it remains a fraction of its pre-conflict level[6,7].

Respondents also reported how armed groups sold hippopotamus teeth and meat to fund themselves during the war. Similarly, hippopotamus hunting by military forces during the civil war in Mozambique between 1980-1992 resulted in a decline of more than 70% of the hippopotamus population in the country[8].

Interaction with other threats - Hippopotamus

According to the IUCN Red List assessment, due to the number of threats facing hippopotamus, the global hippopotamus population is projected to decline by a further 30% over the next 30 years. Responses proposed a number of threats to hippopotamus that may make the trade in their ivory unsustainable however, with the potential exceptions of "hunting/poaching for meat" and "dependence on water" no evidence was submitted to suggest how these threats would precisely interact with the threat from the trade in ivory. The threats proposed were as follows:

- human-wildlife conflict[9]
- hunting/poaching for meat – before Uganda's 2014 hippopotamus ivory ban, ivory could be traded legally if they came from carcasses of hippopotamus that died naturally or were killed only for wild meat
- trophy hunting and country culls
- dependence on water meaning they are easier to hunt and more susceptible to drought, and climate change[10]; with legal and illegal water abstraction compounding this further

[6] Hillman Smith, A.K., Merode, E., Smith, F., Ndey, A., Mushenzi, N. and Mboma, G. 2003. Virunga National Park – North Aerial Census of March 2003. Unpublished report ICCN, ZSL, FZL, IRF, USFWS - this report informed the IUCN red list assessment

[7] DR Congo's hippopotamus face extinction" BBC Article (2005) http://news.bbc.co.uk/1/hi/world/africa/4240420.stm

[8] Mackie, C.S., Dunham, K.M., and Ghiurghi, A. 2013. Current status and distribution of the Vulnerable common hippopotamus Hippopotamus amphibius in Mozambique. Oryx 47(70-76)

[9] Kanga, E.M., Ogutu, J.O., Piepho, H.P. and Olff, H. (2012) Human–hippo conflicts in Kenya during 1997–2008: vulnerability of a megaherbivore to anthropogenic land use changes, Journal of land use science, vol. 7 issue 4, pp.395-406

- habitat destruction[11]
- expansion of agriculture

A conservation NGO: “In essence, hippo populations are precarious. The cumulative impacts of intensifying threats such as climate change and habitat loss, but especially the trade in hippo teeth, seriously challenges the persistence of hippo populations”

A conservation NGO: “This niche environmental requirement puts hippopotamus in competition with the ever-increasing human population for natural resources, water and land, leading to human–wildlife conflict. It also makes them extremely vulnerable to climate change.”

Narwhal

Narwhal are classified as least concern by IUCN red list. Narwhal population trend is not well understood. IUCN Red List note that there are a total of 12 subpopulations and that for the six subpopulations for which there is some information on trend, one is thought to be increasing and five are likely stable.

TRAFFIC warns that the effects of climate change means that the hunting of narwhal needs to be better monitored and regulated[12]. Changing sea ice conditions related to climate change have facilitated easier access for hunters to small cetaceans, as documented for narwhals in Smith Sound in North Greenland[13]. However, TRAFFIC also report that illegal hunting and/or illegal trade do not appear to be a widespread concern for most narwhal range states. In instances where they may occur or are reported, management actions are taken by authorities. They also conclude that according to available data, there is no indication that international trade is currently a threat to the conservation of narwhals.

Evidence submitted suggest that range countries for narwhal have management plans in place, alongside quotas being set at levels that are sustainable and licence/certification systems for the trade in ivory. In the event that a population study indicates a decline in any wildlife species, the management regimes in place are designed to promptly respond and address the decline.

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[10] Plumptre, A.J., Nangendo, G., Ayebare, S., Kirunda, B., Mugabe, H., Nsubuga, P. & Nampindo, S. (2017) Impacts of Climate Change and Industrial Development on the long-term changes in Wildlife Behavior in the Greater Virunga Landscape, WCS & GVTC Report. http://www.greatervirunga.org/IMG/pdf/gvtc-wcs_report_on_behaviour_changes_to_development_and_climate_changes-final_draft_2017_11.pdf

[11] Eksteen, J., Goodman, P., Whyte, I., Downs, C., Taylor, R., (2016) A conservation assessment of Hippopotamus amphibius. In Child, M.F., Roxburgh, L., Do Linh San, E., Raimondo, D., Davies-Mostert, HT., eds. The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa https://www.ewt.org.za/wp-content/uploads/2019/02/11.-Hippopotamus-Hippopotamus-amphibius_LC.pdf

[12] TRAFFIC - Breaking the ice: International Trade in Narwhals, in the Context of a Changing Arctic. https://www.traffic.org/site/assets/files/2528/breaking_the_ice_report.pdf

[13] Nielsen, M. 2009. Is climate change causing the increasing narwhal (Monodon monoceros) catches in Smith Sound, Greenland? Polar Research, 28: 238–245.

Walrus

IUCN Red List classify walruses as vulnerable to extinction, with only around 112,000 mature individuals remaining, with the IUCN Red List noting that the overall population trend for both sub populations (Atlantic and Pacific) is unknown. The 2016 IUCN Red List assessment considers that harvests of walrus, primarily for subsistence purposes, are likely to have been sustainable; but it warns of an uncertain future, with global warming and concomitant sea ice declines may impact the walrus population, and where harvest levels could have an important influence on future abundance.

TRAFFIC (2014)[14] report that neither illegal hunting nor illegal trade appear to be at levels that would cause conservation concern for most walrus range states. Even applying conservative estimates for animals killed but not landed, TRAFFIC estimated that less than 4% of the global population was killed through hunts. However, the report also acknowledges that the lack of long-term data and poor quality of information on population estimates for walrus makes it difficult to determine whether the harvest and resulting international trade will affect the conservation of the species.

Evidence suggests that hunting of walrus in range states is managed and quotas are set at sustainable levels. Furthermore, evidence was submitted that showed that the movement or trade in walrus ivory is only done under licence and/or is regulated in some range states.

Some responses explained that indigenous people have traditionally relied on marine mammals, such as walrus and narwhal for their subsistence and today this relationship endures. Ivory was considered a by-product of regulated subsistence harvests. Some responses explained by reference to a supporting study that concern that the financial benefits arising from the sale for export of narwhal and/or walrus ivory spurs the intensity of harvesting is therefore, by and large, misguided[15]. Some responses warned that the consequences to indigenous people of a trade ban on ivory from narwhal and walrus would be dire and inevitable; as has been demonstrated by previous trade bans[16] see summary of responses to question 8 for more details.

Whales

There was little evidence submitted on the impact of the trade in ivory from whales on the species. Responses considered that whales are not threatened by trade in ivory but by demand for meat and blubber. Responses argued that the major historical threat responsible for decline in sperm whale was commercial industrial whaling, and this is no longer a concern, with populations recovering across much of their former range. Similarly,

[14] TRAFFIC – Hauling Out: International trade and management of walrus. https://www.traffic.org/publications/reports/hauling-out-international-trade-and-management-of-walrus/

[15] Hovelsrud,G.K., McKenna,M., & Huntington,H.P. (2008). Marine mammal harvests and other interactions with humans. Ecological Applications, 18 (2) Supplement, S135-S147.]

[16] Reeves, R.R. (1992). Recent developments in the commerce in narwhal ivory from the Canadian Arctic. Arctic and Alpine Research, 24 (2), 179-187.

one response considered that killer whales are numerically abundant (at least tens of thousands of mature individuals) and very widely distributed, and although the IUCN Red List lists them as Data Deficient the assessment states they would not qualify for listing in a threatened category. They too are no longer hunted commercially.

There were mixed views as to whether these species are targeted for ivory today with some respondents saying this was not the case and others submitting anecdotal evidence suggesting that beached sperm whales, killer whales and other toothed cetaceans are targeted for their teeth in several countries[17, 18].

One response stated that there is international trade in cetacean teeth, including into and from the UK, in both whole and carved teeth. However, conversely another response viewed that trade is largely in antique whale ivory with potentially some teeth salvaged from beached whales.

A small survey (29 responses from the Fijian community) undertaken by a respondent suggested that sperm whale tabula (a polished tooth of a whale that is an important cultural item in Fijian society) may be illegally crossing borders, including the UK. This was likely due to a lack of understanding and/or knowledge of existing restrictions and laws in the South Pacific and internationally on the trade in this ivory. The same respondent reported that in April 2019 the Fijian government announced they are liaising with UK, USA and Australian governments to repatriate tabua seized at their borders[19]. The respondent viewed this as meaning that there are a sizeable number of tabua held by UK Border Force (however this has not been confirmed with UK Border Force).

Warthog (common and desert)

Limited information was submitted on warthog and it was viewed that the degree of threat to this species is hard to ascertain as they are not protected by international agreements, and commercial trade in tusks and other body parts is not closely monitored. One response viewed the trade in warthog ivory to be minuscule.

Some responses explained that both species of warthog show population declines. However within their range they are widespread, often locally abundant, with a high reproductive rate, and in the case of the common warthog expanding their range in South Africa. Elsewhere they are suffering localized population declines in parts of both species' range, but these are thought to be due primarily to habitat loss, fragmentation and degradation, climate extremes, and localized targeting for wildmeat.

Some responses considered that although their ivory is used in trade it is not thought to be a threat to either of these species. One response raised that the trade in warthog tusks or

[17] https://www.icelandreview.com/news/jewellers-want-teeth-and-bones-from-massive-whale-beaching/
[18] https://grapevine.is/news/2015/09/26/another-beached-sperm-whale-poached/
[19] https://fijivillage.com/news/Ministry-of-Environment-to-find-out-number-of-confiscated-Tabua-in-FijiAustralia-and-USA-boarders--r9s5k2

teeth does not substitute for illegal elephant ivory trade and another (individual) that there is no illegal ivory trade; as all trade in this type of ivory is permitted.

Some responses explained that as far as they were aware there are not any significant numbers of worked antique warthog teeth in circulation in the UK, nor of the ivory's use in antique works of art or other objects that commonly incorporate elephant ivory.

Mammoth

Although mammoth is extinct it was included in scope of the call for evidence due to potential impact of the trade in mammoth ivory on elephants due to its similarity in appearance.

Responses noted that trade in mammoth ivory does take place today, as tusks are excavated from the Arctic tundra regions for a range of uses[20]. One response (an individual) noted that mammoth ivory is traded in Canada, Russia, USA and Germany but not in large volumes, but did not submit supporting evidence. Some responses explained that trade in mammoth ivory carvings is economically necessary for indigenous peoples in the Arctic.

There were contradictory views as to whether mammoth ivory is distinguishable from elephant ivory. Some thought that there is a tangible risk of illegal international trade in elephant ivory (and potentially that from other ivory-bearing species) being facilitated by deliberately mislabelling specimens as mammoth ivory in order to circumvent Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) rules and domestic restrictions. However, others argued that the trade in mammoth ivory does not affect wild populations of elephant and may benefit wild elephants as a legal alternative source of ivory. One response argued that banning something due to its similar appearance to something that is illegal is not logical.

One response noted that the proposal to list mammoth at CITES 18th Conference of the Parties (that was subsequently withdrawn by the proponent) so that trade could be monitored was not supported by the UK; and given that position it would be inconsistent to introduce national controls on mammoth ivory. One respondent raised that the proposal to list mammoth under CITES was also put forward at a previous meeting of CITES and was not accepted.

General remarks

A range of comments submitted without supporting evidence backed the notion that the trade in ivory from these species threatens their survival. These included:

- trade in ivory creates demand for ivory and that creates pressure on these species, leading to them being threatened

[20] https://www.mammothivorytrade.com/en/

- a displacement effect - the closure of markets for elephant ivory could increase demand for ivory from these species, specifically hippopotamus was they key species of concern however some respondents argued for a precautionary approach to all species

- although international focus is on protecting elephants, the trade in ivory for trinkets and carvings also threatens several other species

Reference was also made to The Global Assessment Report on Biodiversity and Ecosystem Services[21], published recently by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), highlighting the unprecedented crisis facing the world's biodiversity with a million species at risk of extinction, and which identified direct exploitation of organisms among the key drivers of biodiversity loss.

A conservation NGO: "…we advocate the inclusion of other ivory-bearing species in domestic ivory bans. Such a precautionary approach is consistent with both international agreement and European legislation. It is also consistent with the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)'s Global Assessment Report on Biodiversity and Ecosystem Services. Launched in May of this year, the assessment estimated that a million species may be at risk of extinction, identified direct exploitation of organisms among the key drivers of biodiversity loss, emphasised that transformative changes are required to restore and protect nature, and indicated the need for opposition from vested interests to be overcome."

A range of other comments submitted without supporting evidence took the contrary view that these species are not under threat from the trade in their ivory, as follows:

- climate change, environmental degradation and development pressures to their natural habitats are greater threats to these species than the trade in their ivory

- CITES listings provide sufficient protection and a means to monitor trade in ivory from these species

- the levels of UK imports and exports are very low so this cannot be having any impact on these species and therefore banning their trade is unlikely to have any effect on their conservation

- trade related to antiques that contain or are made of ivory would not affect wild populations today

- eliminating the UK trade in ivory of these species that is almost exclusively in antiques will harm small businesses, private collectors, museums, researchers and students of everything from antiquities to ladies antique dresses, without preserving threatened animals

[21] https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services

- extending the ban to other ivories used in instrument manufacture and repair would have a massively detrimental effect on musicians because mammoth ivory has been used instead of elephant ivory since the 1970s and there are no adequate alternative materials

- one response raised objections to any further controls on warthog

An organisation or national government: “Although the animals under consideration for a ban in trade are in some cases deemed endangered, they are threatened by climate change and environmental and development pressures where they live, not by trade in their ivory. US, UK and European trade in their ivory in most cases does not exist except for antiques, and for Arctic peoples, carving ivory is an income-producing by-product of specially permitted subsistence-hunting for food”

Helmeted Hornbill (not in scope of the call for evidence)

This species is not in scope of the call for evidence as the beak of the hornbill bird is not ivory in the strict sense (even though it is used as an ivory substitute).However one response called upon government to give serious consideration to the helmeted hornbills’ plight and make every effort to include it along with other species under the Ivory Act.

Question 2 – Link between the legal ivory trade and the illegal wildlife trade

Is there any evidence of a link between the legal trade in ivory from these species and illegal wildlife trade? YES/NO. Please explain and provide evidence

Hippopotamus

The majority of evidence submitted on the potential link between the legal ivory trade and illegal wildlife trade was focussed on hippopotamus.

Some responses explained that wildlife authorities report that the flow of hippopotamus ivory into international markets from Uganda has continued despite the 2014 hippopotamus ivory ban. Responses argued that this is due to the long-established transcontinental trade networks, structures and mechanisms that had previously been in place.

Similarly, some response explained that the existence of the legal trade in elephant ivory pre-1989 provided fertile grounds for illegally traded ivory when international demand

returned in 2005[22, 5]. They raised concerns that the trade in hippopotamus ivory may continue illegally, under the guise of legal trade, due to inaccuracies and the lack of standardisation in reporting of trade. Research suggests that there are discordances in the trade of hippopotamus ivory between Africa and Hong Kong with over 14,000 kg of hippopotamus teeth being unaccounted for between Uganda and Hong Kong SAR, China since 1995[3].

There have also been recent seizures of illegal hippopotamus ivory[23, 24].

A conservation NGO: "The EAGLE network has representatives in Congo, Gabon, Guinea, Togo, Benin, Senegal, Ivory Coast and Burkina Faso. They have reported evidence of illegal trade in hippo teeth as recently as January 2019, with 4 traffickers caught smuggling hippo ivory in Cameroon and a trafficker attempting to trade in hippo teeth in Uganda. The EAGLE Network's 2018 annual report documented the arrest of traffickers who were attempting to traffic more than 230 pieces of hippo ivory."

A conservation NGO: "Andersson and Gibson (2018) examined the discordances between import and export data on the legal, commercial trade in hippo ivory as specified in the CITES Trade Database, accessed in April 2016… The researchers uncovered a huge disparity between what is reported as imported, and exported between countries. Over 14,000 kg of hippo teeth was unaccounted for between Uganda and Hong Kong SAR, China, representing more than 2,700 hippopotamus. This represents 2% of the global hippo population, and nearly 30% of Uganda's total hippo population, which is currently estimated at 7,000–10,000."

One response recognised that there is illegal trade involving hippopotamus ivory but considered that the relationship between illegal and legal trade is not clear. They recommended further work to better understand the scale and scope of illegal trade in hippopotamus ivory and whether any links to legal trade is warranted and recommended that this should inform policy decisions.

Mammoth

For mammoth ivory a number of remarks, without supporting evidence, were submitted supporting the argument that there is no link between legal trade in mammoth ivory and illegal wildlife trade.

Some were about ivory identification, as follows:

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[22] Hsiang, S. & Sekar, N. (2016). Does legalization reduce black market activity? Evidence from a global ivory experiment and elephant poaching data, *National Bureau of Economic Research*, No. w22314. Accessed at: https://www.nber.org/papers/w22314

[23] EAGLE (Eco Activists for Governance and Law Enforcement) [January Briefing (2019) Accessed at: http://www.eagle-enforcement.org/data/files/eagle-briefing-january-2019-public.pdf

[24] EAGLE (Eco Activists for Governance and Law Enforcement) Annual Report (2018) Accessed at: http://www.eagle-enforcement.org/data/files/eagle-network-annual-report-2018.pdf

- identification between elephant and mammoth ivory by experts is not a problem
- there is a lack of evidence to link the laundering of elephant ivory as mammoth ivory, they are easily to distinguish from each other and there is no trend in UK to describe elephant as mammoth
- a modern trinket would be suspicious if described as mammoth or elephant
- more sophisticated fake antiques would be identifiable as fake as mammoth was not used during these time periods or for those artefacts

Others included:

- the mammoth ivory trade could alleviate poaching of elephant as a legal alternative to elephant ivory
- the UK mammoth ivory market is very small

Arctic species (narwhal and walrus)

For walrus and narwhal ivory evidence was submitted to refute that there is a link between the legal and illegal wildlife trade as detailed below.

TRAFFIC reports[12, 14] that there is evidence of small-scale illegal trade in ivory from narwhal and walrus, however there is no indication of any linkage to the legal trade or concern that it poses a threat to the conservation status of either species.

Analysis of trade in walrus and narwhal ivory in four East Asian markets between 2005 – 2014[25] supports the notion of the presence of small scale illegal trade for these species with only three seizures of ivory identified (three and one narwhal tusks in 2013 and 2014 respectively, one walrus carving in 2014).

One response highlighted a strategic intelligence assessment in 2016 undertaken in Canada to identify harvest and market trends for narwhal ivory and describe the risks and implications of non-compliance with the existing legislative and regulatory framework. The assessment did not find evidence to support the hypothesis that there is significant trade in illegally harvested narwhal ivory.

Another response highlighted that the TRAFFIC reports on narwhal[12] and walrus[14] describe detailed management approaches that could be taken to strengthen regulation, transparency and oversight of legal trade ivory from these species. Another response explained that narwhal ivory is tracked through a permit/tagging system in Canada and Greenland, and that illegal walrus ivory trade could be made untenable by having a revised documentation system with tags linked to certification or a holographic sticker as recommended in the report. However, another response highlighted that Canada already

[25] WWF and TRAFFIC (2016) Analysis of international trade in narwhal and walrus ivory – unpublished data

requires a Marine Mammal Transportation Licence to move walrus products, including ivory.

One response noted that a report in the Maritime Executive 14 June 2019 describes the issues in fighting the illegal trade in whale ivory, specifically whale and narwhal ivory in China. The respondent highlighted that in one case, Shenzhen customs seized over 1,400 sperm whale teeth, weighing about 96 kilos. A respondent also submitted a newspaper report about a recent seizure of 250 sperm whale teeth in Spain, the largest of its kind in Europe[26].

An organisation or national government: "Only Inuit are permitted to hunt narwhals in Canada and Greenland; communities are set a quota of from five to 50 animals (narwhal). The Inuit communities in Canada use only 73-88% of the quota of hunted narwhal they are allowed each year. Narwhal cannot be legally possessed, traded, or transported from one Canadian province to another unless a Marine Mammal Tag is attached to the tusk or carcass. Export requires CITES documentation. In Greenland, hunters must apply for a license before each hunt and afterward must fill out a reporting form for every animal taken or wounded. The hunter must sign the permit which travels with the carcass or tusks when it is sold. Only professional hunters are allowed to sell meat or tusks. No export is allowed."

General remarks

Some overarching remarks submitted without supporting evidence were made with regards to the link between the legal and illegal wildlife trade, as follows

- one response referred to a study[27] which showed that 90% of the lots at UK auction houses did not satisfy the legal requirement to demonstrate proof of age for pre-1947 elephant ivory, and argued that this would also be the case for other sources of ivory

- a number of responses argued that all the species in scope of this call for evidence could not be miss-sold as a different source of ivory as they could usually be distinguished from elephant ivory and from each other by knowledgeable experts and/or scientific sample testing

- similarly, some responses argued that the trade in antique items from these species was not considered to contribute to the modern illegal wildlife trade, as they are easily distinguishable from modern illegally sourced material

[26] https://www.elmundo.es/elmundo/2013/07/10/valencia/1373455186.html
[27] Ivory the Grey Areas: a study of UK Auction Houses ivory sales – the missing evidence http://tiny.cc/0dv8az

Question 3 – Legal ivory trade and conservation

Does the legal trade in ivory from these species contribute to their conservation or protection and/or does it support wider biodiversity conservation? YES/NO. Please explain and provide evidence.

Some responses thought the trade in ivory contributed to the conservation or protection of those species. Reasons given included:

- mammoth ivory is a legal substitute for elephant ivory and therefore reduces poaching of wild elephants
- indigenous communities hunt narwhal and walrus for their meat and ivory is a by-product, with the management of wildlife and the exercise of Inuit harvesting rights in Nunavut being grounded in the principles of conservation in the Nunavut Agreement (the agreement between the Inuit of the Nunavut Settlement Area and Canada)
- local indigenous villagers who hunt the walrus and narwhal take a leadership role in the effective management of these species
- legal hunter activities support rural economies, assist in the ongoing monitoring of the species (incorporated in harvest management practices) and reduce illegal harvest, with hunters often the first to observe issues that could result in detrimental impacts to wildlife if not addressed (disease, impact of weather events etc.)

A conservation NGO: “Local indigenous villages in Alaska are taking a leading role in stewardship and management of Pacific walrus. Two examples are Point Lay’s stewardship of the large haul-out close to that village, and St. Lawrence Island’s development of local hunting ordinances. Continued cultural engagement in management and a strong relationship with walrus (e.g., through consumption or crafting) are critical to local community resilience and wellbeing. Loss of this opportunity to fully engage in the long-standing cultural relationship with walrus and the crafting and trade in walrus products would have a devastating social impact on walrus-reliant communities, and likely to the growing pride and engagement in their essential contribution to local conservation efforts.”

A number of arguments on the trade in hippopotamus ivory for previous questions were repeated in response to this question and to support the notion that hippopotamus are threatened by the trade in their ivory and which therefore makes no contribution to their conservation or protection. Some responses explained that narwhal and walrus are hunted primarily for their meat and ivory is a by-product.

A conservation NGO: “The supplementary information provided with the 2016 IUCN Red List assessment identifies that:

- National hippo population size is estimated to be 1,000 or less in 21 of the 38 range States.

- Hippo populations are declining in 16 of the 38 range States (42%), and their status is Unknown in a further eight (21%). In all but 5 range States, hippopotamus have a restricted distribution.

- The conservation status of hippo populations is considered of 'concern' in 25 of the 38 range States (66%).

Lewison (2007) noted that despite locally abundant populations, protected hippopotamus populations may decline over the next 60 years in response to a combination of environmental fluctuations and human-mediated threats (including hunting). It is clear that the trade is not adequately regulated properly and hippo population data is limited (http://www.conservationecologylab.com/uploads/1/9/7/6/19763887/lewison_2007.pdf)"

General remarks

Other remarks made in response to this question included:

- a morally based argument that "the ivory trade should be something from our past."
- that banning items in the west is a top down solution that can only harm culture, not abet animal survival
- many African animals are becoming endangered because of the trade in their parts
- warthog trophy hunting yields high returns, and they are a widespread pest to farmers with a high reproductive rate

Question 4 – Monitoring threats from the ivory trade

How do we best monitor any threat from trade in ivory on these species? Please provide any evidence and any suggestions on information that is required.

A number of different suggestions were put forward as to how we best monitor any threat from trade in ivory on these species. Some responses focussed on the use of data and improving the data collected in relation to the trade in ivory from these species, views were as follows:

- all species in trade should be subject to monitoring to ensure that trade is sustainable and not posing a threat to the conservation status of the species in question
- monitoring the threat from the trade in ivory requires robust, reliable and regular data
- utilising trade and law enforcement data of illegal trade from sources such as UK Border Force, and CITES, as well as population assessments and harvest quotas and reporting systems where they exist

- currently mechanisms for providing trade data do not exist, particularly in Africa, therefore a precautionary approach to international trade in ivory from these species is warranted

- global trade trends, along with physical and online market trends (such as those undertaken by TRAFFIC and any relevant national monitoring) should be looked at

- upgrading species that are not in CITES Appendix I and/or EU trade regulations Annex A to these classifications meaning that the Joint Nature Conservation Committee (the UK Scientific Authority to CITES) can assess whether their trade is detrimental to their conservation.

- evidence of consistent illegal ivory that is being traded would signal the market is strong enough to drive illegal trade and that conventional conservation and monitoring measures are inadequate

- similarly, another response stated that the presence of legal/illegal trade is not by itself a good indicator of threat from trade

Others focussed on international agreements and measures, views were as follows:

- influencing market demand for these kinds of ivory to change the attitudes of those consumers towards the use of ivory

- through working with CITES, IUCN and NGOs, such as work done by CITES in determining whether there are non-detriment findings carried out in range countries

Some made suggestions in relation to data and reporting systems related to the number of animals hunted, such as:

- through the use of harvest quotas and harvest reporting systems

- by population/stock assessment information, including currency, used to set harvest quotas for narwhal and walrus

Some suggestions focused on domestic UK measures, including:

- through greater investment for the UK National Wildlife Crime Unit, regional Wildlife Officers and the UK Border Force, so they are able to monitor the amount of other ivories coming into and onto the market and take appropriate action

- the development of a mobile app, containing data on all wildlife for UK police officers would enable officers to refer to up to date and current information, laws and images, enabling them to identify more accurately any items in question

- rigorous enforcement of existing laws, with one response explaining during a previous study[27] on UK auction houses sales of ivory, even though police officers were made aware of illegal sales, the items were still allowed to be sold

- self-regulation of auction houses so they can assure each other on the type of ivory being sold

Some responses focussed on species specific examples and suggestions, these included:

- new survey data on hippopotamus populations, hippopotamus ivory seizure data from authorities and better monitoring of hippopotamus poaching sites similar to the Monitoring the Illegal Killing of Elephant (MIKE) system used for elephants

- legal trade reports from CITES, and import/export countries to estimate the amount of hippopotamus ivory being traded and to which countries

- tracking of mammoth trade

- in Canada adaptive shared management plans between Canadian government, indigenous communities, hunters and trappers organisations and wildlife NGOs are in place along with monitoring of narwhal and walrus harvest and population numbers

A conservation NGO: “Reliable systems for monitoring the impact of trade in ivory from ivory-bearing species depend upon:

- Robust, reliable and regularly updated population data.

- Robust, reliable data on trade, identifying the precise source (to a specific population level), destination and transit routes for items in trade, the nature of the items themselves (including any processing), and the number of animals represented by those items.

- Good data on any seizures of illegally-traded items and the identification of the source of those items through DNA analysis.

- Detailed and ongoing examination of market trends and price fluctuations in all countries where demand exists, in order to enable assessments of likely changes in demand and pressures on supply.

Currently, mechanisms for providing such data do not exist for any of the ivory-bearing species that are the subject of this consultation. A highly precautionary approach to international trade is therefore warranted.”

A conservation NGO: “All species in trade should be subject to monitoring to ensure that trade is sustainable and not posing a threat to the conservation status of the species in question. This is particularly important for species in high value trade such as ivory. Monitoring should include gathering data that enables an understanding of conservation status and trends for wild populations, levels of trade and detect the presence, scale and scope of any illegal trade.”

A conservation NGO: “The development of a mobile app, containing data on all wildlife for police officers. This will enable officers to refer to up to date and current information, laws and images, enabling them to identify more accurately any items in question. The number of possible species and body parts potentially being offered for sale is huge and it is therefore impossible for individuals to know the exact laws relating to every item. This will give officers an opportunity to make more seizures and arrests when confronted with wildlife crimes.”

General remarks

One response proposed a blanket ban on all sources would make it is easier to monitor and police this trade. One response argued that reliable systems for monitoring the impact of trade in ivory from these species does not exist and therefore a highly precautionary approach to international trade is needed.

Some responses highlighted that a robust management and enforcement system, and working with hunters, is one way that will ensure the sustainability of legal trade. For example, the U.S. Fish and Wildlife Service, the Eskimo Walrus Commission, and represented communities currently work together to promote effective management of walrus and the walrus hunt.

Question 5 – Identifying threats from the ivory trade

How do we best identify the point at which a species might become threatened by the trade in its ivory? Please provide any evidence and any suggestions on information that is required.

Some respondents commented that species are already threatened by the trade in their ivory, as indicated by the presence of illegal seizures of ivory, and the lack of robust and regular data on these species. One respondent considered any trade in parts of a species is a threat to that species. However, contrary remarks were also made to suggest that the presence of illegal wildlife trade is not a good indicator of a threat from trade.

Some responses highlighted and provided evidence that:

- the common hippopotamus populations are already threatened due exploitation for their ivory, skin and meat, with more animals being traded since 1975 than currently exist in the world today (arguments and evidence in relation to population trends, population crashes at times of conflict, illegal trade, and trade data discrepancies, were put forward for responses to questions 1 to 3 on hippopotamus were used again to argue that the species is already threatened by the trade in its ivory)

- the degree to which accurate data on population trends is not available for the species in scope of the call for evidence emphases the need for a precautionary approach

Remarks put forward on how to best identify the point at which a species might become threatened were as follows:

- that CITES is the appropriate forum for consideration of international trade in wildlife. The process around consideration of Appendix listing changes and Reviews of Significant Trade represent mechanisms for consideration of both the threat posed to a species by trade and the appropriate regulatory response
- using robust and regularly updated data on population trends and the scale and nature of trade
- for government to maintain dialogue with IUCN Red List and to consult species experts
- by demonstrable trade in ivory from these species in the UK beyond antiques

Uses of non-elephant ivory

Question 6 – Important or common uses of ivory

Are there any other important or common uses of ivory from these species? If so please provide further information and, if appropriate, indicate if any alternative material can be used.

Museums

Some responses explained that ivory sourced from animals other than elephants has been used by cultures throughout the world, including within the British Isles, as a medium for carving and decorative art. Many of these objects have been accessioned by UK museums on account of their historical or artistic value and the ivory identity is often unknown. Some responses highlighted that the identification of ivory itself can be a difficult process for Museums and in some cases determining the species of origin is not possible without invasive research techniques, which may affect the outward appearance or integrity of the object.

Arts and antiques

Some responses explained that the extent to which ivory from species in scope of the call for evidence features in old, cultural, historical, ethnographical or natural history objects varies and they argued that the living ivory bearing species under consideration have very little in common with elephant ivory. They explained that their teeth and tusks were not treated historically as a commodity in the way, and to the extent that, elephant tusks were and consider that as a result of this they have not usually been used by western or Asian craftsmen in the same way that elephant ivory has been and are not as common. Some responses explained that all the species under consideration may have their teeth/tusks as

part of a natural history collection and that there are many Victorian collections of natural history objects, which help explain to the current generation how our ancestors understood the natural world around them.

Some responses also explained that narwhal, walrus and sperm whale ivory were not used and incorporated in European objects in the way that or to the extent that elephant ivory was. For example, these species of marine ivory were not used in art deco bronze and ivory sculptures, nor for piano keys, nor for the knobs on furniture. Some responses also explained that as far as they were aware there are not any significant numbers of worked antique warthog teeth in circulation in the UK, nor of the ivory's use in antique works of art or other objects that commonly incorporate elephant ivory.

Musical instruments

Some responses explained that a number of different musical instruments contain non-elephant ivory. A musical association surveyed 63 of its members and found that the majority of non-elephant ivory used in both manufacture and repair is mammoth (70%). There is some evidence of the use of walrus (5%) and sperm whale (2%). Other non-elephant ivory products are used and these were plastic, tortoiseshell, and synthetic ivory. The survey found no evidence of the use of hippopotamus or either species of warthog ivory in musical instruments.

The survey found the majority of musical items made of ivory were bows (74%); other musical items were: mouthpieces, guitars, mandolin, cittern, recorder, bassoon, bagpipes, uillean pipes, piano, Northumbrian small pipes and concertina. Other responses noted that mammoth ivory features mostly in string and woodwind instruments (e.g. violin bows, viola bows, cello bows, bassoons, clarinets, bagpipes, accordions etc.) Some responses explained that the age of musical instruments made of non-elephant ivory is varied, but the majority of instruments made or repaired with mammoth ivory were done so post-1975, as this was seen as a legal alternative to elephant ivory.

Some responses argued that musical instrument repair, conservation and making relies on mammoth ivory where it is necessary because it has the closest properties in weight and density to elephant ivory, especially for violin bows. Therefore, in repair it retains the original playing properties of the violin bow, and in making of new bows it enables expert copying of master bows, and to work within the same tradition without having to take into account differing material properties. Some responses proposed that the weight and density of ivory from other species makes it less suitable. Some responses explained the amount of ivory in each item (mostly violin bows) is small and it is not valuable in and of itself. Some responses explained that this use mainly takes place in USA, UK, France, Germany, Italy and China. However, there is some use in other countries where classical music is performed.

Some responses argued that musical instruments that use mammoth ivory would not threaten these species as the amounts used are very low. It was thought that banning this ivory would have detrimental effect on musicians. Some responses raised that musical

instruments containing mammoth or other non-elephant ivory, without exception or reference to date and amount of ivory used, should be exempt from any ban on the trade in these types of ivory. They argued that to extend the ban to other ivories used in instrument manufacture and repair would have a massively detrimental effect on musicians because mammoth ivory, for example, has been used instead of elephant ivory since the 1970s and there are no materials other than ivory which work as well in instrument repair.

A music association or music shop: “Our trade, which revolves around bowed stringed instruments of the violin family, uses a small piece of mammoth (less than one gram) for a vital part (known as the "face") of the bow tip. Mammoth is extinct and the volume used is very low, so presents no threat to this species.”

Hippopotamus

Some responses explained that hippopotamus teeth are commonly carved into sculptures, trinkets, figurines and other ornaments and are considered a luxury good in Southeast and East Asia. Hippopotamus ivory features in traditional African tribal art. The incidence of antique items being traded in the UK is rare. Hippopotamus ivory has also been used in historical pieces such as walking cane handles, dagger hilts and netsuke.

Arctic species (narwhal and walrus)

Some responses explained that hunting of walrus and narwhal by indigenous communities is traditional and is legal, the primary use of the species is as a food source. Ivory is considered a by-product of a subsistence hunt as all parts of a hunted specimen are used. Common uses and trade for this ivory include as carvings, musical instruments and tusks in natural form. The tusks of male narwhal are considered a valuable economic commodity that is an important source of cash for some coastal communities. Mammoth is also thought to be traded by indigenous communities in traditional ivory carvings, jewellery and collectables for the fossil market. In the past, walrus tusks were used to make tools, and the tusks from narwhal was used for tentpoles, walking sticks and the manufacture of hunting implements.

Some responses explained that walrus ivory was used over the past 1,000 years as a medium for producing decorative solid carvings in Europe – examples include the Lewis Chessmen, dating from the 12th Century. Ivory was frequently used to make handles for knives and bladed weapons (such as swords and daggers), with examples cited made from walrus ivory originating from the Arctic from Europe, Russia, Turkey and Iran from the 4th to the 19th century. It has also been used by sailors to make “scrimshaw” (used to describe the decorated, etched or carved whale bone or teeth that were worked on by whaling mariners in the 18th and 19th centuries, in both the Pacific and Atlantic oceans).

Some responses noted that in Japan walrus ivory has been carved into traditional handicrafts and sculptures, including netsuke, ojime and obidome (small carved ornaments worn as part of Japanese traditional dress).

Some responses explained that Narwhal tusk is most commonly used as a decorative piece, usually as a whole unworked tusk.

Sperm whale

Some responses explained that the Fijians produced sperm whale teeth necklaces, worn with the curved teeth pointing upwards. If the teeth did not come from a beached whale it was often the Tonga islanders who hunted the whales and sold the teeth – known as tabua when threaded on a cord – to the Fijians. Tabua is often gifted at ceremonies such as weddings and births. The gifting and exchange of tabua is of significance as the recipient is bound by tradition to honour a request. Tabua is a symbol of status and wealth amongst other things. Tabua is still important in modern day Fijian society. Alternatives to using sperm whale ivory for tabua in the past have included the use of walrus and elephant ivory.

Sperm whale ivory has also historically been used to make scrimshaw. One response raised that whalebone was historically used for women's dresses and corsets, however whalebone is not in scope of the call for evidence as it is not considered as being ivory.

A conservation NGO: "The teeth of sperm whales have for many centuries been prized possessions within Fijian and Tongan society. They are still used today in ceremonies such as weddings and are gifted upon the birth of babies, when seeking a woman's hand in marriage and they are also gifted to neighbouring villages, sometimes as many as 100 tabua at a time. … The tabua is still of immense importance in the lives of Fijian people, it is so ingrained in their identity that the strength of feeling towards the tabua should not be underestimated."

Alternative materials

Some responses explained that alternative materials for ivory include wood, stone and often ivorine, a plastic with an ivory-like appearance.

Some responses explained that after it became difficult to obtain elephant ivory, musical instruments have more often than not been made and repaired with mammoth ivory. Some responses highlighted that alternative materials to ivory are considered inferior as they negatively affect the tonal quality of the instrument. They note that removing the ivory and replacing it with an alternative material is not only likely to damage the instrument, but also consider that it would decrease the value of the instrument especially given that it will no longer be in its 'original' form.

Some responses claimed that for those items that are wholly made out of the ivory no alternative material is possible. For others where the ivory only accounts for a part of the item, responses argued that it is mostly not possible to substitute other material without affecting the historic integrity and value of the piece.

Some responses explained that extending the Ivory Act to include walrus ivory would prevent repairs using this material, and also that these items would be unlikely to meet the 10% de minimis threshold or be considered rare and important enough in their own right[28].

Some responses highlighted that in Fiji, historically walrus and elephant ivory have on occasions been used as a substitute to sperm whales' teeth, and more recently resin. A survey (29 responses from the Fijian community) undertook by a respondent suggests that alternative materials are not particularly acceptable to Fijian people with 56% respondents saying they wouldn't accept an alternative material.

Some responses argued that Inuit communities do not have any alternative material that they can use to walrus and narwhal ivory due to the cultural importance attached to carving ivory.

Some responses explained that museums do not use ivory in the repair/conservation of items, and that they would use an alternative material.

Question 7 – Outstanding items made from ivory

Are there any particular examples of items, which are made from or contain ivory from these species that could be considered of outstanding artistic, cultural or historical value and importance?

Some response noted that museums hold a wide variety of objects of historic, cultural and scientific importance which contain ivory, both elephant and non-elephant. A large proportion of these objects form part of varied medical collections, as well as a significant collection of King George III, amongst others. These artefacts range from 17th-Century muskets held by the Royal Armouries to the Lewis Chessmen, carved from walrus ivory and displayed in both the British Museum and the National Museum of Scotland.

Some responses also explained that natural history collections could feature under the "Collections and specimens of fauna", as the first listed category of items afforded protection under Article 1 of the 1970 UNESCO convention on cultural property. Many collections of natural history objects are likely to be regarded as being of historical significance and some collections will be regarded as being of outstandingly high historical value. Collections such as those of the Pitt Rivers Museum in Oxford or the Horniman

[28] The Ivory Act ban is subject to five narrow and carefully defined exemptions:

- Pre-1947 items containing less than 10% ivory by volume
- Pre-1975 musical instruments containing less than 20% ivory
- Portrait miniatures made before 1918
- Sales and exchanges to and between accredited museums. This applies to museums accredited by Arts Council England, the Welsh Government, the Scottish Government or the Northern Ireland Museums Council in the UK, or, for museums outside the UK, the International Council of Museums
- Items of Outstanding Value and Importance. An exemption for pre1918 items of outstanding artistic, cultural or historic value and importance. Such items will be subject to expert advice from a selection of institutions deemed to have the necessary knowledge and expertise to do so.

Museum in London provide plenty examples of the importance of ethnographic and natural history objects from the past.

Some responses argued that whilst in some cases it is possible to identify the precise species, in many only invasive research techniques would provide precise confirmation, something which the museums would not do as a matter of course.

Global trends in the trade of non-elephant ivory

Question 8 – International value of ivory

Is the ivory from any of these species valued in other parts of the world and why? Please provide any evidence to support your answer.

Some responses highlighted similar uses of these ivories as detailed in the summary of responses to questions 6 and 7, including; musical instruments, sculptures, carvings and luxury goods. Musical instruments included violin bows in the western classical tradition, as well as those made by native communities, such as flutes and pipes. Some responses explained that violin bows are valued across the world.

Native communities in the Arctic region use walrus and narwhal ivory historically and now.

Carvings and sculpture are most common in Southeast and East Asia. This usually takes the form of hippopotamus teeth imported from several African states.

Arctic species (narwhal and walrus)

TRAFFIC found that the main international markets for walrus tusks included Japan, Germany, Switzerland, Denmark and Spain[14]. TRAFFIC found that the main international markets for narwhal tusks were Denmark, Japan, Netherlands, France, Germany, Italy, Switzerland, Belgium, Austria and Spain[12]. Some responses explained that there is also a limited market for walrus (and whalebone products) in North America, and some responses viewed that the overall trade in walrus ivory is low and is not driven by any particular international market, however these views were submitted without any supporting evidence.

Some responses explained that trade in narwhal and walrus ivory provides economic value to indigenous communities in Canada. These are subsistence hunts where all parts of the animal are used. In addition to a key part of their diet, parts of the animals provide materials for everyday items essential for living in the Arctic, including clothing, tents and hunting equipment. The ivory is a by-product of this hunting and is either sold as raw ivory, or carved, and then sold.

Some responses explained that indigenous communities are small (usually under 1000 people), isolated (no roads, usually hundreds of kilometres apart) and the cost of living is very high (most consumer goods are 4 – 5 times the price in southern Canada). Therefore, Inuit maintain their hunting lifestyle, which includes selling by-products of their subsistence harvests. This, in turn, brings strong engagement from communities in co-managing harvest and trade of all species. One response estimates a value of $30,000 (CAD) annually from mostly walrus and some narwhal hunting in the area of Pangnirtung, Nunavut – money that is returned to the community.

A strategic intelligence assessment in 2016 undertaken in Canada to identify harvest and market trends for narwhal ivory found that Chinese customers value narwhal tusks for their rarity and beauty, as well as part of a fascination with the Canadian Arctic. The study found that there is no indication that narwhal ivory is being used as a substitute for ivory from other species. It is a separate commodity valued by a small market of interested buyers. One response explained that hunters usually sell narwhal tusks for around $100.00 (CAD) per 30 cm.

Evidence submitted by one response of export data of narwhal and walrus tusks from 2005 -2014 to mainland China, Hong Kong, Japan and Taiwan shows that tusks from one third of narwhals and 41% of walruses landed were exported and the respondent suggests that this indicates that it is an important source of income[25].

Some responses explained that there is also the non-monetary value generated from indigenous hunting of narwhal and walrus. This includes providing opportunities for the maintenance of traditions and the related intergenerational transferal of skills and knowledge, as well as for the preservation of language, cultural identity and social/community cohesion[15, 16, 29].

A conservation NGO: “The sale by hunters of narwhal and walrus tusks seems to be an important source of income, with tusks from one third of narwhals landed and 41% of walruses landed in Canada exported.”

Hong Kong, SAR China

Some responses explained that there is a significant trade in hippopotamus ivory which is considered a luxury good in Southeast and East Asia. Evidence from the TRAFFIC report[4] suggests that the US market is supplied with ivory that is in the main exported from African range states to Hong Kong SAR China as raw ivory to be carved before being re-exported to the US. Furthermore, TRAFFIC’s examination of who in Hong Kong is listed as the foreign supplier showed that the trade is dominated by a small number of companies. For example, between 1995 and 2002, 13 Hong Kong–based companies accounted for 642

[29] Keenan, E., Fanning,L.M., & Milley,C. (2018). Mobilizing *Inuit Qaujimajatuqangit* in narwhal management through community empowerment: A case study in Naujaat, Nunavut. *Arctic, 71* (1), 27-39

(79%) of all carved hippopotamus ivory shipments to the USA. The top five listed exporters alone accounted for 443 of these shipments (54%).

Fiji and Tonga

As explained in summary of responses to previous questions 'tabua' made from sperm whale ivory, hold significant value in Fijian and Tongan society. Some responses explained that with the exception of Fiji and Tonga, the trade in ivory from sperm whales and killer whales is very low and is mostly pre-convention (CITES) specimens for personal purposes.

Question 9 – Value of global ivory trade

What is the value of global trade in ivory from these species?

Some responses noted that there is no reliable estimate for the value of global trade in ivory from any of these species individually, or non-elephant ivory as a whole. However, some examples of individual trades including the value were provided. These included an auction of 3.5 tonnes of hippopotamus ivory in Tanzania in January 2018, which sold for £9,600.

Hippopotamus

Some responses explained that whilst the exact value of the global trade in hippopotamus ivory was unknown, the global market was "large" and worth "substantial" amounts of money, based on numbers that are available. Other responses highlighted that the UK does not have high volumes of trade in any of the ivory in scope of the call for evidence.

As noted in the summary of responses to question 1, despite disparities between countries in reporting imports and exports, some responses estimated that 771,000 kg of hippopotamus ivory has been traded internationally since 1975[3]. Some responses equated this to an estimated 146,857 hippopotamus, more than the number of hippopotamus remaining. The study also suggested that more than 90% of global hippopotamus teeth trade is imported to, and re-exported from, Hong Kong SAR, China. Of that, over 75% originated in Tanzania or Uganda. Additionally, 97% of all the CITES-registered commercial trade of hippopotamus teeth into or out of Hong Kong SAR, China since 1975 is specified as 'wild caught', with less than 2% listed as captive-bred, ranched or pre-convention, which equates to roughly 128,206 wild hippopotamuses.

Evidence submitted suggests that there is an increasing trend in the trade of hippopotamus ivory and the volumes of global trade in hippopotamus ivory; with 12,847 hippopotamus teeth and tusks, weighing a total of around 3,327kg, bought and sold in 2018. Global trade has increased from 273 items in 2007 to 6,113 in 2011. Another response submitted analysis to suggest that more than 38,000 individual teeth, 26 tonnes of teeth by weight, 6,550 hippopotamus tusks, almost 6,500 carvings, and various other

hippopotamus products were legally traded between countries in the 10 years to 2016, and that many of these were destined for EU Member States.

A conservation NGO: “No trade values have been found for the entire market, but clearly there is a large global import, carving and export market worth a substantial amount of money based on trade between Hong Kong SAR China, SE Asia and the USA markets.”

A conservation NGO: “An examination of the CITES Trade Database reveals the in the decade to 2016, more than 78,000 hippo teeth or ivory items, and almost 30,000kg of hippo teeth and ivory by weigh, were declared to have been legally exported from a number of countries. Hippo parts are also coming into EU countries in significant quantities: in the decade to 2016, more than 6,000 hippo teeth, 2048 hippo tusks, and a further 1,183 hippo ‘trophies’ were exported to EU Member States, alongside thousands of other hippo parts and products. Hippo ivory trade appears to be increasing, with reports that as many as 12,847 hippo teeth and tusks, weighing more than 3,000kg, were bought and sold in 2018.”

Artic species (walrus and narwhal)

Evidence submitted suggests that that for the period 2005 – 2014 the global trade to four East Asian markets – mainland China, Hong Kong, Japan and Taiwan of both walrus and narwhal ivory decreased significantly[25]. The trade in narwhal ivory decreased from around 1,000 – 2,000 pieces in each of 2005, 2006 and 2008, to under 500 pieces each year from 2011 to 2014. The trade in walrus ivory declined from 20,000 – 35,000 pieces in each of the years from 2005 to 2010, to under 5,000 pieces in 2013 and in 2014. The response suggested that most of the trade in ivory from these species was online, and that they considered it difficult to find these items for sale in physical outlets. This makes it more difficult to establish true demand, buyer profiles and supply chains.

Evidence submitted from the CITES trade database analysis for ivory from narwhal in the decade to 2016 show some 7,000 tusks or carvings were reported to have been exported around the world. Specifically, on commercial trade one response quoted an estimate of more than 2,500 tusks, 2,100 carvings and various products from narwhal traded between countries in the decade to 2016. According to the MADB database (Market Access Database) of EU imports, EU countries have imported 1,466 narwhal tusks since 2014; all but 39 were from Canada.

Evidence submitted from the CITES trade database suggests that in the decade to 2016 more than 170,000 walrus tusks or carvings were globally exported. Other analysis showed that between 2007 and 2016, more than 150,000 carvings, 12,500 items of jewellery, and various other walrus items including teeth and tusks were declared to have been traded internationally. Evidence submitted on the MADB database of EU imports, suggests that EU countries have imported 733 walrus tusks since 2014, in addition to 395 teeth (which could also be tusks). Imports into the EU of worked walrus products since 2014, including under the codes for carvings, ivory carvings, bone carvings, jewellery, ivory jewellery and ivory pieces, number in the tens of thousands.

Some responses emphasised the importance of considering the non-monetary value in addition to the monetary value of trade in walrus and narwhal ivory to indigenous communities – see summary of response to question 8.

Mammoth

Briefing submitted separately to the call for evidence by one organisation that requested this be considered as part of the call for evidence explained that the Chinese ban on elephant ivory (announced 2016, implemented 2017) is thought to have caused a significant increase in both the quantity of mammoth ivory imported into the country from Russia and the price for mammoth ivory. It was viewed that the increased demand has led to the creation of smuggling networks, as evidenced by arrests and sizeable seizures of mammoth ivory being imported without the required permits. Some responses explained that there is an estimated 500,000 tons of mammoth ivory frozen in the tundra in Russia and that it is exported to China, where it is being sold as an "ethical alternative" to elephant ivory.

Respondents provided evidence to suggest that in 2017 Russia exported 72 tons of mammoth ivory of which over 80% went to China[30]. Some responses highlighted that in addition to mammoth ivory traded directly from Russia into mainland China, there has also been a significant increase in mammoth ivory exported to Hong Kong SAR, from 9 tonnes per year from 2000 to 2003 to an average of 31 tonnes per year from 2007 to 2013. Research in 2011 found 6514 mammoth ivory items for sale alongside 6437 items of non-mammoth ivory[31].

Question 10 - Economic value of protection or ivory trade

Do you have any evidence on if the protection of these species OR the trade in their ivory provide any economic value outside the UK?

If so, please provide this evidence and also any evidence you have on any links between this value and the UK.

Limited information was submitted in response to this question that has not already been picked up in the summary of other questions; the evidence that was submitted was mostly focussed on narwhal and walrus.

Narwhal and walrus

Evidence submitted on the trade in narwhal and walrus ivory between 2005 – 2014 into four East Asian markets – mainland China, Hong Kong, Japan and Taiwan suggest that

[30] https://phys.org/news/2019-01-siberia-chinese-demand-prehistoric-tusks.html
[31] http://www.rhinoresourcecenter.com/pdf_files/131/1316403533.pdf

the East Asian markets studied were not globally significant when looking at carvings from these ivory which made up the overwhelming majority of items traded. Less than 1% of carvings were imported into these countries. However, these markets were more significant for raw tusks representing 41% of the market for walrus and 28% of the market for narwhal[25]. The evidence also suggests that the value of walrus ivory in China could vary considerably depending on the age of the item.

Some responses highlighted that native communities who are reliant on the trade in ivory from these species for part of their income are vulnerable to changes in the market due to economic, conservation or political actions, such as boycotts, campaigns and lobbying – see question 8 for more details.

A conservation NGO: "From market surveys of mainland China, Hong Kong, Japan and Taiwan, an "old" piece of bracelet rosary, claimed to date back to the Qing Dynasty, was priced at CNY500,000 (USD73,740). However, the same type of rosary, without indication of age, was priced at CNY399 (USD59). Online advertisements of walrus ivory claiming to date back to 1949 or earlier cost between CNY1,500–20,000 (USD221–2,950) per piece. The remaining walrus ivory products were advertised as "new", with prices between CNY450–20,000 (USD66–2,950) per piece."

Question 11 – UK role in ivory trade

Does the UK play an important role in the trade of these types of ivory?

Some responses noted that the UK does not play an important role in the trade of these types of ivory, although that levels of intra-UK trade are unknown. Some responses warned that there is a risk of increased demand for these items following the implementation of the Ivory Act 2018.

Research undertaken by one response found a total of 1591 items (this figure includes ivory not fully identified and labelled "marine") containing ivory from species covered by the call for evidence were sold in the UK by 131 auction houses from 2013 to 2019. To note, some of the items may have been captured more than once in these data as they may have been sold more than once.

Hippopotamus

Some responses considered that despite evidence of some level of trade, the UK does not play a key role in the international trade in hippopotamus ivory. For example, 75 items (of which 73 were whole teeth) of hippopotamus ivory were imported into the UK between 2008-2019 in contrast with data that suggests Tanzania sold 7.5 tonnes of hippopotamus ivory last year, comprising more than 12,000 items.

Sperm whale

Some responses explained that trade from the UK to the US in sperm whale ivory is likely as there is a historical tradition of producing scrimshaw, and a current interest in antiques of this type. They also noted that the majority of these items were categorised as carvings in the CITES trade database and therefore it is not possible to tell if these are carved teeth or carved bone as both of these are used in the production of scrimshaw.

Arctic species (narwhal and walrus)

Some responses noted that the UK trade in narwhal and walrus ivory is low and they consider the majority to be based on personal use or for exhibitions, however this latter point submitted without any supporting evidence. In the TRAFFIC[12] report the trade examined between 2005 – 2009 did not feature the UK in the top 10 countries for exports of narwhal ivory. Various responses quoted CITES trade data of imports into the UK to demonstrate that the volumes of trade are low.

An organisation or national government: “The UK is not even among the primary countries trading in Arctic material. One is Sweden with only a few hundred narwhal objects in the last decade. All for "personal use". There is no evidence for commercial trade”

Museums

One response explained that the UK plays an important role in the international circuit of touring public exhibitions. The response argued that any proposed change in policy on the trade in non-elephant ivory should not impact on the museum sectors’ ability to ‘export’ culture, and so would require exemptions similar to those contained in the Ivory Act 2018.

An organisation or national government: “The UK plays an important role in the international circuit of touring public exhibitions. Many historical objects of cultural, artistic and scientific importance contain ivory from the species listed. UK museums are therefore implicitly part of the “trade” in ivory, in so much that they legally exchange and share collections with other museums, both within the UK and abroad.”

Domestic Market

Question 12 – Financial value of ivory items in the UK

Do you have any evidence on the financial value of items made of or containing ivory from these species in the UK? This evidence could include, for example average prices or the highest and lowest prices.

Musical instruments

Some responses to question 12 noted that musical instruments made of non-elephant ivory tend to be the oldest, rarest and most important, with prices varying from £300 to £100,000, depending on condition, craftsmanship, availability etc., rather than specifically on the quantity of ivory.

Bows can sell for as little as £10 to hundreds of thousands and are not valued for the ivory; this was deemed the most appropriate material to use due to its flexibility, strength and durability. Mammoth ivory is also used on new bows with these valued for the craftsmanship rather than the ivory (ivory is valued at £1 whereas the bow is valued in the region of £3,500). Some responses explained that the use of mammoth ivory has been a legal and pragmatic solution for the musical instrument industry following the international ban on elephant ivory in the 1970s.

Arts and antiques

Some responses explained that there are a small number of objects in circulation containing or made of ivory from these species compared to items containing or made of elephant ivory, and that antique ivory items vary in price depending on the condition, quality, provenance and subject matter, alongside how important and unusual the collection, and their rarity.

An art and antique association, dealer or auction house: “Scrimshaw objects, such as an etched whale tooth can sell for as little as £100 and as much as several thousand pounds, depending on the condition, quality, provenance and subject matter… Ethnographic items will vary in price between important and unusual collections that might sell for tens of thousands of pounds down to an individual specimen selling for a few pounds. Because of their rarity antique narwhal tusks can be priced in the low tens of thousands of pounds for the oldest and largest specimens”

UK Auction House sales

One response undertook research of sales from a sample of 131 UK Auction Houses, between 2013 and 2019, of non-elephant ivory (Table 2 and 3). They found that descriptions were sometimes vague and ambiguous in terms of the type of ivory the item was made from/included, with 3% of sales being sold as an unidentified type of ivory and 39% being labelled very broadly as ‘marine ivory’. Their study also suggests that price across the different types of ivory varies. The research also showed that the total value of the ivory from the species in scope of this call for evidence sold was in the region of £1.7 million. The actual amounts will be higher as this was only a sample of UK Auction Houses and sometimes the sale price was not available. To note, some of the items may have been captured more than once in these data as they may have been sold more than once.

Table 2. Evidence submitted on the value of sales between 2013-2019 from a sample of 131 UK Auction Houses												
Species	**No of lots within sample**	**No of hammer prices available**	**Lowest hammer price**	**Highest hammer price**	**Number of lots with no estimate given**	**Number of lots sold under estimate**	**Number of lots sold over estimate**	**Number of lots sold within estimate**	**Number of lots passed**	**Lowest estimate for time period**	**Highest estimate during time period**	**Total hammer price from those available, in time period**
Hippopotamus	56	35	£60	£2,800	0	12	12	2	9	40-50	4000-6000	£18,350
Hornbill	32	20	£0	£21,000	1	1	8	1	9	100-150	10000-15000	£35,635
Mammoth	104	56	£0	£8,000	7	15	9	14	17	20-30	80000-90000	£37,142
Marine	630	422	£20	£20,000	21	98	122	120	64	20-40	25000-35000	£228,115
Narwhal	78	59	£220	£36,000	2	2	26	18	11	40-60	15000-25000	£237,174
Walrus	477	345	£20	£548,750	6	65	99	104	74	30-50	200000-300000	£1,094,400
Warthog	36	25	£0	£380	1	7	3	9	5	20-30	600-800	£2,781
Whale	149	120	£40	£9,800	0	14	41	48	17	50-70	6500-7500	£80,293
Unsure	42	25	£30	£9,000	1	6	9	6	3	20-40	5000-8000	£23,272
Mixture	20	14	£0	£11,250	0	1	3	8	2	80-120	9000-12000	£28,160

General remarks

Some responses argued that ivory from these species can often be distinguished from other ivory materials by those with sufficient knowledge of antiques, based on the context of the entire object, the extent of wear, and the quality and style of workmanship. Natural history items can also be dated by observation or through scientific analysis. For example, the case of uncarved narwhal tusk, antique tusks are much larger and exhibit a pronounced spiral. Some responses thought it is more acceptable to use scientific testing for these items than in the case of works of arts; the integrity of the natural specimen is seen as being less compromised by the invasive process of sample taking.

Question 13 – Commonness of ivory items in the UK

Do you have any evidence on how common these items are in the UK? For example, do you have any evidence to demonstrate how often they are sold or how many items are owned by individuals or organisations?

A number of different views were submitted in response to question 13. Overall evidence indicates that the UK is not of major importance in the trade or market for ivory from the species in scope of the call for evidence. However, some responses raised concerns that after the implementation of the Ivory Act 2018, trade in ivory from these species to the UK may increase as people move to other sources of ivory. One response viewed that few people want anything made of ivory and another response estimated that the number of items made of non-elephant ivory are probably in the thousands in the UK.

Musical instruments

Some responses explained that musical instruments (aside from bows) made of non-elephant ivory tend to be very rare with less than a few hundred of their type in existence in the UK. Similarly, another response explained that it is not unusual for string and woodwind instruments to contain ivory and therefore these items are common among musicians in the UK. One response estimated that there are around 96,000 bows that contain mammoth ivory in the UK and one business stated that in 2018 they auctioned 2587 bows. One response explained that due to the small size of the ivory in bows it is not possible to identify its source.

Owners of these items of ivory identified included individuals, musicians, museums, dealers, musical instrument makers and restorers, and collectors, with musical instruments considered as being the retirement and pension fund for some owners. Some responses viewed that a ban on mammoth ivory would cause a devastating financial loss to them.

A music association or music shop: “When instrument makers stopped using elephant ivory approximately 30 years ago, the makers turned to mammoth ivory as a substitute.

Today, lawfully made bows and other instruments containing mammoth ivory are being played, exhibited, and sold throughout the world by makers, dealers, and musicians who depend on them as indispensable tools of their trade. For musicians, instruments are highly personal, integral to their sound and performance quality, while often representing a very substantial personal financial investment. Mammoth tips are functional and make important contributions to the bow's artistic and acoustic qualities. Replacing the mammoth tip of a bow to avoid burdensome permitting requirements would risk damaging the bow's wooden stick and artistic value. Bows typically contain less than 1 gram (.25 gram when finished) of mammoth ivory. The overall scale of bow making is very limited."

Arts and antiques

Some responses explained that common items auctioned tend to be decorative items including some component of walrus, hippo, narwhal ivory or whalebone. Within the antiques sector hippopotamus ivory is not a replacement for elephant ivory as it is not easy to carve and therefore not widespread. Some responses noted that there are far fewer antique items made of ivory from these species in comparison to those made of elephant ivory and the use of ivory is less ubiquitous than it was 30 years ago, often replaced with something else, usually ivorine.

Some responses considered it premature to add other species to the Act before the cultural property database and the certification of important items for elephant ivory is operational and has proved itself effective.

Research undertaken by one response suggests that marine ivory is the most commonly sold ivory with a total of 630 items, representing 39% of the total sales of a sample of 131 UK Auction House examined between 2013-2019. This was followed by walrus ivory (477 items, 29%) and whale ivory (148 items, 9%) – see Table 3 for the full breakdown of the number of items sold during this time period. The low number of hippopotamus ivory items for sale during this time (56 items) supports arguments made by some responses that carved hippopotamus ivory, or indeed, whole antique teeth, are not being widely traded in the UK. To note, some of the items may have been captured more than once in these data as they may have been sold more than once.

Table 3. Evidence submitted on the number of sales of different types of ivory between 2013-2019 from a sample of 131 UK Auction Houses

Species	No.	%
Hippopotamus	56	3.43%
Hornbill	32	1.96%
Mammoth	104	6.38%
Marine	630	38.63%
Narwhal	78	4.78%
Whale	148	9.07%
Walrus	477	29.25%
Warthog	36	2.21%
Wild Boar	8	0.49%
Unsure	42	2.58%
Mixture	20	1.23%
Total	**1631**	**100.00%**

Question 14 – UK businesses specialising in ivory

Are there any businesses in the UK that specialise in ivory from these species? YES/NO. If yes, how many?

Some responses did not consider there to be any business that specialise in ivory from these species in the UK. However, others noted that there are a small number of antique businesses which specialise in ethnographical and natural history objects, ranging from tribal art specialists through to taxidermy dealers, and folk art dealers, which would be made of or contain non-elephant ivory. These items are often sold alongside objects such as Marbled busts, devotional jewellery and wooden cabinets, which helps explain the historical or cultural significance of the objects, rather than the precise materials from which they are made, and it is that which leads to their being selected for stock.

Other responses thought that there were business in the UK that specialise in non-elephant ivory within the music industry and these would be:

- musical instrument businesses and specialists
- specialist and general auction houses
- high level dealerships selling to internationally renowned soloists and normal dealerships selling to musicians

- general music shops
- independent bow makers
- independent people trading only in bows
- musicians selling bows to supplement their income

Some responses highlighted that the UK is a global epicentre for fine instrument dealing, some of which are made from non-elephant ivory. Some responses raised that musical instruments containing mammoth or other non-elephant Ivory, without exception or reference to date and amount of ivory used, should be exempt from any ban on the trade in these types of ivory.

A music association or music shop: “The UK and London in particular is considered at the international hub for the stringed instrument industry. As a country we have greatly benefitted from over 200 years of professionalism and honesty within the musical trade. There is an international market for musical instruments and their bows, with five of the six auction houses based in the UK (the other in France).”

International examples of country-level restrictions on the trade in non-elephant ivory

Question 15 – Restrictions on the ivory trade in other countries

We are interested in finding out more about countries’ restrictions on trade in ivory from these species. Please provide any information and/or evidence that you are aware of on this.

Some responses provided varied information and examples in response to question 15. Below is a summary of the key responses to this question.

Australia

One response explained that Australia treats all cetaceans as CITES Appendix I species.

Canada

One response explained that for imports and exports of ivory, Canada strictly applies and enforces the provisions of CITES. Some countries have separately imposed import bans for Canadian species, including polar bear, seal, narwhal and walrus. One response argued that there is no conservation benefit derived from these bans for Canadian species and they viewed these foreign import bans to have a significant negative impact on

Canadians. For example, they eliminate markets for legally harvested animals, which in turn impact the economies of remote Inuit communities where economic opportunities are very limited.

Fiji

One response explained that Fiji banned the sale of tabua (sperm whale teeth) without the relevant paperwork from the Department of Environment, however the respondent viewed that there is still a thriving illegal market. They also explained that the export or import of tabua requires a permit approval letter from the Permanent Secretary of iTaukei Affairs.

New Zealand

One response explained that under New Zealand's Trade in Endangered Species Act, artefacts like tabua (sperm whale teeth) need an export permit to be brought into the country.

Uganda

Some responses explained that before Uganda's 2014 ban, hunting hippopotamus was illegal, but their teeth could be traded legally if they came from carcasses of hippopotamus that died naturally. However, such large volumes of ivory were being traded that the authority suspected falsified export permits were being used for teeth from hippopotamus poached in neighbouring Democratic Republic of the Congo (where hunting is banned and there has been no legal trade in 20 years) and so introduced a ban. Some responses also referred to evidence presented in question 1 to 3 on hippopotamus population numbers and trade in their ivory to argue that the restrictions on trade have not stopped the illegal trade and hippopotamus populations are still in decline in some areas.

US

One response explained that under the US's Marine Mammal Protection Act, Alaskan natives can craft and trade ivory; otherwise, the domestic trade in marine mammals is banned. Some responses viewed that native artists and carving traditions have been severely threatened in US, after the passage of ivory laws by states banning all ivories. They viewed that the losses suffered by Native Alaskan craftspeople were so alarming that Alaska Senators Lisa Murkowski and Dan Sullivan introduced a bill in 2017, the Allowing Alaska Ivory Act, which would have prohibited any US state from banning sales, trade, or possession of handicrafts made of walrus ivory, whale bone, fossilized mammoth ivory or fossilized mastodon ivory if the handicrafts were made by Native Alaskans. However the bill did not pass.

Some responses explained that many Native artisans depend on sales of carved marine mammal ivory, particularly walrus, to pay for necessities like fuel oil through the winter. They argued that public confusion about what types of ivory are covered by the federal elephant ivory ban has reduced Native carvers' earnings by as much as 40% (according to

recent press reports), and the once-popular Native crafts are now disdained by visiting tourists due to negative associations with poached elephant ivory. Another response viewed that an unhelpful paradox has arisen: science, policy and Arctic peoples have worked together to agree quotas and methods of hunting marine mammals in the Arctic but are then prevented selling the produce from those animals, the quota is therefore not being used to its fullest extent, creating unnecessary waste products.

Washington State, US

Since 2015 the state has had a total, paperwork-free exemption for any ivory used in musical instruments but this up to 15% by volume.

Arctic species

One response provided a summary of the current regulatory regime surrounding exports of narwhal and walrus from its range states to the UK/EU.

Other remarks – CITES

One response explained that in the main researchers in sustainable wildlife practices appear far more concerned about updating and improving overall documentation of all endangered species under CITES than about risk to animals in proposed expansion of UK law.

Other remarks - UK Ivory Act

Some responses raised points for consideration on adding species to the Ivory Act in response to this question. Some responses stated that it is premature to add other species to the Ivory Act before the cultural property database and the certification of important items is operational and have proved themselves effective. In addition, some responses viewed that the underlying assumptions about the widespread incidence and historical use of elephant ivory that have driven the structure of the Ivory Act do not apply to the species under consideration today. For example, they viewed the Ivory Act as being developed against the background of a widespread use of elephant ivory historically in the UK and of its use in a very large number of important cultural and historical objects. Using the Ivory Act to prohibit these other lower incidence materials would represent a disproportionate response, particularly since they are unaware of any significant trade in the UK in historical objects made from the tusks and teeth of these species.

They also argue that as nearly all examples of historical non-elephant ivory are solid carvings or in objects where the ivory tusk or tooth form the majority of the material this will mean that the 10% de minimis exemption would not be relevant. Their view is that as a consequence of this the vast majority of non-elephant ivory objects would have to be capable of passing the “outstandingly high” Section 2 test in the Ivory Act in order to receive an exemption certificate and it is not clear whether these items would pass that test[28].

Next steps

The Department is exploring and considering the evidence submitted in response to the call for evidence with a view to determining what actions, if any, it is seeking to take forward.