



OCEAN THEME PARKS: **A Look Inside China's** **Growing Captive Cetacean Industry**

SECOND EDITION

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2019



China Cetacean Alliance

We belong in the wild

The **China Cetacean Alliance (CCA)** is a coalition of international animal protection and conservation organisations, comprising the Animal Welfare Institute (AWI), Endangered Species Fund, Environment & Animal Society Taiwan (EAST), Hong Kong Dolphin Conservation Society (HKDCS), Kuroshio Ocean Education Foundation, Life Investigation Agency, Marine Connection, and Whale and Dolphin Conservation (WDC).

The CCA raises awareness of the welfare issues associated with the capture of free-ranging whales, dolphins and porpoises (also known as cetaceans), and their subsequent holding in ocean theme parks in mainland China.

A 2015 CCA report documented the number of facilities and the cetaceans held within those facilities, provided an assessment of the

animal welfare issues associated with cetacean captivity, assessed facility breeding success and educational activities, and considered the facilities' adherence to China's national regulations.

This updated report documents the changes since 2015 in the number of facilities and the number of cetaceans exhibited, and analyses significant events within the industry that have taken place since the last report. This report should be read in conjunction with the 2015 report, to obtain a full picture of the ocean theme park industry in China.

Conclusions drawn from both reports are being used for continuing public awareness campaigns to inform the Chinese public about the conservation and welfare concerns associated with the capture of free-ranging cetaceans and their subsequent holding in captivity in China.



CHINA CETACEAN ALLIANCE MEMBERS

Animal Welfare Institute (AWI) has been dedicated since 1951 to reducing animal suffering caused by people. AWI seeks better treatment of animals everywhere—in the laboratory, on the farm, in commerce, at home, and in the wild. www.awionline.org

Endangered Species Fund is dedicated to the protection of endangered species in China. Through public awareness raising activities, the Fund promotes biodiversity conservation, and legislation for species conservation to realise the sustainable development of ecological civilisation in China. The Endangered Species Fund was initiated by China Biodiversity Conservation & Green Development Foundation (CBCGDF).

Environment & Animal Society Taiwan (EAST) is a non-governmental organisation campaigning for improvements for animals, people and the environment in Taiwan, established in 1999. EAST believes that human welfare is closely linked with animal welfare and environmental protection, and aims to use these links to address the roots of problems. EAST researchers uncover cruelties and injustices that society would otherwise not be aware of. EAST also believes that effective change needs to happen at a legislative level as well as through awareness-raising and institutional education. Besides advocating for better welfare for companion animals, farm animals, wildlife and experimental animals, EAST actively engages in many environmental issues. EAST promotes freedom of government information, and lobbies for the improvement of existing legislation, with better citizen participation in public policy-making in Taiwan. www.east.org.tw

Hong Kong Dolphin Conservation Society (HKDCS) is a non-governmental organisation dedicated to the conservation of whales, dolphins and porpoises in Hong Kong. Founded in December 2003, its mission is to protect whales and dolphins through scientific research and public education. www.hkdc.org

Kuroshio Ocean Education Foundation (KOEf) was founded in 1998 to investigate and monitor cetaceans in Taiwan. Its mission is to gather ocean lovers in Taiwan to protect the oceanic environment and deliver conservation information to the public. www.kuroshio.org.tw

Life Investigation Agency was established in 2010. LIA is an independent campaigning organisation to investigate, expose and inspire, and to campaign against the illegal trade in wildlife, illegal logging and trade of timber species, the destruction of our natural environment and the abuse of animals. <http://ngo-lia.org/>

Marine Connection works internationally to protect dolphins and whales in the wild and to end the keeping of them in captivity. Through effective campaigning and public awareness initiatives on issues such as the formation/expansion of new captive facilities, wild captures and other threats to cetaceans caused by human activity, Marine Connection is dedicated to ensuring their welfare and survival. www.marineconnection.org

Whale and Dolphin Conservation (WDC) is the global voice for the protection of whales, dolphins and their environment. WDC aims to reduce and ultimately eliminate continuing threats to cetaceans and their habitats through campaigns, field projects, scientific research, educational outreach and legal advocacy. The charity was established in 1987 and has offices in the USA, UK, Australia, Germany and Argentina. www.whales.org



Animal Welfare Institute



ABBREVIATIONS

CCA: China Cetacean Alliance

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

IUCN: International Union for Conservation of Nature

IUCN-SSC: IUCN Species Survival Commission

MOA: Ministry of Agriculture and Rural Affairs

GLOSSARY

Cetacean: A collective taxonomic name for whales, dolphins and porpoises.

CITES Appendices: Appendices I, II and III to the Convention are lists of species afforded different levels or types of protection from over-exploitation in international trade.

- + Appendix I lists species that are the most endangered among CITES-listed animals and plants. They are threatened with extinction and CITES prohibits international trade in specimens of these species except when the purpose of the import is not commercial; for example, when it is for scientific research. In these exceptional cases, trade may take place provided it is authorised by the granting of both an import permit and an export permit (or re-export certificate). Article VII of the Convention provides for a number of exemptions to this general prohibition.
- + Appendix II lists species that are not necessarily currently threatened with extinction but may become so unless trade is closely controlled. It also includes so-called 'look-alike species'; i.e., species whose specimens in trade look like those of species listed in Appendix I. International trade in specimens of Appendix-II species may be authorised by the granting of an export permit or re-export certificate. No import permit is necessary for these species under CITES (although a permit is needed in some countries that have taken stricter measures than CITES requires). Permits or certificates should only be granted if the relevant authorities are satisfied that certain conditions are met, above all that trade will not be detrimental to the survival of the species in the wild.
- + Appendix III lists species that are included at the request of a Party that already regulates trade in the species and that needs the cooperation of other countries to prevent unsustainable or illegal exploitation. International trade in specimens of species listed in Appendix III is allowed only on presentation of the appropriate permits or certificates.

Conspecifics: Members of the same species.

Dolphin-assisted therapy (DAT): A form of interaction intended as therapy for psychologically or physically disabled people. Those who practice DAT maintain that structured interactions with captive dolphins are beneficial for patients with conditions such as autism, Down's syndrome and other disabilities. Scientific evidence for this is lacking, however.

Ex situ conservation: The process of protecting or attempting to protect endangered plant or animal species outside of natural habitat. This includes moving them to reserves or bringing them into captivity for propagation or breeding purposes, with the intent of returning progeny to natural habitat in the future.

Free-ranging: Non-captive, independent-living, ecologically functional wildlife in natural habitat.

In situ conservation: The process of protecting or attempting to protect an endangered plant or animal species in its natural habitat.

Ocean theme park: Commercial theme park or aquarium that holds marine mammals, especially cetaceans, in exhibits, primarily for use in theatrical performances.

Stereotypy: Repetitive behaviour that is generally not observed in a wild setting. In captivity, it has no obvious function and may indicate sub-optimal welfare and a failure to cope with the captive environment. It can include pacing, swaying and self-mutilation.

Threatened species: A species that is categorised by the IUCN Red List of Threatened Species as Vulnerable, Endangered or Critically Endangered.

Trainer for a day: A programme offered to paying members of the public in which they experience and participate in some level of marine mammal care and training carried out by trainers and other ocean theme park staff.

EXECUTIVE SUMMARY

The Chinese ocean theme park industry continues to expand rapidly. As of April 2019, there were 80 ocean theme parks in operation and a further 27 under construction, suggesting an increasing desire amongst the Chinese public to see captive cetaceans. This is in contrast to the situation in many other parts of the world, where the popularity of keeping cetaceans in captivity is rapidly waning.

Detailed information on the status of the captive animals inside China's ocean theme parks is difficult to obtain, as there is no publicly available information source. Therefore, it is not possible to know the exact number of individuals currently or previously held in the parks, the number that have been captured in the wild or the number that have died in Chinese facilities.

The parks house an estimated 1,001 cetaceans, representing 13 species. Bottlenose dolphins (*Tursiops spp.*) and beluga whales (*Delphinapterus leucas*) continue to be the most commonly held species.

Media reports indicate that most captive cetaceans in China have been captured from the wild, and it is likely that many of these animals have undergone periods of severe stress as they have been chased, captured, removed from their family groups and transported over long distances to be placed into restrictive environments. Such captures are also causing the death and injury of free-ranging cetaceans during and following the capture process, due to stress and entanglement in the nets.

The continued import of wild-caught cetaceans risks damaging China's economic interactions. As international public awareness of these imports grows, so does the call for Chinese airline carriers to end their involvement in this trade. The subsequent damage to China's international image and the threat to trade caused by the ocean theme park industry violate the regulations governing ocean theme parks in China.

China's participation in the live capture of free-ranging cetaceans from the waters of both Russia and Japan, and the subsequent import of these individuals, is having a negative impact on the conservation status of some targeted cetacean populations and on the international image of the country's commitment to protecting wild animals.

In November 2018, Shanghai Haichang Ocean Park publicly displayed four orcas, becoming the first park to put orcas on public display in

China. The China Cetacean Alliance is aware of an additional 11 orcas in China held at three ocean theme parks. All 15 orcas were imported from Russia.

In addition, 56 pantropical spotted dolphins (*Stenella attenuata*) have been identified in Chinese ocean theme parks, yet the CITES trade database lists the import of just nine individuals. This discrepancy presents a potential violation of CITES regulations.

Fourteen ocean theme parks claim to have bred cetaceans in captivity. Of 37 births, at least seven calves are known to have died.

All ocean theme parks display cetaceans in shows, and over half of them offer visitors close contact interaction opportunities. During these activities, visitors receive very little educational information about cetacean conservation, despite claims to the contrary made by the facilities.

Ocean theme parks also claim they are an integral part of the conservation of free-ranging cetacean populations, yet only two of the 80 operational parks in China provide public information regarding their involvement with any *in situ* cetacean conservation programme or stranding, rescue and rehabilitation programmes.

The welfare of captive cetaceans in mainland China continues to be of major concern. The regulations stipulate minimum requirements for trained personnel and housing conditions. Yet it is evident that the living conditions within the ocean theme parks are inadequate to meet the complex physical and behavioural needs of cetaceans, incidents of animal abuse and neglect are widely documented, and many veterinarians and trainers do not possess the necessary skills to care for cetaceans in accordance with national government regulations. Due to these conditions, many animals are likely to be suffering to varying degrees. These welfare issues have been documented publicly and subsequently have been recognised by both the industry and the government regulators.

Chinese laws and regulations lack a legal definition of 'animal welfare'. Specific animal welfare concepts within the laws and regulations relevant to the ocean theme park industry are therefore lacking, and facilities flout the regulations regardless. It is clear that cetaceans in captivity in China remain without proper protection from conditions that cause suffering.

RECOMMENDATIONS

The China Cetacean Alliance (CCA) recommends that the governing authorities responsible for the management of captive cetaceans in China adopt the following measures:

1. Conduct an investigation into (a) the industry's compliance with the national government regulations regarding the professional skills of the veterinarians and trainers and (b) the ability of the ocean theme parks to meet the biological needs of cetaceans, as stipulated within the regulations.
2. Initiate an independent assessment of the welfare of captive cetaceans in China using science-based assessment methods.
3. Establish a nationwide inventory of captive cetaceans.¹ Facilities holding cetaceans should be required to report all imports, pregnancies, births, deaths, causes of death and transfers within 30 days of such events occurring, and this information should be available to the public. This would enable full and independent data analysis, including for research purposes.
4. Establish an independent expert body to investigate and, where appropriate, take action to address complaints made in relation to facilities that breach the governing regulations.²
5. Amend the *Management regulation of aquatic wildlife license* to include a ban on the import of cetaceans for commercial purposes, in response to concerns about the impact of captures and trade on cetacean conservation and welfare. China's participation in the trade in wild-caught live cetaceans listed in CITES Appendix I risks violation of CITES Article III³ 3b⁴ and 3c,⁵ and its participation in the trade in wild-caught live cetaceans listed in CITES Appendix II risks violation of Article IV 2a⁶ and 2c.⁷
6. Amend the *Requirements for aquatic mammal rearing facilities* to include standards that adopt animal welfare concepts, addressing the potential risks to health and welfare of cetaceans in captivity. Guidance can be found in the standards developed by the countries of Brazil,⁸ Italy⁹ and the United Kingdom¹⁰
7. Prohibit interaction programmes that allow contact between cetaceans and members of the public due to concerns for public safety and the health and welfare risks to both human and animal participants.
8. Establish a training programme for members of governing authorities involved in the issuing of permits and licences for the keeping of cetaceans in captivity. Such training workshops would help individuals understand the conservation and welfare issues associated with the live capture of free-ranging cetaceans and their species-specific needs.
9. Amend the *Grade of aquatic mammal rearing techniques in aquaria* to ensure the following:
 - a. Veterinarians working in ocean theme parks, or who provide veterinary support for ocean theme parks, are equipped with the relevant training and skills relating to the health and welfare of cetaceans in captivity.
 - b. Marine mammal trainers and accompanying staff with responsibilities for the management of cetaceans in captivity are provided with relevant training and skills in cetacean care and welfare.
10. Conduct an investigation into the import of orcas and pantropical spotted dolphins into China to determine the cause of the discrepancy in trade figures.
11. Conduct an investigation into the import of five Indo-Pacific humpbacked dolphins (*Sousa chinensis*), a CITES Appendix I species, from Singapore to China in 2016 to determine the true origin of these individuals.
12. Prohibit further captures of the Yangtze finless porpoise (the Yangtze River sub-species of the narrow-ridged finless porpoise, *Neophocaena asiaeorientalis asiaeorientalis*) for *ex situ* conservation purposes and prioritise the conservation of free-ranging Yangtze finless porpoises and protection of their habitats.
13. Prepare plans to phase out the display of captive cetaceans at ocean theme parks by prohibiting (a) captive breeding, (b) the import of additional cetaceans, (c) the development of new ocean theme parks and (d) the expansion of existing ocean theme parks, except where this is required to drastically improve the health and welfare of existing cetacean residents. Where appropriate and available, work with existing ocean theme parks to transfer captive cetaceans to rehabilitation, retirement and/or release programmes that comply with IUCN release guidelines.¹¹



OCEAN THEME PARKS IN CHINA

There are presently 80 ocean theme parks operating in China and a further 27 under construction.¹² This is an increase of 54 ocean theme parks (both operational and under construction) since the publication of the December 2015 CCA report.

The majority of ocean theme parks feature several performing theatres for various cetaceans (and other marine mammals); exhibitions of captive fish, invertebrates, amphibians, turtles and other marine and terrestrial mammals; and non-animal-related entertainment activities.

Most ocean theme parks are located in eastern China (see Figure 1).

Ocean theme parks are present in 22 mainland Chinese provinces, five autonomous regions and four municipalities.¹³

Shandong Province has the most parks (13), three of which are under construction, followed by Jiangsu Province, which has 11. Eight are open to the public and a further three are under construction.

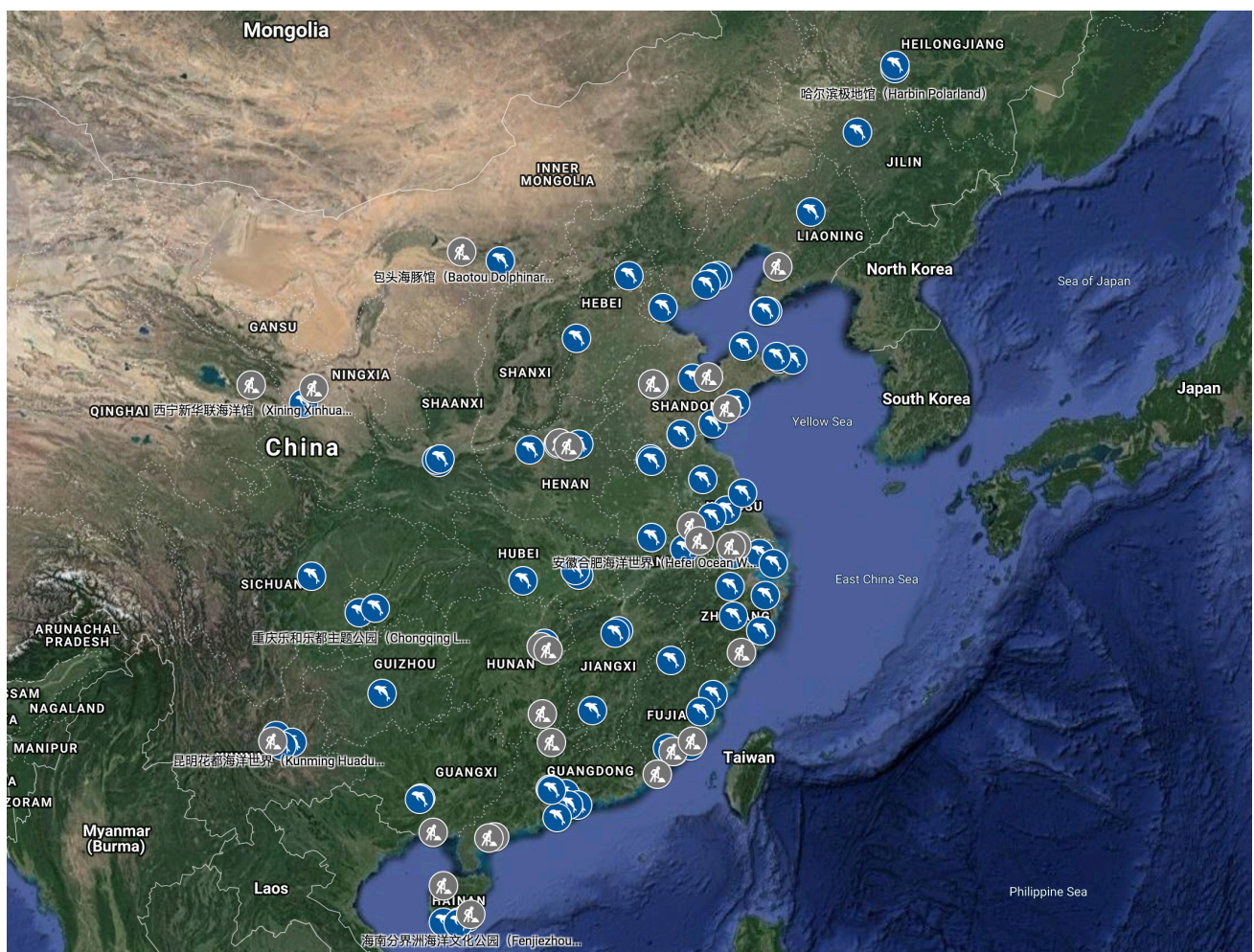


Figure 1. Location of ocean theme parks (open and under construction) in China that house cetaceans in captivity (see Appendix One for legend)¹⁴

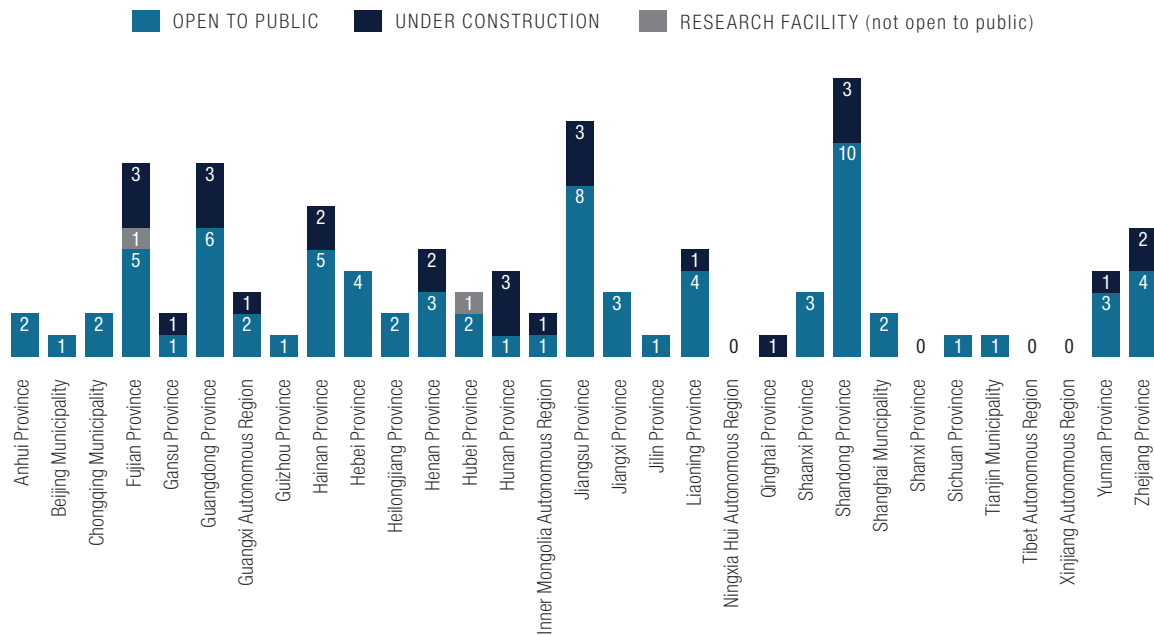


Figure 2. Number of ocean theme parks in mainland China by province/municipality

Rapidly developing industry

The 2015 CCA report identified 39 operational facilities and 14 facilities under construction. In the four years since the publication of that report, a further 41 facilities have opened and an additional 27 facilities are under construction. This demonstrates the continuing rapid expansion of this industry within China and an increasing demand for cetaceans and other animals to be on display within these facilities.

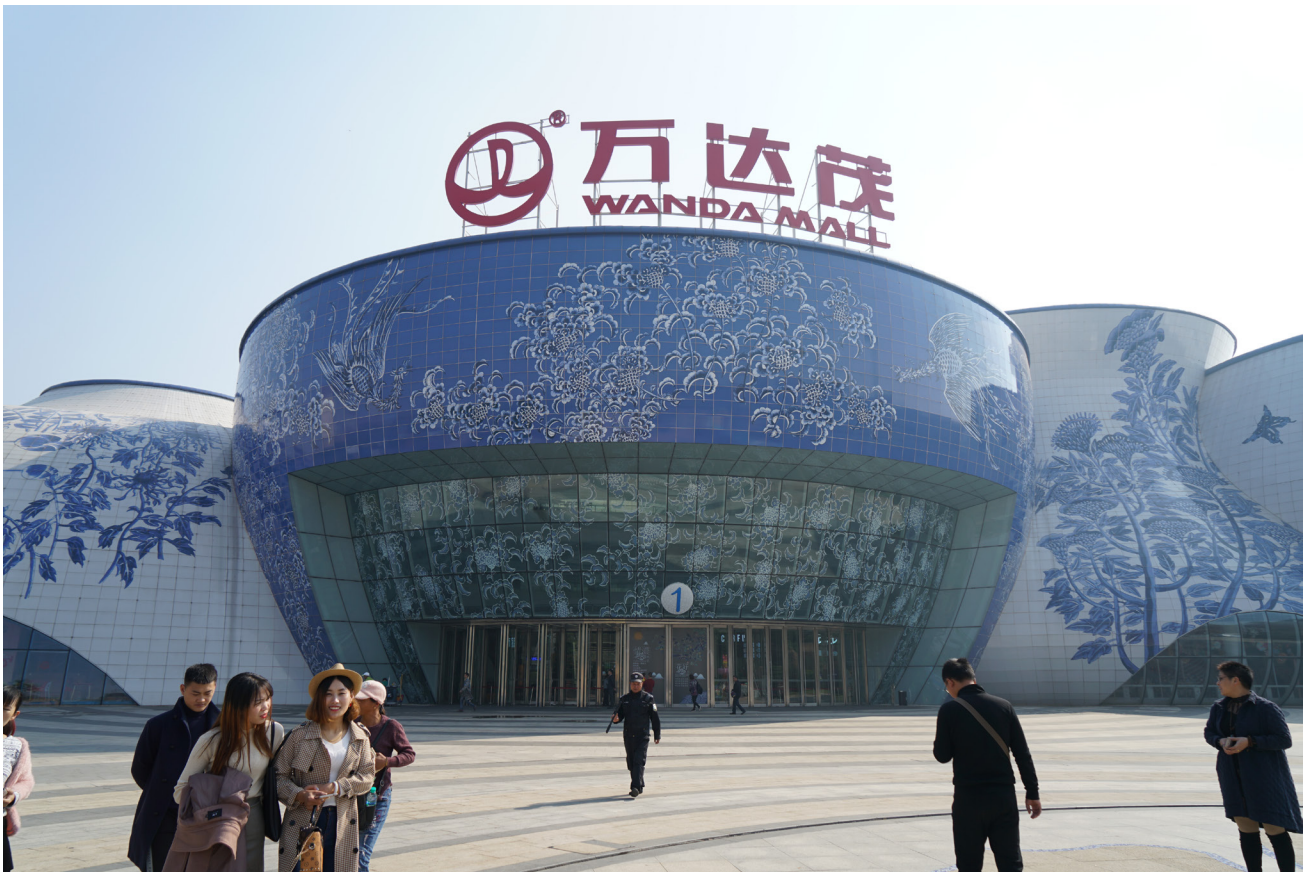
The period 2015–2019 has also seen the emergence of new trends within the industry. Ocean theme parks are now seen regularly as

part of real estate development projects, in shopping malls and as an incentive for the import and public display of novel species.

Wanda Group is a multinational conglomerate with investments across many industries, including real estate and entertainment. Wanda Group opened its first ocean theme park in Nanchang in 2016.¹⁵ China's second largest property developer, Evergrande Group, is also due to open its own ocean theme park, the Evergrande Ocean Flower Island on Hainan Island.

Table 1. The increase in number of ocean theme parks, operational and under construction, from 2015 to 2019.

Year	Total Operational Facilities	Total Facilities Under Construction	Total
2015	39	14	53
2019	80 ¹⁶	27	107
Change	+41	+13	+54



Main entrance to Nanchang Wanda Aquarium

The largest ocean theme park operator in China is Haichang Ocean Park Holdings Ltd. Haichang operates 10 ocean theme parks.¹⁷ In 2016, Haichang parks reportedly attracted a total of 12 million visitors. A 2017 tour operator's report¹⁸ documents that four of the top 11 most popular ocean theme parks in China are Haichang facilities. Haichang opened its RMB 3 billion (US\$457 million) Ocean Park in Shanghai in November 2018, and the company predicts this park alone will attract over 3 million visitors annually.¹⁹

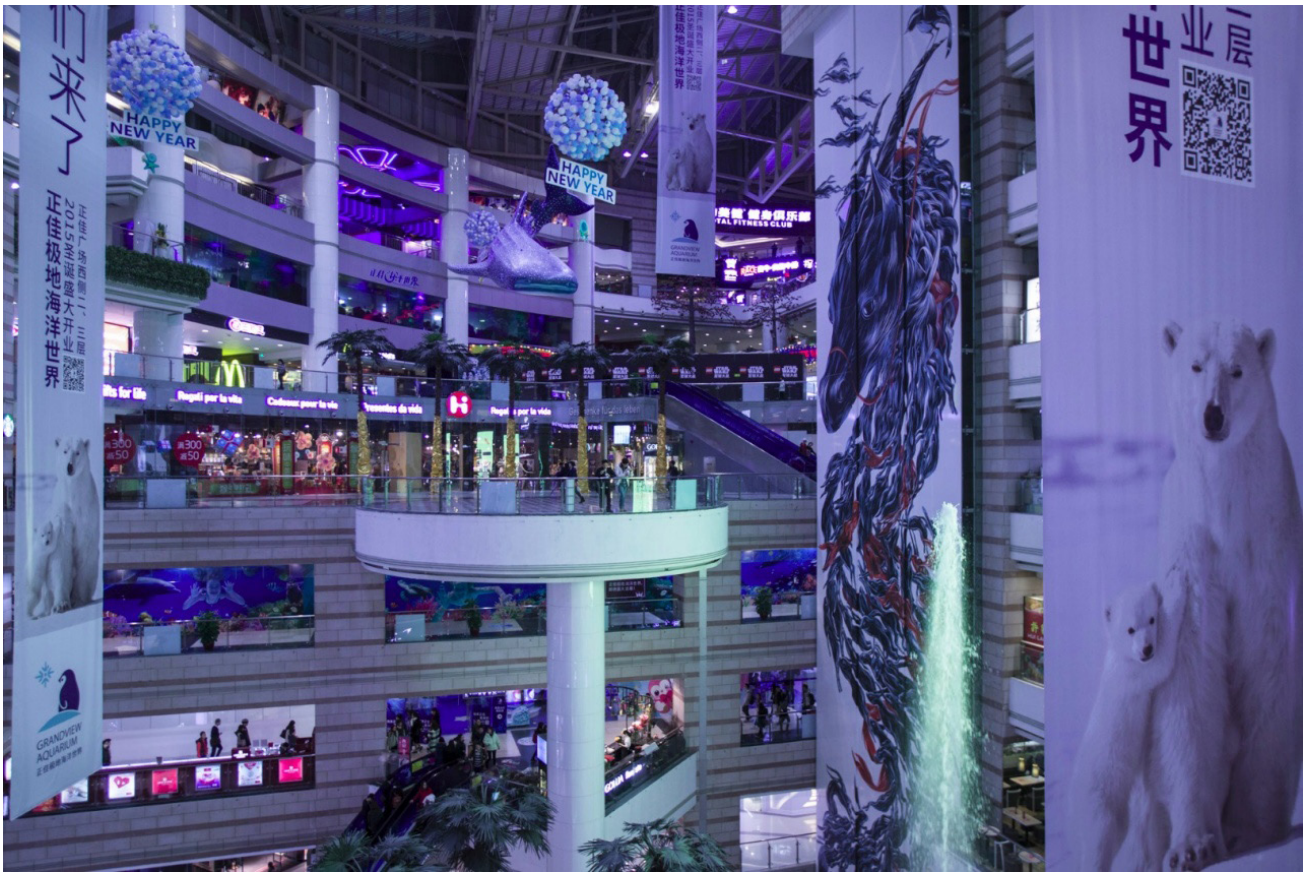
This financial success has led to international investment. In January 2016, Orix Corporation, a Japanese financial services conglomerate with a 2015 revenue of US\$2 billion, announced that it was increasing its ownership stake in Haichang by 200 million shares, giving it a 14.83 percent ownership interest in the company.

In October 2015, Haichang Ocean Park Holdings announced²⁰ its involvement in the development of other ocean theme parks in China, with contractual links 'for provision of aquarium operation consultancy and aquarium techniques management' to Zhengjia Polar Ocean World, amongst others. Zhengjia Polar Ocean World opened in December

2015 inside the Grandview shopping mall in Guangzhou City. Five²¹ ocean theme parks in shopping malls have opened since 2015.

The opening of the Grandview facility generated considerable press coverage and public criticism in both the Chinese and the international media with regard to the poor living conditions for the animals.²² Much of this centred on the poor living conditions for a polar bear called 'Pizza' on display at the facility. Despite this criticism, in November 2016, Grandview boasted of its success, claiming an income of RMB 100 million in its initial year and projecting an income of RMB 300 million for 2018.

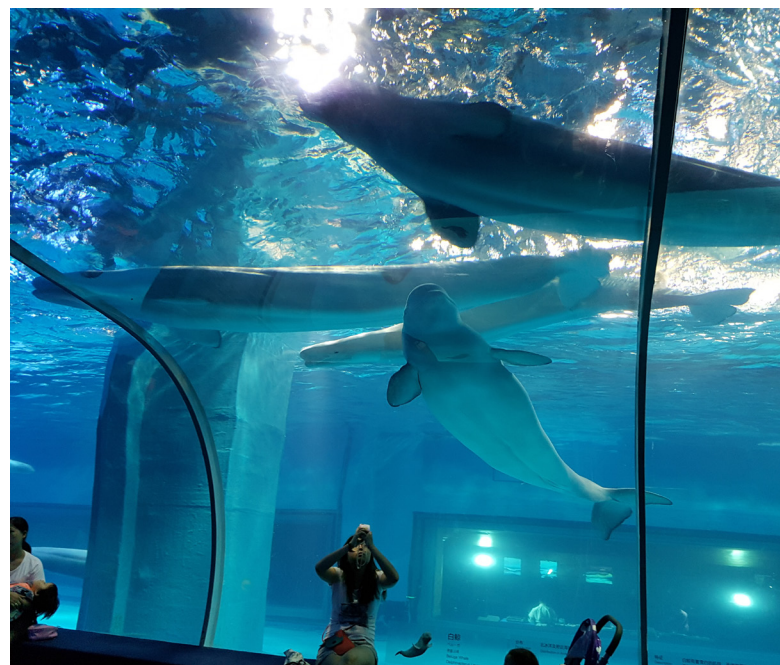
As the number of ocean theme parks continues to rise across the country, so does competition for visitors, and this may be having an impact on some facilities. In 2015, Dalian Sun Asia Ocean Park reported a 21.96 percent drop in income,²³ and reports²⁴ suggest that Linyi Polar Ocean World suffered financial difficulties leading to its closure. The latest news is that Linyi Polar Ocean World reduced its scale and size and reopened recently.



Grandview shopping mall houses the Grandview Aquarium

In contrast to the general growth trend in China, in other parts of the world an increased understanding of the negative conservation and welfare aspects of the cetacean captivity industry is leading to a decrease in the desire to see captive cetaceans.²⁵ Due to this increasing awareness and declining popularity, many countries have regulations that either ban or restrict the keeping of cetaceans in captivity (Appendix Two).

Only one Chinese facility, the Shanghai Changfeng Aquarium, has thus far committed to phasing out the use of cetaceans in entertainment and the subsequent display of cetaceans at its facility. The aquarium—owned and operated by Merlin Entertainment, a UK-based company—houses two beluga whales. Plans are in place to relocate these two whales into a specially designed sanctuary in Iceland.²⁶



Beluga whales in Grandview Aquarium



Orcas in Shanghai Haichang Ocean Park

Orca case study

In recent years, the display of orcas has become more popular within China, and 15 orcas have been imported into China since 2013. Reliable sources suggest that these are being held at three separate facilities, nine at the Chimelong Ocean Kingdom in Zhuhai, four at Shanghai Haichang Ocean Park, and two at Wuxi Changqiao Ocean Kingdom. The nine orcas at Chimelong Ocean Kingdom in Zhuhai were presented to the media (but were not yet displayed to the public) in February 2017,²⁷ and Shanghai Haichang Ocean Park publicly debuted its orca exhibit in November 2018.

An April 2017 report²⁸ suggested that the Seaside Dolphinarium in Nakhodka, Russia (near Vladivostok), was holding two orcas destined for Linyi Polar Ocean World, but information received by CCA investigators suggests that, due to the park's financial problems, these two orcas are now at Wuxi Changqiao Ocean Kingdom. An additional three facilities²⁹ have reportedly stated their intention to display orcas.

In 2017, the Russian fisheries agency reportedly sanctioned the capture of 13 orcas, a decision that the Russian prosecutor general's office reportedly said in October 2018 was in violation of the law, as it did not take into account expertise and public opinion.³⁰ In October 2018, Greenpeace Russia informed the media³¹ that preparations were underway to ship the 13 orcas to China, claiming that at least 11 were at a holding facility in Nakhodka. One of these 11 has since disappeared and is presumed to have died.³² News reports³³ suggest that this has subsequently led to an investigation and the initiation of a criminal case against the capture operators due to the captured animals being caught for commercial purposes rather than for 'cultural and educational' purposes, per the agreed permits.

The capture and export of beluga whales and orcas from Russian waters has been well documented in the international press³⁴ and at international forums³⁵ in recent years. The negative publicity and subsequent campaigning has led Russian authorities to rule³⁶ in 2018

that only Russian dolphinariums with proper staffing, equipment and resources can capture belugas and orcas for cultural and educational purposes. This ruling, if it is implemented and enforced, could thus end the trade in beluga whales and orcas to Chinese ocean theme parks.

In February 2018, news reports³⁷ suggested that Russian authorities had ordered the release of the whales back into the wild. The Russian government clearly intends for the whales to be released; until that happens, however, the possibility remains that some or even all will be shipped to Chinese ocean theme parks or be displayed in Russia.

Activities

A review of the activities of the ocean theme parks in China was included in the 2015 report, and an update to this is provided in Figure 3 and Appendix Three.

Visits by CCA representatives to ocean theme parks between 2015 and 2019 confirm that the following activities are still occurring within the industry:

- + Cetacean shows, with cetaceans performing various tricks and trained behaviours
- + Visitors paying to have their photographs taken with cetaceans and have close contact interactions (e.g., touch, pat, hug and kiss)
- + Dolphin-assisted therapy sessions
- + ‘Trainer for a day’ programmes
- + Diving with cetacean experiences and underwater wedding ceremonies in the presence of cetaceans

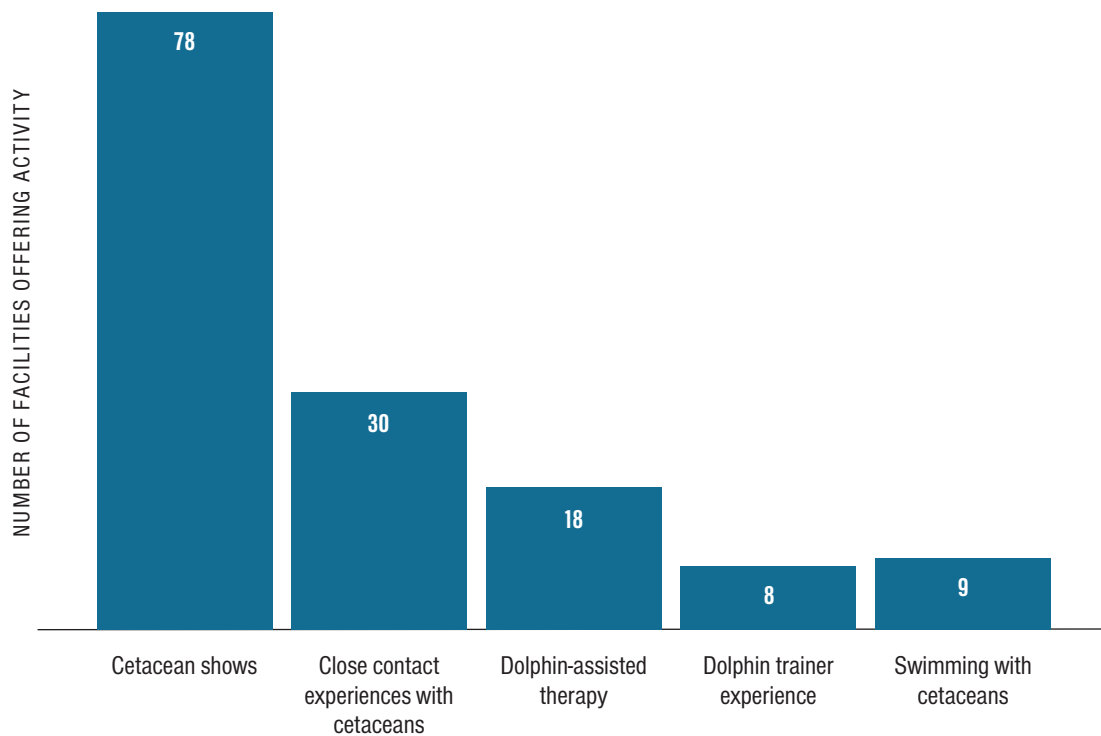


Figure 3. Activities available to visitors at ocean theme parks in China in 2018

CETACEANS IN CAPTIVITY IN CHINA

There were an estimated 1,001 cetaceans of 13 different species (Table 2) in the 80 operational ocean theme parks in China as of the publication date of this report.

Table 2. Species of captive cetaceans in Chinese ocean theme parks, and the species' conservation status on the IUCN Red List and CITES species database

Species	IUCN conservation status	CITES Appendix listing ³⁸	Estimated number in Chinese ocean theme parks
common bottlenose dolphin (<i>Tursiops truncatus</i>) and Indo-Pacific bottlenose dolphin (<i>Tursiops aduncus</i>)	Least Concern and Data Deficient	Appendix II	554
beluga whale (<i>Delphinapterus leucas</i>)	Near Threatened	Appendix II	210
pantropical spotted dolphin (<i>Stenella attenuata</i>)	Least Concern	Appendix II	56
narrow-ridged finless porpoise (<i>Neophocaena asiaorientalis</i>)	Vulnerable	Appendix I	48
Risso's dolphin (<i>Grampus griseus</i>)	Least Concern	Appendix II	46
Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	Least Concern	Appendix II	36
orca (<i>Orcinus orca</i>)	Data Deficient	Appendix II	15
false killer whale (<i>Pseudorca crassidens</i>)	Data Deficient	Appendix II	17
Indo-Pacific humpbacked dolphin (<i>Sousa chinensis</i>)	Near Threatened	Appendix I	6
Spinner dolphin (<i>Stenella longirostris</i>)	Least Concern	Appendix II	5
short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	Data Deficient	Appendix II	4
rough-toothed dolphin (<i>Steno bredanensis</i>)	Least Concern	Appendix II	4



Dolphins performing at the Dalian Sun Asia Ocean World

Appendix Four provides species details per facility. These data were collected via online searches, media reports and facility visits. There is no known, publicly available species inventory for ocean theme parks in China; therefore, the life history and management data for Chinese captive cetaceans (i.e., pregnancies, births, deaths and transfers) are not readily available, and the inventory in Appendix Four may have inaccuracies due to unreported deaths, transfers, imports and births of cetaceans.

The most commonly held species are the bottlenose dolphin and the beluga whale. The largest increase since 2015 is in the number of bottlenose dolphins (554 now versus 279 then), an increase of 275 individuals. A further 96 beluga whales have been identified since 2015, the number of orcas has increased from seven to 15, and the number of pantropical spotted dolphins has increased substantially from 16 to 56. Four rough-toothed dolphins and five spinner dolphins reportedly have also been imported since 2015.

Ten of the cetacean species kept in captivity in China are listed in CITES Appendix II. Two species, the narrow-ridged finless porpoise and the Indo-Pacific humpbacked dolphin, are listed in Appendix I (Table 1).



Finless porpoise on display at the Zhengzhou Aquarium

Narrow-ridged finless porpoise case study

In China, the narrow-ridged finless porpoise and the Indo-Pacific humpbacked dolphin are first class National Key Protected Species under the Law of the People's Republic of China on the Protection of Wildlife.³⁹

Since 2013, the Yangtze subspecies of narrow-ridged finless porpoise (*Neophocaena asiaeorientalis asiaeorientalis*) has been red-listed as Critically Endangered, and conservation efforts have successfully increased the population in the established semi-natural reserves (Appendix Five).

In July 2018, the Yangtze River Fisheries Administration and the Ministry of Agriculture and Rural Affairs (MOA) issued a notice (Appendix Six) stating that relocation of cetaceans to captive facilities should proceed quickly, in order to implement the MOA's Saving Yangtze River Finless Porpoises Plan (2016–2025). The MOA notice outlined requirements for obtaining an artificial breeding license, installing necessary physical facilities and improving the training of relevant staff so they can provide ideal conditions for taming and breeding the porpoises after their arrival. Significantly, the notice did not mention details of re-introduction of the original animals or their offspring back into the wild.

Applications from Zhuhai Chimelong Investment and Development Co., Ltd, Shanghai Haichang Ocean Park, and the Freshwater Fisheries Research Centre of the Chinese Academy of Fishery Sciences were subsequently approved for capture, transport and breeding of porpoises from reserves for *ex situ* conservation.

The CCA applied to the MOA for copies of these applications but the MOA did not provide access due to confidentiality.

On 27 July 2018, the Anhui Provincial Agriculture Committee sent a letter to the Anqing City Agriculture Committee requesting that 14 Yangtze finless porpoises be removed from the Xijiang Reserve and the Swan Island Reserve and sent to commercial display facilities at Zhuhai Chimelong Ocean Kingdom and Shanghai Haichang Ocean Park (Appendix Seven).

The Anhui Provincial Agricultural Committee states that Chimelong and Haichang are members of the Yangtze River Finless Porpoise Rescue Alliance and thus this is part of a conservation programme for research and education.⁴⁰

In light of the increasing number of porpoises in the reserves, the removal of animals from them is a questionable action at best. This opinion is shared by the IUCN Species Survival Commission Cetacean Specialist Group (Appendix Eight).

Captive cetacean populations are rarely self-sustaining without taking free-ranging individuals to add to the captive population's gene pool, and these removals harm the genetic diversity and health of the targeted wild populations. There are examples of captive bottlenose dolphins, orcas and beluga whales successfully giving birth outside of China, but the latter two species in particular cannot maintain populations in captivity through captive breeding alone.

Those taken into captivity may be deprived of natural mating and be subjected to artificial insemination. The collection of sperm for artificial insemination is intrusive, and impregnating females of this intelligent group of animals without male-female intercourse may be socially stressful.

All captive cetacean breeding programmes to date, globally, have been for commercial purposes or for replenishing captive populations, not for release into the wild to replenish depleted populations. While calves born in semi-natural lagoon reserves for free-ranging cetaceans (such as the finless porpoise reserves on the Yangtze River) can be released back into protected habitat, cetaceans born in concrete tanks almost certainly cannot be released back to the wild, as they will lack survival skills; therefore, there is no conservation value to breeding them within the aquarium setting.

The Yangtze finless porpoise is a native species of the Yangtze River. These animals have evolved to thrive in this habitat. The finless porpoise reserve system on the Yangtze River is the best way to protect and recover this species. Breeding success in one of the reserves has been strong, and those progeny are being born in natural habitat and learning from their mothers how to survive in the wild.

The MOA should prioritise the conservation of wild Yangtze finless porpoises and protection of their habitats in the Yangtze River over the taking of individuals into captivity for *ex situ* conservation, an activity more to legitimise a commercial industry than to save an endangered species.



Pantropical spotted dolphin at the Chengdu Haichang Polar Ocean World

The trade in live cetaceans

All cetaceans imported into China are listed in Appendix I or Appendix II of CITES. All import, export and re-export between CITES member countries is authorised through a licensing system. Each Party to the Convention has a designated Management Authority (MA) in charge of administering the licensing system and a Scientific Authority (SA) to advise on the effects of trade on the status of the species.

The CITES trade database reports the import of 1,061 cetaceans into China (Appendix Nine).⁴¹ Most of these individuals were reportedly captured in the wild and their arrival into China documented by the media. Wild-caught cetaceans for Chinese ocean theme parks have reportedly been sourced from waters off the coasts of Russia, Japan, and Solomon Islands.

Capturing free-ranging cetaceans for the Chinese ocean theme park industry employs methods that are invasive, stressful and potentially lethal. Family and group members are separated from each other, and studies are rarely conducted to ascertain what happens to those animals left behind (Reeves *et al.*, 2003). Research on bottlenose dolphins and modelling of orca societies show that certain individuals play a crucial role in holding communities together. If these individuals are removed, the group may lose cohesion and disperse (Lusseau and Newman, 2004; Williams and Lusseau, 2006). Further details of the capture methods are provided in Appendix Ten. It is highly likely that many animals have died during the capture process or soon after due to the stress of capture.

Pantropical spotted dolphin case study

Fifty-one pantropical spotted dolphins have been identified in Chinese ocean theme parks (Appendix Four). The CITES trade database lists the import of nine individuals through the end of 2017 (Appendix Nine), and thus it appears that at least 42 of these animals are as yet unregistered with the CITES trade database. If pantropical spotted dolphins were imported without the required CITES documentation, this would demonstrate a serious breach of the CITES regulations, and an immediate investigation should be conducted into the legality of these imports.

The conservation status of most of these targeted cetacean populations is unknown, but in the case of the beluga whale feeding group in the Sakhalin Bay-Amur River region in the Sea of Okhotsk, Russia—the source for virtually all of the beluga whales found in Chinese ocean theme parks—the population is considered depleted under US law.⁴² The Chinese ocean theme park industry is therefore highly likely to be directly contributing to the decline of at least one free-ranging cetacean population.

Captured individuals are being imported by established import/export companies. The companies involved in the transportation of cetaceans in China are listed in Appendix Eleven.

Free-ranging cetaceans captured for the ocean theme park industry in China are likely to undergo at least two transports before reaching their final destination. First they will be taken from their wild habitat

and placed in a holding/training facility. Then they will undergo a second, more extensive transport that will include travel by air and road from their country of origin to their Chinese destination.

Media reports documenting these transports show animals in slings surrounded by large numbers of facility staff and press photographers, conditions that are likely to cause a significant amount of stress for an animal unaccustomed to such situations. Reports document journey times of over 70 hours⁴³ for some of the animals.

Ocean theme parks in China purchase their cetaceans from companies that specialise in the capture and, in some cases, training of newly captured cetaceans. The costs associated with their purchase are typically high. Examples documented within the Chinese media are listed in Appendix Twelve and suggest that individual dolphins cost in the range of US\$65,000 to US\$250,000 each, and beluga whales in the range of US\$150,000 to US\$240,000 each. The costs differ considerably within this small sample, and there is no publicly available official data to verify them.



Import of bottlenose dolphins from Japan to the Penglai Polar Ocean World



Indo-Pacific humpback dolphin with injuries to the snout tip, at the Chimelong Ocean Kingdom

Indo-Pacific humpbacked dolphin case study

Under CITES regulations, trade in wild-born Appendix I species can only be authorised under exceptional circumstances, and a CITES Appendix I species can only be imported for non-commercial purposes (Appendix Thirteen). The Convention provides a recommendation for interpretation by Member States of the term 'commercial purposes' (Appendix Fourteen).

Member States are encouraged to define 'commercial purposes' as 'those that obtain economic benefit, and provide a service', and Member States are encouraged to define this purpose 'as broadly as possible so that any transaction which is not wholly "non-commercial" will be regarded as "commercial". In transposing this principle to the term "primarily commercial purposes", it is agreed that all uses whose non-commercial aspects do not clearly predominate shall be considered to be primarily commercial in nature, with the result that the import of specimens of Appendix-I species should not be permitted'.

The recommendation also states, 'The burden of proof for showing that the intended use of specimens of Appendix-I species is clearly non-commercial shall rest with the person or entity seeking to import such specimens'.

Chimelong Ocean Kingdom imported five Indo-Pacific humpbacked dolphins, a CITES Appendix I species, from Singapore to China in 2016. CITES import permits (Appendix Fifteen) document these as two captive-bred individuals from Thailand, two captive-bred

individuals from Singapore, and one wild-caught individual from Thailand. There is no known captive breeding of *Sousa chinensis* in Thailand and it is believed that the individuals listed as captive-born in Thailand are actually likely to have been wild-caught.

Chimelong Ocean Kingdom is a commercial operation, and thus this trade, in the opinion of the CCA, has violated a fundamental principle of CITES. The import of these individuals was approved by the Chinese CITES MA, despite these animals being used for 'primarily commercial purposes', and thus the Chinese CITES MA appears to be in breach of the CITES regulations.

To import these dolphins into China required both the Chinese CITES MA and SA to approve each import application. Subsequently, each permit approval is logged with the CITES Secretariat. That is, three levels of administration oversee the import of any CITES-listed species.

For CITES Appendix I species, CITES (Article III, para 3a) requires that an import permit shall only be granted when the SA of the state of import has advised that the import will be for purposes which are not detrimental to the survival of the species involved (Appendix Thirteen).

The Chinese CITES SA was therefore obligated to make a 'non-detriment finding' on each of the permit applications for the import of Indo-Pacific humpbacked dolphins into China. Only when the SA has found that the import would not be detrimental to the survival of the species is the MA able to issue the import permit. Non-detriment findings have not been made available for public scrutiny.

CAPTIVE BREEDING

There is no centralised, publicly available inventory of captive cetaceans in China, nor a public record of their survival and reproductive rates. Life history information such as pregnancies, stillbirths and calf mortality and records of transport of individuals between facilities are either absent or extremely difficult to obtain. The media provide the only current, publicly available information on captive breeding of cetaceans in China.

Appendix Sixteen lists the captive breeding records reported by the Chinese media, documenting the birth of 22 bottlenose dolphins, five

beluga whales, one false killer whale, seven finless porpoises and two hybrids. These births have taken place at 14 ocean theme parks. Seven of these individuals are known to have since died.

Eleven of these 37 births reportedly occurred in 2017 alone. This is a substantial increase in reproductive output from previous years, but the available data suggest overall that the industry's breeding success rate continues to be low, given that the number of cetaceans in captivity across the country exceeds 1,000 individuals at 80 facilities. The industry must therefore continue to rely on wild-caught imports.

RESCUE AND REHABILITATION



Ocean theme parks have a responsibility to rescue and subsequently release stranded, injured or entangled marine mammals, where possible. Very few records (Appendix Seventeen) exist documenting the success of the ocean theme park industry in rescuing, treating and rehabilitating free-ranging cetaceans in China.

Responding to strandings would be viewed as wholly positive by the industry, so it seems likely that facilities would publically share information on successful marine mammal rescues and releases. Given the rarity of such stories in the Chinese media, however, we can only assume that very few ocean theme parks have actively participated in such activities.



One recent rescue example involved a rough-toothed dolphin. The animal was found stranded in Heishu Bay in Jiangmen in May 2017. Chimelong Ocean Kingdom staff rescued, rehabilitated and subsequently released the dolphin back into the wild.⁴⁴

Rescue and rehabilitation of a rough-toothed dolphin at Chimelong Ocean Kingdom

USE OF CETACEANS FOR PUBLIC ENTERTAINMENT

Ocean theme parks in China are centres of entertainment, where the types of activities on offer for the public include cetacean shows and cetacean interaction opportunities. A key feature of many marine mammal exhibits is allowing visitors to have close contact with the individual animals on display.

Cetacean shows

The 2015 report noted that bottlenose dolphins and beluga whales were the main performing animals. False killer whales and Pacific white-sided dolphins were also used in performances at the parks visited by CCA investigators.

The variety of tricks documented during the cetacean shows viewed in 2015 and data on the facilities known to provide cetacean shows are listed in Appendix Three. The majority of these behaviours are unnatural or grossly exaggerated natural actions, taught in the captive environment, which provide no specific benefit for the survival of the animals in the wild. Although free-ranging cetaceans do breach out of the water, and from time to time some individuals may naturally beach themselves, these types of behaviours in the wild have specific ecological functions that are lost in the artificial setting of concrete enclosures.

These shows demean the cetaceans, showing them as circus performers to the crowd. This was highlighted in June 2018 at Dalian Sun Asia Ocean World, when a trainer applied lipstick to the mouth of the beluga whales during a show.⁴⁵

Swimming with dolphins

One-third of China's facilities (27) offer 'swim with dolphin' experiences for visitors. These are closed sessions allowing visitors to enter the water with dolphins under the guidance of a trainer. In some cases, the ocean theme parks promote this activity as one that connects and bonds humans with cetaceans, and many target this activity toward children, claiming that children with autism can benefit from such interactions.

Dolphin-assisted therapy (DAT) is an increasingly popular animal-assisted therapy in Chinese ocean theme parks. This increase in China reflects the increase in DAT programmes internationally (although they are in decline in the United States and Europe). Eighteen facilities have been identified as offering DAT sessions (Appendix Three).



Performing dolphins at Nanchang Wanda Aquarium



A trainer at the Dalian Sun Asia Ocean World applying lipstick to a beluga whale



Dolphin-assisted therapy in Chengdu Haichang Polar Ocean World

These programmes are marketed as offering a cure or respite from human illness or disability and are targeted towards vulnerable groups within society. The people undergoing the therapy are often children or adults with psychological or physical disabilities and/or emotional problems. Proponents of DAT have claimed it can be used to treat a whole range of physical and psychological conditions. Independent reviews, however, have concluded that there is no proven scientific validity to DAT.⁴⁶

DAT programmes are not subject to any specific regulations in China. It is therefore not possible for authorities to ensure any health or safety standards in such programmes. Furthermore, DAT providers are not required to have any specific training or certification. Consequently, participants and their families and caregivers have limited opportunity to verify any qualifications, or expertise, of the staff in whose care they place themselves or their loved one.

Studies of swim-with-dolphin facilities globally have noted that the animals may prefer not to interact with swimmers at times but are rarely provided with a refuge area. They therefore cannot escape from human swimmers with whom they do not want to interact (Kyngdon *et al.*, 2003).

Dolphins are wild and unpredictable animals, even when well trained. They are large and strong, and entering the water with them can present a risk to human health and safety. People have been injured, sometimes seriously (Frohoff, 1993). In 2008, a dolphin at the Dolphin Academy Curaçao in the Caribbean breached and landed on top of three swimmers. One person was hospitalised with symptoms of paralysis (Rose and Parsons, 2019).

The public may also be at risk of transmitting diseases to, and contracting diseases from, dolphins. A survey of people who regularly came into contact with marine mammals resulted in 23 percent of respondents reporting the development of skin rashes or similar ailments (Hunt *et al.*, 2008). Although dolphins in swim-with programmes may be screened for disease, there is no legal requirement to do this in China, and it is apparent that some facilities do not have adequate veterinary or husbandry practices in place to identify diseases and prevent their subsequent transmission from dolphins to swimmers (or vice versa).

Close contact experiences

Thirty facilities (Appendix Three) are known to provide visitors with close contact interactions with cetaceans outside of the water. These activities are being popularised by increasing promotion via TV shows and celebrity involvement. Celebrities, including Cai Xukun,⁴⁷ Fan Bingbing,⁴⁸ Liu Yifei and Yang Yang,⁴⁹ and Dilraba Dilmurat,⁵⁰ were filmed interacting with beluga whales or bottlenose dolphins at Beijing Aquarium, Chimelong Ocean Kingdom and Shanghai Haichang Polar Ocean Park.

In 2016, dolphin interaction activities received a significant amount of TV promotion, including on high-profile Chinese national TV programmes. The Jiangsu Satellite TV channel created the reality show *We Fight It*, featuring TV celebrity Wang Kai kissing a beluga whale at Chimelong Ocean Kingdom.⁵¹ CCTV Film Channel, in conjunction with Tianjin Haichang Polar Ocean Park, produced the film *Love of Beluga*, which told the story of four young beluga trainers in the aquarium and their interactions with captive whales.⁵² These depictions subsequently fuel the public's desire to interact with captive cetaceans in ocean theme parks.

ANIMAL MANAGEMENT AND ITS CONTRIBUTION TO WELFARE

Based on site visits and media reports, the CCA has a number of serious concerns about the management of cetaceans in captivity in China. Several practices present a significant risk to the animals' health and welfare (for a definition of animal welfare, see Appendix Eighteen).

Restricted and poor quality environments

The display tanks are, on average, approximately 6m deep, 15m wide and 20m long. Such enclosures cannot meet the complex behavioural needs of the animals they hold. In the wild, the species commonly held in captivity travel between 40 and 150 kilometres per day, swim at speeds between five and 50 kilometres per hour, and routinely dive between 10 and 300 metres deep (Perrin *et al.*, 2009; Rose *et al.*, 2017). These types of behaviours are severely inhibited for the individuals in Chinese ocean theme parks.

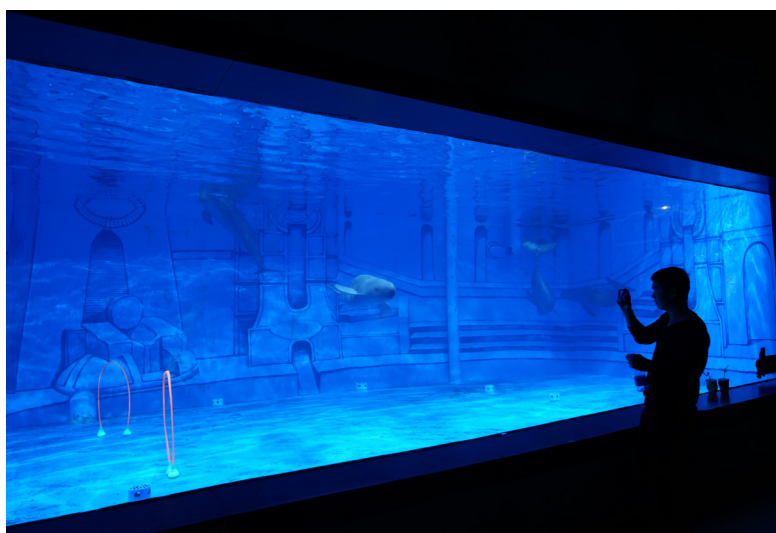
The tanks lack structural complexity, with little or no topographical features, thus leaving them bare and largely featureless. In 2015, only four of the 14 parks investigated were observed providing any form of enrichment for the cetaceans in the public display tanks, including foam surroundings and floats for individuals to interact with. Things have not changed much in subsequent years. Such conditions are likely to cause extreme boredom in these intelligent species. Even the four orcas in Shanghai Haichang Ocean Park do not have anything to interact with other than the debris of the dead fish in the tanks.

Many cetaceans are also housed in tanks that are in need of maintenance. In 2015, ten facilities⁵³ were reported to have paint peeling off the walls and rusted gates and poles, and some had particulates, faeces and other foreign objects floating in the water column. Even in newly opened facilities, rusty poles and gates and paint chips at the bottom of tanks have been observed.

In 2018, an Al Jazeera undercover investigation⁵⁴ documented beluga whales playing with chips of paint that had flaked off the walls of their tanks, exposing them to a variety of dangers from the possible ingestion of the paint and its potential toxicity. Photos of staff cleaning empty display tanks also show a considerable amount of algal growth that has developed on the floor and walls, demonstrating that animals are often living in unhygienic environments, with inadequate water treatment, which can lead to health problems.



Bottlenose dolphins during a water-change session at Nanchang Wanda Aquarium



Finless porpoises



Beluga whales and orcas covered with scars and rake marks

Unnatural social groupings

Marine mammals are rarely exhibited in natural social groupings. For many years, facilities have been importing animals and introducing new animals to existing groups; therefore, the individuals that are exhibited together are unlikely to have come from the same social groups in the wild.

Many cetacean species form complex societies partially based on kinship, and certain species are known to retain family bonds for life (Perrin *et al.*, 2009). Forcing individuals who would never even encounter each other in nature to live in close proximity in a tank can lead to negative social interactions, and facility complexes rarely provide refuges for individuals to escape from tank-mates who are behaving negatively towards them.

In 2016, bottlenose dolphins at Chimelong Ocean Park were observed expressing aggressive behaviours, including chasing and

open mouth threats, toward pantropical spotted dolphins with whom they shared a tank. Rake (tooth) marks on individual cetaceans, which are likely to have been inflicted by tank-mates during aggressive interactions, have been observed on cetaceans at 14 facilities (Appendix Nineteen).

The Al Jazeera investigation documented an incident of an Indo-Pacific humpbacked dolphin bullying and harassing another individual for over one hour with no means of escape for the harassed dolphin. A former trainer recalled another incident where one dolphin was being harassed by another so persistently that it slid out of the tank onto a concrete deck and refused to re-enter the water.

CCA discussions with a veterinarian at Changsha Underwater World in 2014 revealed this ocean theme park had separated a male and female beluga whale due to the male continually harassing the female.⁵⁵

Stereotypies

Stereotypies or stereotyped behaviours have been observed by CCA investigators at ocean theme parks (Appendix Twenty), with investigators documenting cetaceans swimming in a repeated pattern around their display tanks. Such abnormal behaviours are indicative of the failure of an individual to cope with its environment (Hill and Broom, 2009) or are a coping mechanism when exposed to inappropriate conditions (Rushen and Mason, 2008).

Physical issues caused by poor animal management

Under-stimulated and bored animals are more likely to ‘chew’ metal bars and ‘mouth’ concrete tank walls, putting them at risk of damaging their teeth. Tooth breakage can leave the pulp of some teeth exposed and food can become impacted in any cavities that form. If left alone, the decaying pulp can become a serious health concern. Poor dentition is associated with numerous systemic disorders in mammals, including several, such as respiratory ailments (Jett *et al.*, 2017), that are commonly cited as causes of death in cetaceans.

A bottlenose dolphin with damaged and rotting teeth was observed during a visit to Chimelong Ocean Kingdom.⁵⁶ Such damage could lead to periodontal disease of the gums and thus seriously affect the health of the dolphin.

Dolphins have also been observed both squinting and swimming with their eyes closed.⁵⁷ Several dolphins had eye lenses that appeared

clouded (e.g., with premature cataracts). This could be due to poor water quality or excessive chemical treatment of the water causing eye irritations and damage.

Two cases⁵⁸ have also been observed of false killer whales suffering from a degree of malnutrition, with their ribs evident when they were asked to ‘slide out’ of the water onto a platform as part of a show.

During shows, trainers are frequently seen standing on the melons of beluga whales (the melon is an oil-filled organ inside the animal’s forehead). The beluga melon is very flexible and flattens out when pressure is applied, making the forehead a stable platform for a human foot to balance on. However, this pressure may be harmful and could lead to long-term negative impacts.

Noise and stress

Visitor numbers at Chinese ocean theme parks are high. In February 2015, Chimelong Ocean Kingdom recorded 80,000 visitors in a single day,⁵⁹ with numbers peaking on weekends and holidays. This facility hosted 9.78 million visitors in 2017.⁶⁰ High visitor numbers generate a high level of noise around cetacean exhibits. This noise is particularly problematic for cetaceans, as they are highly dependent on their sense of hearing (Couquiaud, 2005).

In 2015, the music accompanying the performances was recorded at levels reaching 110 dB—equal to noise levels recorded during



Underweight false killer whale in a show at Chimelong Ocean Kingdom



A woman covers a child's ears as loud background music plays during a cetacean show

chainsaw use.⁶¹ Noise at this level was also recorded during visits in 2016–2019. High noise levels are likely to cause animals a significant degree of stress (Couquiaud, 2005), whether above or below the

water's surface. We have no estimates of noise levels underwater, but pumps and other machinery can be very noisy below the surface (Couquiaud, 2005).

Trainer abuse

Investigations for the 2015 report documented staff in some facilities acting in ways that could directly cause the animals stress and discomfort. Trainers at Penglai Ocean World were seen knocking on the glass and shouting to attract the attention of the animals.⁶² A trainer at Chengdu Haichang Polar Ocean World was seen poking a beluga whale with a stick for refusing to perform an expected behaviour.⁶³

The Al Jazeera investigation in 2018 also obtained information from former marine mammal trainers stating that animals were being beaten with sticks and that animals were coerced into performing the physically punishing routines through food deprivation. Investigators also filmed a trainer kicking a beluga whale in the mouth at the end of a performance at the Chimelong Ocean Kingdom in Zhuhai.

INJURIES AND ILLNESSES

Information on injuries and illnesses sustained by captive cetaceans in Chinese ocean theme parks has been obtained via media reports (Appendix Twenty-One).

Articles report captive cetaceans sustaining injuries in training sessions due to collisions with enclosure walls, through ingestion of inappropriate items, and as a result of fights between individual animals. These publicly recorded incidents are likely to provide only a snapshot of the types and number of injuries experienced by captive cetaceans in Chinese ocean theme parks, as it is not in the best interests of the parks to publicise such negative incidents, and there is no official, legally required centralised database.

Investigations have also revealed that facilities appear not to have staff with the necessary veterinary skills on hand to deal with illness and injuries to their animals. This is highlighted via the case of three dolphins reported to have a poor appetite at Changsha Underwater World in October 2017. The facility consulted paediatricians from the Children's Hospital of Hunan Province for advice. Doctors performed a gastroscopy on one dolphin and diagnosed a rough gastric mucosa and poor digestion.⁶⁴

The Al Jazeera investigation interviewed a former trainer who stated that the veterinarians in the ocean theme parks have little training. Many are livestock vets or previously worked in pet shops. This former trainer was left to provide medical care to sick dolphins. He was aware that some veterinarians would prescribe pills without knowing what the problem was with the animals. This information corroborates a previous discussion CCA staff had with the veterinarian at Changsha Underwater World in December 2014. She confirmed that she had studied farm animals and had attempted to learn about marine animal veterinary care on her own.

Discussions with a trainer at Chengdu Haichang Polar Ocean World in December 2014 and with trainers at various facilities in the following years also revealed that trainers do not have the necessary qualifications required under the industry notices. The trainer stated that he did not hold the aquatic mammal trainer certificate and that he only needed his diver's certificate to be able to work at the facility. This is still the norm. When facilities recruit trainers, the online job posts tend to state that swimming ability is required and a diver's certificate preferred, but do not mention the need for an aquatic mammal trainer certificate.⁶⁵



Beluga whale being attended to at Harbin Polar Land to remove a swallowed ball



Indo-Pacific humpbacked dolphin being fed at the Chimelong Ocean World

DEATHS

Globally, capture, transport and confinement have considerable impact on cetacean mortality. A 1995 study determined that mortality rates for bottlenose dolphins increase six-fold during and immediately after capture (Small and DeMaster, 1995). A similar mortality spike occurs after every transport between facilities (Small and DeMaster, 1995). The median survival estimate for captive orcas is just 6.1 years, meaning that 50 percent of captive orcas die within 6.1 years of when they were captured or born (Jett and Ventre, 2015). Survival of captive orcas has generally improved over time, although survival to age milestones (sexual maturity and menopause) is poor when compared to free-ranging orcas (Jett and Ventre, 2015).

Free-ranging beluga whales have a maximum estimated life span of 60 years (Stewart *et al.*, 2006), but captive beluga whales routinely die before the age of 30. Likewise, annual mortality rates for captive beluga whales may be higher than in the wild (Small and DeMaster, 1995; Woodley *et al.*, 1997).

Information on the death of captive cetaceans in Chinese ocean theme parks has been obtained via media reports (Appendix Twenty-Two). Only nine deaths have been reported publicly, although the number of deaths of cetaceans at ocean parks is virtually certain to be much greater.

The Al Jazeera investigation revealed a freezer holding several dead dolphins at the Hangzhou Changqiao Polar Ocean World. The facility veterinarian was recorded with a hidden microphone—he stated that they had died due to twisted intestines caused by the moves they are required to do during the shows. The implication was that they are being asked to do more than their bodies can cope with physically. The Hangzhou Changqiao Polar Ocean World veterinarian also revealed that ocean theme park managers were asking staff to keep the high mortality rates ‘under wraps’ to prevent outside scrutiny and criticism.

The investigation also taped a marine mammal importer in China stating that an ocean theme park owner had said that *‘as long as the animals make enough money in the high season then if they die I can just buy more’*. This demonstrates an attitude of seeing animals as disposable commodities within the industry.

An analysis of the CITES trade database indicates that the number of beluga whales imported over the years is much higher than the number currently held captive within China. CITES figures (Appendix

Nine) list the import of 260 beluga whales between 1997 and 2016, with an industry representative⁶⁶ suggesting that this figure could be as high as 300. Yet we can document only 210 held in Chinese ocean theme parks. If we assume a 35-year lifespan (at the lower end of longevity estimates), these figures demonstrate that a large number of individuals have already apparently died relatively young.

The CITES trade database also lists the import of 674 bottlenose dolphins through the end of 2017, yet only 554 are documented within the ocean theme parks, once again indicating a large number of individuals have presumably died prematurely.

INDUSTRY AND GOVERNMENT CONCERNS

Poor breeding success rates, poor welfare and premature death of captive cetaceans are all issues of concern to both the industry and the government bodies regulating the industry. These concerns were aired by Mr Hu Wei Yong, the chief manager of Beijing Aquarium, during the second China Aquarium Development Forum in November 2017. He stated that the industry has developed too fast, facilities have not given enough emphasis to the welfare of the animals, and China has become the biggest importer of marine animals. He said this has drawn negative attention to activities of the industry from social groups, and this attention was exerting pressure on the ocean theme park industry.

Mr Hu called upon the delegates to enhance the welfare of the animals by adopting environmental and behavioural enrichment programmes, improving water quality to prevent health issues and improving veterinary skills to enable more detailed examination of individuals and

diagnosis of health issues, which would in turn help to improve the breeding success of the animals.

These messages were reiterated in a speech delivered by Ms Guo Rui, who directs the Environmental Resources Department of the MOA's Bureau of Fisheries. Ms Guo stated that the industry had developed too quickly and had relied upon the import of wild-caught animals, leading to concern from international environmental groups. She also said that a lack of management skills within the industry had led to large numbers of animal deaths and injuries and that this was also having an impact on the national and international image of the industry. Ms Guo called upon the industry to take immediate action to rectify these problems, to improve breeding success and to limit the import of animals. She recommended that the industry do this voluntarily, before the government needed to take action.

CHINESE NATIONAL GOVERNMENT REGULATIONS

There are two national laws that apply to the keeping of cetaceans in captivity: the Wild Animal Conservation Law of the People's Republic of China (revised) 2016⁶⁷ and the Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife.⁶⁸ These laws set out the principles for the protection of wild habitats, free-ranging wildlife and wildlife held captive in Chinese ocean theme parks.

The Law of the People's Republic of China on the Protection of Wildlife, Chapter III Article 26 (Appendix Twenty-Four) stipulates living conditions for animals in captive breeding programmes relevant to Chinese ocean theme parks.

Whilst these laws and regulations provide animals with a degree of protection, articles within them allow for protected animals to be captured from the wild,⁶⁹ bred in captivity,⁷⁰ and imported and exported for the captive display industry.

Review of laws

The laws allow for the utilisation of wildlife such as cetaceans. Specific licenses can be obtained to capture and trade in all species regardless

of their conservation status. In some cases, such utilisation is likely to have a negative impact on both individual animals and populations, and therefore such use will be contrary to the purpose of the law.

The Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife, Chapter III Article 24 (Appendix Twenty-Three) states that the economic benefits generated from this industry should be used for wild aquatic animal protection, yet research suggest that only one facility⁷² provides financial support toward the protection of free-ranging cetacean populations.

The Law of the People's Republic of China on the Protection of Wildlife, Chapter III Article 26 (Appendix Twenty-Four) contains content relevant to the application of animal welfare concepts. It stipulates that *'facilities engaged in captive breeding of wildlife under special state protection must ensure that they have the necessary living space and conditions for the movement, reproduction, hygiene and health of the animal according to its habits and properties; that they are equipped with adequate premises, facilities and technology in line with the purpose, type and scale of the captive breeding*

operation; that they can satisfy relevant technical standards and disease prevention requirements; and that the wildlife is not abused'.

It is evident from our analysis of animal management in ocean theme parks that facilities are not meeting these conditions.

Both laws maintain a positive attitude toward the breeding of wildlife and the development and utilisation of wildlife resources. To ensure that individual animals are protected, such laws must incorporate further animal welfare concepts, and so instruct facilities to adopt specific management practices that meet the individual physical and behavioural needs of the animals they are responsible for. There is no legal definition of 'animal welfare' within the laws or their regulations. This leaves cetaceans in captivity with only vague protections under these laws.

Information supplied by Dr Zhang Xianfeng of the Chinese Academy of Sciences Centre for Aquatic Biodiversity and Resource Conservation to delegates at the Yangtze Bioresource Conservation workshop in November 2018 suggested that industry standards for the keeping of beluga whales, Yangtze finless porpoises, and bottlenose dolphins are being produced. Copies of these standards are not currently available publicly.

National standards for the keeping of aquatic animals

The Ministry of Agriculture and Rural Affairs is responsible for aquatic wildlife in captivity in China.⁷³ Five national standards were issued by the Ministry in March 2013. These were developed by the National Aquatic Wildlife Conservation Association (Appendix Twenty-Five).

1. Management regulation of aquatic wildlife license (Appendix Twenty-Six)

This regulation designates the Science Committee of National Endangered Aquatic Wildlife as the authority to assess any application for special licenses for exploitation of aquatic wildlife on artificial breeding and display, as well as import and export (Article 4).

- + Capture is allowed under licence for scientific research, education, artificial breeding, exhibition, donation⁷⁴ and other special purposes (Article 8).
- + The unit or individual that has obtained the Artificial Breeding License shall ensure that the aquatic wildlife that are used for artificial breeding are acquired from a legitimate source (Article 21).
- + An operation and exploitation license can be issued if the committee is satisfied that in doing so, the aquatic wildlife resource will not be damaged and the national image on

wildlife conservation and foreign economic exchanges will not be affected (Article 25).

- + To import aquatic wildlife, a 'unit' must have proper and necessary facilities and technologies for keeping the imported aquatic wildlife alive, and the national image on wildlife conservation and foreign economic exchanges must not be affected (Article 33).

2. Recording requirements for studbook keeping of captive aquatic mammals (Appendix Twenty-Seven)

This provides details of the records that facilities must keep on the life histories of each individual within their care. It requires the completion of a form upon the death of an individual for the following possible reasons:

- + During transportation
- + Abnormal environment or behaviour
- + Disease
- + Injury due to performance
- + Premature delivery
- + Stillbirth

3. Requirements for aquatic mammal rearing facility (see Appendix Twenty-Eight, which contains the standards for aquatic mammal facilities)

This standard applies to the housing of cetaceans in ocean theme parks or other related facilities, and sets out details that include the following:

- + Minimum housing pool and show pool sizes (4.3.2 and 4.3.5)
- + Ventilation and lighting (4.6.1.2)
- + Barriers (4.6.4)

4. Grade of aquatic mammal-rearing techniques in aquaria (Appendix Twenty-Nine)

This provides a grade (1st, 2nd or 3rd) for each facility and the conditions that facilities must meet to be classified within each grade. It stipulates the skills and knowledge that each trainer must possess and covers basic animal husbandry, feeding and training for shows.

5. Water quality for aquatic mammals in aquaria (Appendix Thirty)

This sets out the specific water quality and species-specific temperature details that each facility must adhere to.

Review of management regulations

Ocean theme parks in China are not meeting the conditions set out within the management regulations of aquatic wildlife licenses. These regulations provide clear guidance that no harm must come to animals during their capture, import and use, yet cetaceans are harmed physically and psychologically during the transport process as they arrive into China. In addition, it is not possible for ocean theme parks to meet all of the physical and behavioural needs of cetaceans, causing them to suffer to varying degrees, in direct violation of the regulations.

This report has also documented a number of deaths of cetaceans in captivity, which can be attributed to poor management and a lack of appropriate facilities. This contravenes Article 33 of the management regulations.

Public opposition, both within China and internationally, to the keeping of cetaceans in captivity based on the welfare implications of capture and subsequent holding are having an increasingly negative impact on the industry and on China's image. This has been acknowledged by both industry and government representatives. This opposition to the management practices of the ocean theme parks seems likely to increase as the public becomes further aware of the welfare issues associated with this industry. Therefore, ocean theme parks will find it increasingly difficult to ensure that their actions will not harm the country's image, as stipulated within the regulations.

This issue was further highlighted by the Al Jazeera investigation, with an ocean theme park manager stating that although Chinese facilities have held orcas in captivity since 2013, none had yet put them on public display due to the international condemnation this will bring. In November 2018, Shanghai Haichang Ocean Park finally debuted its four orcas and this has led to a significant amount of public criticism both from within China and internationally, as predicted.

Many facilities, including Chimelong Ocean Kingdom, Guangzhou Grandview Aquarium and Haichang Ocean Parks, have already come under public scrutiny for the treatment of their animals, poor living conditions, and imports of large numbers of wild-caught cetaceans. This negative national image contravenes Articles 25 and 33 of the management regulations; if the ministry were to enforce its regulations, therefore, these facilities would not be granted an operating license.

Aquatic mammal-rearing facilities are required to provide a minimum horizontal dimension in their tanks to allow aquatic mammals to turn around. This should not be less than four times the average length of

adults of particular species (see Appendix Twenty-Eight). The depth of the tank should not be less than 1.5 times the average body length of adults. It is not possible to meet the behavioural needs of cetaceans when held in such limited space. Some species are known to travel as many as 150 kilometres in a day and to dive several hundred metres deep in the wild (Perrin *et al.*, 2009; Rose *et al.*, 2017). These types of behaviours are severely restricted by captive conditions in Chinese ocean theme parks, even when they meet legal requirements.

While the minimum space requirements may allow an individual cetacean to turn around, they provide little else, and the facility could house an individual within such limited space for its entire life. This raises a very important ethical, as well as welfare, point as to whether society has the right to restrict wide-ranging, social predators to conditions that are highly likely to cause them a significant degree of suffering.

The management regulations state that to obtain an artificial breeding license, facilities must ensure that wildlife are acquired legitimately. The CCA has concerns about the import of Indo-Pacific humpbacked dolphins by Chimelong Ocean Kingdom and the legitimacy of the CITES import data provided for other species as well.

The requirements for aquatic mammal-rearing techniques stipulate that ocean theme parks must be staffed with at least two full-time veterinarians, one of whom should have a minimum of five years clinical experience with aquatic mammals, and staffed with a trained technician. It is evident that these conditions are not being met, and many ocean theme parks employ inexperienced veterinary and technical staff to meet the needs of the animals.

The regulations relevant to animal trainers are extensive. A wide knowledge base is necessary for individuals to become 'advanced trainers' and 'technicians'. Knowledge of animal diets, animal behaviour, and health care are all part of the assessment criteria. Yet the dominant expertise these regulations require is the ability of trainers and technicians to train the animals and to perform (Appendix Twenty-Nine). The training and performance elements for trainers and technicians account for the largest proportion of all examination marks, ranging from 30 to 55 percent.

From personal communications with ocean theme park staff, it is apparent that the animal trainer conditions are not being met.

Case study - comparison of regulations with Brazil and the UK

In a number of cases, the Chinese regulations are of a lower standard than those imposed within countries such as Brazil and the United Kingdom.

The Brazilian regulations⁷⁵ stipulate that facilities must do the following:

- + Install a veterinary outpatient department and develop a programme of veterinary care for the prevention and control of illnesses
- + Develop educational programmes based on the biology, ecology and conservation of aquatic mammals in the wild
- + Establish research programmes incorporating behaviour, social relationships, reproduction, feeding, changes to how the water is treated and health
- + Install a respite area that provides a retreat for the animals in the enclosure
- + Provide a maternity area for females and their new-born calves and/or those that are pregnant
- + House animals in conditions that satisfy their biological needs, providing the species with enrichment of their enclosures and maintaining a level of excellence in animal handling through established programmes of preventative medicine, veterinary care and nutrition

- + Ensure the structure and location of the enclosures minimise the effects on the animals of excessive noise and any other causes of stress
- + Ensure the enclosures illuminate with natural light and contain both shady and exposed areas, depending on the species

The United Kingdom regulations stipulate that facilities must do the following:

- + Hold species in social groups typical of that species
- + Not hold any single specimens

These essential conditions are not required within the Chinese regulations.

The general size requirements of the enclosures also differ. The minimum water volume required for the common bottlenose dolphin in Brazil is 1,600m³, compared with just 509m³ in China, and the minimum water depth required for the common bottlenose dolphin in Brazil is 6m, compared with 4.5m in China. The minimum water volume required for the orca in the United Kingdom is 12,000m³, compared with just 7,393m³ in China (see Table 3).

Table 3. Comparison of Brazilian, UK and Chinese standards for the keeping of cetaceans in captivity

Species	Country	Minimum Horizontal Dimension (m)	Minimum Depth (m)	Minimum Volume (m ³)
<i>Tursiops truncatus</i>	Brazil	14	6	1,600
	UK	7	5.6	1,200
	China	12	4.5	509
<i>Orcinus orca</i>	UK	15	12	12,000
	China	29.28	10.98	7,393
<i>Delphinapterus leucas</i>	Brazil	14	7	1,600
	China	16	6	1,200

Within the Chinese regulations, there is no mention of the social nature of many cetacean species. Therefore, cetaceans—some species of which are known to form complex societies based on kinship and to retain family bonds for life—can be held alone or in incompatible groups. (It is common to see beluga whales held with bottlenose dolphins, although these species in nature never encounter one another and inhabit completely separate ecosystems. Both conditions are likely to cause stress and even physical suffering for individual animals.)

The Chinese regulations also provide no stipulations with regard to the veterinary regimes necessary to ensure the health of the animals maintained.

The requirements for aquatic mammal-rearing facilities instruct ocean theme parks to use barriers to ensure a safe distance between animals and the audience. Yet this requirement is frequently ignored, as members of the audience are encouraged to physically interact with the cetaceans in the shows, and a number of facilities offer swim-with-dolphin/DAT sessions, which are based on physical contact between visitors and dolphins. The most disturbing example of a violation of this requirement is when facilities put a small child in a rubber dinghy and direct a dolphin to tow the child around the perimeter of the performance tank. This places the child at risk, with trainers at some distance should their intervention be needed.

The nature of the 'deaths' listed within the recording requirements for studbook keeping provide us with an insight into some of the challenges that ocean theme parks face in keeping their animals healthy and alive. These challenges are faced by ocean theme parks/dolphinaria globally. The list of possible causes of death includes many that are major threats during the capture and subsequent captivity of cetaceans. Individuals may die during transportation, suffer from abnormal behaviour, and die as a result of disease brought on due to stress (Rose and Parsons, 2019). The cetacean display industry in China appears to be struggling to breed animals in captivity, and therefore it is likely that facilities are experiencing premature deliveries and stillbirths, per the details on the required forms.

The recording requirements also list 'injury due to performance' as a cause of death; this is of further concern. The CCA identified one report⁷⁷ of an animal being injured during a training session, and the Al Jazeera investigation interviewed a facility veterinarian who believed the deaths of several dolphins at the Hangzhou Changqiao Polar Ocean World were due to physical issues brought on by the cetacean shows. If deaths are occurring due to performances, then this once again demonstrates that cetaceans should no longer be held captive and forced into performing potentially dangerous tricks for entertainment.

CONCLUSION

The Chinese ocean theme park industry continues to exacerbate conservation and welfare problems associated with the display of captive cetaceans, is doing little to educate the public on issues of species and/or habitat conservation and is damaging the international reputation of China.

Chinese ocean theme parks are ideally placed to raise awareness of the threats facing free-ranging cetaceans in their natural habitats, and to generate empathy to encourage individuals to take action to help protect free-ranging cetacean populations. Yet the parks continue to choose to depict captive cetaceans as entertainers, training them to perform unnatural and exaggerated behaviours and encouraging close-contact photo opportunities and other

interactions—subsequently putting public safety at risk due to such unregulated interactions. Visitors to such parks are unlikely to leave with knowledge of species attributes, natural behaviour, and the threats that species face in the wild and are therefore unlikely to take action in support of cetacean conservation following such a visit.

Despite a stipulation in the regulations that the economic benefits derived from the exhibition of wild aquatic mammals shall be used for the purpose of wild aquatic animal protection, there is a little evidence to suggest that this is actually happening.

The industry and the government regulators are critical of their own continued active participation in the acquisition of live animals from

the wild, yet these captures continue due to the poor breeding success rate within the industry. With this inaction, the industry continues to be responsible for the death of individuals during the capture process and for causing animals to suffer by using capture methods that are known to cause stress and fear in free-ranging individuals. Such captures also disrupt natural social groups, and have a negative impact on the social structure of the individuals left behind. The sustainability of these captures is also in question, and in some cases they are contributing to population decline.

Despite the regulators' criticism of the continued import of wild-caught individuals, the regulations that govern the industry continue to support such captures by providing conditions that allow for the issuing of permits for the capture of all species regardless of their conservation status. In a number of cases, this is contrary to the principles of CITES, which prohibits commercial trade in endangered Appendix I species.

Serious violations of CITES may have occurred with the import of undeclared pantropical spotted dolphins into China, and the import of Indo-Pacific humpbacked dolphins listed as captive bred. These situations must be investigated to determine if individual facilities, import companies and/or the Chinese CITES Management Authority are in breach of the CITES regulations.

Once cetaceans are in captivity, the facilities are causing the further suffering of these animals. Incidents of abuse of, injuries to and illnesses of cetaceans have been documented. The national regulations do not address the complex physiological and behavioural needs of cetacean species; as a result, facilities fail to provide conditions that meet these complex needs.

Ocean theme parks also continue to openly flout the national regulations with regard to the professional skills of the veterinarians within the industry. They struggle to develop adequate veterinary skills to meet the health and welfare needs of captive cetaceans. The industry is willing to pay large sums of money to buy individual animals, but appears less than willing to invest in the necessary skills and training to equip itself with competent veterinary resources to meet the needs of the animals.

The training requirements for Chinese ocean theme park personnel are also insufficient to guarantee the welfare of captive cetaceans. Training and performance elements account for the majority of examination marks, emphasising the importance of these elements over animal husbandry and care skills. This is in line with the industry's

desire to entertain rather than to educate the general public or promote conservation.

The industry also continues to struggle to provide conditions that significantly improve the breeding success of captive cetaceans. It is thus unable to limit the number of free-ranging animals being captured to supply facilities, as required by the government regulations.

Evidence also suggests that individual animals are being treated as disposable commodities, with the main aim to bring in as much money as possible before the animals become ill and die and need to be replaced.

These conditions also have a negative impact on the image of China internationally. The cetacean captures in Japan and Russia have received a significant amount of negative publicity for the suffering they cause free-ranging cetaceans and the potentially negative impact on their conservation status. It has been well noted in international media that China is the main market for these wild-caught animals. The contribution of individual facilities toward this negative public image contravenes the national regulations governing the industry.

The China Cetacean Alliance strongly urges the Chinese ocean theme park industry and government regulators to address the concerns expressed in this report as soon as possible, for the sake of the captive cetaceans held in China and for China's international image.

ENDNOTES

1. Similar to the United States Government's Marine Mammal Inventory Report; see Section 104(c) (10) in <http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf>
2. The governing regulations are Management regulation of aquatic wildlife license, Requirements for aquatic mammal rearing facilities, Grade of aquatic mammal rearing techniques, and Water quality for aquatic mammals in aquaria.
3. <https://cites.org/sites/default/files/eng/disc/CITES-Convention-EN.pdf>
4. A Scientific Authority of the State of import is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it.
5. A Management Authority of the State of import is satisfied that the specimen is not to be used for primarily commercial purposes.
6. A Scientific Authority of the State of export has advised that the export will not be detrimental to the survival of the species involved.
7. A Management Authority of the State of export is satisfied that any living specimen will be so handled as to minimise the risk of injury, damage to health or cruel treatment.
8. Ministry of the Environment; Brazilian Institute of Environment and Renewable Natural Resources—Regulation No 3 of 8 February 2002
9. Italian Environment Ministry—Decreto 469 of 6 December 2001
10. Supplement to the Secretary of State's Standards of Modern Zoo Practice; Additional standards for UK cetacean keeping.
11. <https://portals.iucn.org/library/efiles/documents/2013-009.pdf>
12. As of April 2019
13. Beijing, Shanghai, Tianjin, and Chongqing
14. <https://drive.google.com/open?id=1FWa1rkGpjycR0arw5Rv3JDwQkgKyrBM9&usp=sharing>
15. Includes two research facilities not open to the public
16. <https://guam.stripes.com/travel/chinese-developer-wanda-opens-theme-park-take-disney>
17. Six open, four under construction
18. <http://travel.people.com.cn/n1/2017/0328/c41570-29173129.html>
19. <https://www.scmp.com/property/hong-kong-china/article/2111734/bumpy-ride-ahead-theme-park-operators-china>
20. <http://investors.haichangoceanpark.com/English/news/news-details/2015/Latest-Development-in-Relation-to-the-Marine-Cultural-Innovation-Business-of-the-Group/default.aspx>
21. Dalian Whale Mall Beluga Cafe, Grandview Aquarium, Nanchang Wanda Aquarium, Sanya Atlantis, and Zhengzhou Jinyi City Aquarium
22. <https://www.theguardian.com/world/2016/nov/14/worlds-saddest-polar-bear-temporarily-moved-chinese-mall-pizza>
23. <http://finance.sina.com.cn/roll/2017-04-08/doc-ifyecfnu7755410.shtml>
24. <http://linyiqwb.com.cn/2017/0815/1014883.shtml> and <http://www.rmgcw.cn/newstitem/278238854>
25. See, for example, <https://awionline.org/content/poll-shows-big-jump-percentage-americans-opposed-keeping-orcas-captive-public-display>
26. <http://uk.whales.org/blog/2017/08/our-search-for-beluga-sanctuary-location>
27. <https://qz.com/919644/chinas-amusement-giant-chimelong-opened-the-nations-first-killer-whale-breeding-center/> and http://news.xinhuanet.com/photo/2017-02/24/c_1120527038.htm
28. <http://www.orcahome.de/orcanews.htm>
29. Bayuquan Beluga World <https://new.qq.com/omn/20180813/20180813F16EMZ.html>, Huaxia Brigade Nanjing International Tourism Resort <http://www.myzaker.com/article/5996b9f11bc8e0d41d0002ef> [http://wb.qdqq.com/html/qdrb/20150702/qdrb77389.html](https://www.google.com/url?q=http://www.huaxiawenlv.com/show_399.aspx&sa=D&ust=1547216592667000&usq=AFqjCNFW6iDEmz7uAZYNQ-jdwSEM90JGA, Qingdao Lingshan Bay Ocean Park), <http://vestiprim.ru/news/vestifrm/69195-genprokuratura-prinudila-peresmotret-uvelicchenie-kvot-na-ylvov-kosatok.html>
31. <https://www.urdupoint.com/en/world/preparations-for-illegal-sale-of-13-killer-wh-463327.html>
32. <https://www.telegraph.co.uk/news/2019/02/22/orca-held-notorious-russian-whale-jail-missing-feared-dead/>
33. https://genproc.gov.ru/smi/news/archive/news-1500938/?fbclid=IwAR0GpDfQahB9uRqk1YcN5k-F0IeS_TDBgk3M98LGRQLy5SmfEbuQDIhYo
34. <https://www.telegraph.co.uk/news/2018/11/05/russia-investigating-whale-jail-holding-101-captured-orcas-belugas/>
35. The Journal of Cetacean Research and Management. Volume 15, Supplement April 2014, and Volume 16, Supplement April 2015
36. <http://savedolphins.eii.org/news/entry/exclusive-russian-government-says-nyet-to-new-orca-beluga-capture-permits>
37. <https://canoe.com/news/world/russian-whale-prison-owners-charged>
38. <http://checklist.cites.org/#/en>
39. <http://www.trafficchina.org/node/39>
40. http://china.cnr.cn/xwgf/20180811/t20180811_524329256.shtml
41. The database currently includes data through the end of 2017; therefore, it does not reflect the actual situation in Chinese ocean theme parks in 2019.
42. <https://www.fisheries.noaa.gov/action/designation-sakhalin-bay-nikolaya-bay-amur-river-stock-beluga-whales-depleted-under-mmpa>
43. <http://fj.qq.com/a/20151229/038322.htm>
44. http://www.sohu.com/a/158877270_401391
45. <http://www.dailymail.co.uk/news/article-5829053/Shocking-moment-keeper-puts-lipstick-BELUGA-boasts-makes-animal-prettier.html>
46. Examples: "Despite DAT's extensive promotion to the general public, the evidence that it produces enduring improvements in the core symptoms of any psychological disorder is nil" (Marino and Lilienfeld, 2007). Marino and Lilienfeld recommend that "both practitioners of DAT and parents who are considering DAT for their children should be made aware that this treatment has yet to be subject to an adequate empirical test" (Marino and Lilienfeld, 1998).
47. http://k.sina.com.cn/article_6582178445_1885412800100ib8i.html?from=ent&subch=star
48. <https://ent.qq.com/a/20160718/027263.htm>
49. <http://sz.people.com.cn/n2/2017/0728/c202846-30541148.html>
50. http://www.sohu.com/a/146074419_118433
51. http://cq.cqnews.net/html/2016-07/25/content_37807372.htm
52. <http://travel.people.com.cn/n1/2017/0329/c41570-29177805.html>
53. Dalian Laohutan Ocean Park, Dalian Sun Asia Ocean World, Changsha Under Water World, Wuhan Haichang Polar Ocean Park, Hangzhou Changqiao Polar Ocean World, Shanghai Changfeng Ocean World, Penglai Ocean World, Jinan Ocean Spring Polar World, Guangzhou Ocean World and Harbin Polar Land.
54. <https://www.aljazeera.com/programmes/101east/2018/09/china-caging-ocean-wild-180919055944863.html>
55. See Changsha Underwater World investigation report <https://drive.google.com/drive/folders/1VdtMF0r-sIT0zqXpz5ETGWUb7YLq7jN?ogsrc=32>
56. CCA investigator observation at Chimelong Ocean Park in December 2016.
57. CCA investigator observation at Chimelong Ocean Park in December 2016.
58. Chimelong Ocean Park (2016) and Chengdu Haichang Polar Ocean World (2010).
59. <http://www.hengqin.gov.cn/hengqin/hqbb/201502/943e4da5cebb45a2aed8b5016b00832b.shtml>
60. http://zhuhai.house.ifeng.com/news/2018_06_06-51485950_0.shtml
61. <http://www.gsecc.com/typical-and-recommended-residential-noise-levels-residential-secondary-glazing>
62. http://v.youku.com/v_show/id_XOTA2MzUxNDE2.html
63. http://v.youku.com/v_show/id_XOTA2MzU0Dc2.html and <http://ww3.sinaimg.cn/bmiddle/e7c7ecaajw1epax3md4gj20hs2nwme.jpg>
64. <http://gongyi.people.com.cn/n1/2017/10/27/c151132-29611500.html>
65. <https://jobs.51job.com/shanghai-pdqx/40176189.html?s=01&t=0>
66. Figures from Dr Zhang Xianfeng, Chinese Academy of Sciences Centre for Aquatic Biodiversity and Resource Conservation, delivered via a PowerPoint presentation at a Yangtze Bioresource Conservation workshop in November 2018.
67. <http://www.lawinfochina.com/display.aspx?id=22418&iib=law>
68. http://big5.gov.cn/gate/big5/www.gov.cn/gongbao/content/2011/content_1860774.htm
69. Law of the People's Republic of China on the Protection of Wildlife, Chapter III Article 21 and 23 (Appendix Twenty-Two). All protected species may be traded for captivity in accordance with the Law of the People's Republic of China on the Protection of Wildlife, Chapter III Articles 27 and 33 (Appendix Twenty-Three), and the Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife, Chapter III Article 18 (Appendix Twenty-Four)
70. Law of the People's Republic of China on the Protection of Wildlife, Chapter III Article 25 (Appendix Twenty-Three) and Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife, Chapter III Article 17 (Appendix Twenty-Four)
71. Law of the People's Republic of China on the Protection of Wildlife, Chapter III Article 35 and 37 (Appendix Twenty-Three), and the Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife, Chapter III Article 22 and 23 (Appendix Twenty-Four)
72. https://travel.ifeng.com/a/20181117/45226858_0.shtml
73. http://www.moa.gov.cn/zwlwm/zcfcg/nybgz/201401/t20140113_3737659.htm
74. The use of the term 'donation' is a direct translation of the Chinese phrase used within the regulation. It is believed to refer to the international exchange of animals to other countries.
75. Ministry of the Environment; Brazilian Institute of Environment and Renewable Natural Resources – Regulation No 3 of 8 February 2002
76. Supplement to the Secretary of State's Standards of Modern Zoo Practice; Additional standards for UK cetacean keeping
77. http://health.gmw.cn/newspaper/2015_02/09/content_104429196.htm?utm_source=bshare&utm_campaign=bshare&utm_medium=sinaminiblog&bsh_bid=574692338

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APPENDIX ONE

Chinese ocean theme parks in operation and under construction:

Anhui Province

1. Hefei Ocean World
2. Wuhu Xinhualian Beluga Ocean Park

Beijing Municipality

3. Beijing Aquarium

Chongqing Municipality

4. Chongqing Hanhai Polar Ocean World
5. Leheledu Theme Park

Fujian Province

6. Fuzhou Luoyuanwan Polar Ocean World
7. Shishi Golden Shore Ocean World
8. Wuyishan Tianhong Polar Ocean World
9. Quanzhou Baxianguoohai Ocean World
10. Xiamen Haichang Polar Ocean World
11. Xiamen Sousa breeding and rescue center
12. Yongtai Polar Ocean World
13. Zhangzhou East Mountain Polar Ocean World
14. Zhangzhou Mount Tianzhushan Aquaruum

Gansu Province

15. Baiyin Aquarium
16. Lanzhou Haidebao Polar Ocean World

Guangdong Province

17. Guangzhou Aquarium
18. Guangzhou Grandview Aquarium
19. Shenzhen Safari Park
20. Shenzhen Xiaomeisha Ocean World
21. Zhanjiang Dinglongwan Ocean Kingdom
22. Zhuhai Chimelong Ocean Kingdom
23. Dongguan City Zoo
24. Maoming Haichang Polar Ocean World
25. Shaoguan Yunmen Mountain Aquarium

Guangxi Autonomous Region

26. Nanning Zoo
27. Sanniang Bay Dolphin Theatre
28. Nanning Rongsheng Polar Ocean World

Guizhou Province

29. Colorful Guizhou Polar Ocean World

Hainan Province

30. Fenjie Island Ocean Museum
31. Sanya Atlantis Hotel Dolphin Cove
32. Evergrand Ocean Flower Island
33. R&F Ocean Paradise
34. Riyue Cove Rongchuang Aquarium
35. Sanya Haichang Fantasy Town
36. Sanya Whale World

Hebei Province

37. Qinhuang Island Royal Blue Ocean Park
38. Qinhuang Island Xin'ao Undersea World
39. Shanhaiguan Happy Ocean World
40. Shijiazhuang Zoo-Aquarium

Heilongjiang Province

41. Harbin Polar Land
42. Harbin Poseidon Ocean Kingdom

Henan Province

43. Zhengzhou Changqiao Polar Ocean World
44. Kaifeng Aquarium
45. Luoyang Zhonghe Dolphin Cove Ocean Park
46. Zhengzhou Haichang Ocean Park
47. Zhengzhou Jinyicheng Aquarium

Hubei Province

48. Jingzhou Xiaomeisha Ocean World
49. Wuhan Haichang Polar Ocean World
50. Wuhan Baiji Aquarium

Hunan Province

51. Changsha Undersea World
52. Changsha Haichang Polar Ocean World
53. Chenzhou Huatai City Ocean World
54. Zhuzhou Yunlong Ocean Park

Inner Mongolia Autonomous Region

55. Baotou Aquarium
56. Huhhot Jingfeng Ocean World

Jiangsu Province

- 57. Huaian Dragon Palace Beluga World
- 58. Nanjing Happy Valley
- 59. Nanjing Undersea World
- 60. Nanjing Wenlv Aquarium
- 61. Suzhou Aquarium
- 62. Taizhou Qin Lake Ocean World
- 63. Wuxi Changqiao Ocean Kingdom
- 64. Xuzhou Polar Ocean World
- 65. Xuzhou Sanbao Plaza Aquarium
- 66. Yancheng Dafeng Harbor Ocean World
- 67. Yangzhou Polar Ocean World

Jiangxi Province

- 68. Nanchang Rongchuang Park
- 69. Nanchang Zoo
- 70. Ganzhou Polar Ocean World

Jilin Province

- 71. Changchun Love of Sea Plaza

Liaoning Province

- 72. Dalian Laohutan Ocean Park
- 73. Dalian Sun Asia Ocean World
- 74. Fushun Royal Ocean World
- 75. Dalian Whale Mall Beluga Cafe
- 76. Yingkou Beluga City

Ningxia Hui Autonomous Region

N/A

Qinghai Province

- 77. Xining Xinhualian Mini Aquarium

Shaanxi Province

- 78. Huaxia Wenlv Ocean Park
- 79. Xi'an Qujiang Polar Ocean World
- 80. Xi'an Dreamy Aquarium

Shandong Province

- 81. Jinan Quancheng Polar Ocean World
- 82. Jinan Wanda Mall Aquarium
- 83. Penglai Polar Ocean World
- 84. Linyi Polar Ocean World
- 85. Linyi Shushing Cultural City Ocean Park
- 86. Qingdao Haichang Polar Ocean World

- 87. Qingdao Lingshan Bay Ocean Park
- 88. Rizhao Ocean Park
- 89. Weifang Seashore Ocean Park
- 90. Weifang Shouguang Polar Ocean World
- 91. Weihai Shendiao Mountain Safari Park
- 92. Weihai Shenyou Ocean World
- 93. Weihai Weigao Ocean Park

Shanghai Municipality

- 94. Shanghai Changfeng Ocean World
- 95. Shanghai Haichang Ocean Park

Shanxi Province

N/A

Sichuan Province

- 96. Chengdu Haichang Polar Ocean World

Tianjin Municipality

- 97. Tianjin Haichang Polar Ocean Park

Tibet Autonomous Region

N/A

Xinjiang Autonomous Region

N/A

Yunnan Province

- 98. Shilin Frozen Ocean World
- 99. Fuxian Lake Happy World
- 100. Kunming Huadu Ocean World
- 101. Kunming Beluga Magic World

Zhejiang Province

- 102. Hangzhou Changqiao Polar Ocean World
- 103. Ningbo Undersea World
- 104. Hengdian Dreamy Valley Dolphin Cove
- 105. Taizhou Ocean World
- 106. Wenzhou Polar Ocean World
- 107. Wuxi Rongchuang Wenlv City

APPENDIX TWO

International regulations restricting the display of cetaceans in captivity

The following countries do not allow the display of cetaceans for entertainment: Bolivia, Chile, Costa Rica, Croatia, Cyprus, Hungary (achieved through a trade ban), India, Nicaragua, Slovenia and Switzerland (achieved through a trade ban). States, provinces, counties, and municipalities have done the same, including Barcelona, Spain; Malibu, California, United States; Maui County, Hawaii, United States, South Carolina, United States; Mexico City, Mexico; and Ontario, Canada (orcas only; achieved through a trade and breeding ban). Most of these jurisdictions had no dolphinarium to begin with; the two that have a remaining facility (Barcelona and Mexico City) will close them soon.

Other countries have banned or restricted the trade in live cetaceans, including Argentina (imports from the Russian Federation prohibited); Brazil (ban on imports and exports); Canada (administrative policy banning the capture of beluga whales for export); Chile (prohibits the import and export of dolphins for public display); Costa Rica (imports and exports prohibited); Cyprus (imports prohibited); Dominican Republic (orca imports prohibited); Hungary (imports prohibited); India (imports prohibited); Malaysia (no trade); Mexico (trade in wild-caught cetaceans prohibited); Solomon Islands (exports prohibited); and the United States (imports of wild-caught cetaceans strictly regulated). A number of countries (including several of those above) ban live captures in their Exclusive Economic Zones, while still others have prohibited new dolphinarium while grandfathering existing ones.

The government of Antigua and Barbuda, after issuing a permit to a foreign company to capture as many as 12 dolphins annually from local waters, rescinded this permission after activists filed a lawsuit arguing the quota was unsustainable and that it violated regional conservation agreements. In a number of cases, municipal, provincial and national governments have decided not to allow a dolphinarium or a cetacean exhibit to be built.¹ Furthermore, some countries have implemented strict legislation for the keeping of cetaceans in captivity. Among these are Brazil, Luxembourg, Norway and the United Kingdom; the United Kingdom used to have as many as 30 dolphinarium and now has none. Italy bans swim-with-dolphin encounters and other human-dolphin interactions.

In May 2017, France issued a “decree” that banned the acquiring of more cetaceans for public display, banned the breeding of captive cetaceans, prohibited swimming with captive dolphins and other forms

of interaction, and mandated that pool size should be increased by 50 percent (with facilities being given six months to comply; BBC News, 2017). However, the decree was overturned by a judge in January 2018, as it was ruled that there had been insufficient public input on some of the restrictions (The Local, 2018). Animal protection groups continue to work to reinstate the decree.

Information retrieved from Rose and Parsons, 2019

1. These include the cities of Vodnjan, Croatia; Virginia Beach, Virginia, United States; Denver, Colorado, United States; and Calgary, Alberta, Canada. The government of Panama, after two years of debate and controversy, decided not only against the building of a dolphinarium, but also against allowing the capture of dolphins from its waters.

APPENDIX THREE

OCEAN THEME PARK ACTIVITIES

Dolphin assisted therapy

Facility	Species	Date
Dalian Sun Asia Ocean World	Bottlenose dolphin	March 2011 ²
Fushun Royal Ocean World	Bottlenose dolphin	July 2010 ³
Guangzhou Aquarium	Bottlenose dolphin	2003 ⁴
Chengdu Haichang Polar Ocean World	Bottlenose dolphin	May 2017 ⁵
Qingdao Haichang Polar Ocean Park	Bottlenose dolphin	2010 ⁶
Tianjin Haichang Polar Ocean Park	Bottlenose dolphin	March 2017 ⁷
Hangzhou Changqiao Polar Ocean World	Bottlenose dolphin	June 2015 ⁸
Hefei Ocean World	Bottlenose dolphin	May 2015 ⁹
Nanjing Underwater World	Bottlenose dolphin	Sep 2017 ¹⁰
Ningbo Ocean Park	Bottlenose dolphin	July 2009 ¹¹
Qinhuang Island Xin'ao Undersea World	Bottlenose dolphin	July 2015 ¹²
Shenzhen Safari Park	Pantropical spotted dolphin	July 2015 ¹³ and 2018 ¹⁴
Shenzhen Xiaomeisha Seaworld	Bottlenose dolphin	May 2007 ¹⁵
Weihai Shenyue Ocean World	Bottlenose dolphin	April 2016 ¹⁶
White dolphin breeding and rescue centre	Bottlenose dolphin	July 2011 ¹⁷
Wuyi Mountain Ocean Park		March 2016 ¹⁸
Xi'an Qujiang Polar Ocean Park	Bottlenose dolphin	April 2015 ¹⁹
Xi'an Dreamy Aquarium	Bottlenose dolphin	April 2018 ²⁰

Swimming with cetaceans

Facility	Species	Date
Beijing Aquarium	Bottlenose dolphin	May 2014 ²¹
Chengdu Haichang Polar Ocean World	Long beaked common dolphin	October 2010
Chimelong Ocean Kingdom	Bottlenose dolphin	April 2017 ²²
Chimelong Hengqin Bay Hotel	Bottlenose dolphin	June 2016 ²³
Chongqing Hanhai Polar Ocean World	Bottlenose dolphin	2018 ²⁴
Fenjiezhou Ocean Park	Pantropical spotted dolphin	June 2016
Sanya Atlantis Hotel Dolphin Cove	Bottlenose dolphin	2018 ²⁵
Shenzhen Safari Park	Bottlenose dolphin	July 2017 ²⁶
Wuhan Haichang Polar Ocean Park ²⁷	Bottlenose dolphin	July 2012 ²⁸

Close contact experiences with cetaceans

Facility	Species	Date
Beijing Aquarium	Beluga whale and dolphin	May 2017 and December 2018
Changsha Underwater World	Dolphin	December 2014
Chengdu Haichang Polar Ocean World	Long-beaked common dolphin, bottlenose dolphin, and beluga whale	October 2014
Dalian Laohutan Ocean Park	Beluga whale and dolphin	January 2015
Dalian Sun Asia Ocean World	Bottlenose dolphin	June 2014
Fenjiezhou Ocean Park	Pantropical spotted dolphin	June 2016
Fushun Royal Ocean World	Bottlenose dolphin and beluga whale	April 2015
Fuzhou Luoyuan Bay Ocean World	Dolphin	October 2018 ²⁹
Grandview Aquarium	Beluga whale	March 2018
Guangzhou Ocean World	Bottlenose dolphin	March 2015
Hangzhou Changqiao Polar Ocean World	Beluga whale and bottlenose dolphin	December 2014
Hefei Ocean World	Bottlenose dolphin	May 2017
Jinan Ocean Spring Ocean World	Beluga whale and bottlenose dolphin	January 2015
Fuzhou Luoyuan Ocean World	Beluga whale and bottlenose dolphin	March 2017
Yongtai Polar Ocean World	Bottlenose dolphin	November 2018 ³⁰
Nanchang Wanda Aquarium	Bottlenose dolphin	October 2018 ³¹
Nanjing Underwater World	Bottlenose dolphin	January 2019 ³²

Penglai Polar Ocean World	Bottlenose dolphin	January 2015
Sanya Atlantis Hotel Dolphin Cove	Dolphin	January 2019 ³³
Shanhaiguan Happy Ocean World	Beluga whale and dolphin	October 2018 ³⁴
Shanghai Changfeng Ocean World	Beluga whale	December 2014
Shenzhen Safari Park	Dolphin	October 2018 ³⁵
Shenzhen Xiaomeisha Seaworld	Bottlenose dolphin	April 2017
Yunnan Shilin Polar Ocean World	Bottlenose dolphin	October 2016
Tianjin Haichang Polar Ocean Park	Bottlenose dolphin	October 2018 ³⁶
Wuhan Haichang Polar Ocean Park	Beluga whale and bottlenose dolphin	December 2014
Wuyishan Polar Ocean Park	Bottlenose dolphin	March 2017
Xiamen Sousa breeding and rescue center	Dolphin	July 2011 ³⁷
Xi'an Qujiang Polar Ocean World	Bottlenose dolphin	November 2014
Zuhai Chimelong Ocean Kingdom	Bottlenose dolphin	March 2018

Dolphin trainer experience

Facility	Species	Date
Beijing Aquarium	Beluga whale	June 2016 ³⁸
Dalian Sun Asia Ocean World	Bottlenose dolphin	August 2016 ³⁹
Guangzhou Grandview Aquarium	Beluga whale	August 2017 ⁴⁰
Hangzhou Changqiao Polar Ocean World	Bottlenose dolphin	July 2012 ⁴¹
Nanjing Underwater World	Bottlenose dolphin	August 2016 ⁴²
Shenzhen Xiaomeisha Ocean World	Bottlenose dolphin	July 2017 ⁴³
Taizhou Ocean World	Bottlenose dolphin	July 2018 ⁴⁴
Wuyishan Tianhong Polar Ocean World	Bottlenose dolphin	August 2017 ⁴⁵

Cetacean shows

Facility	Species	Date
Beijing Aquarium	Beluga whale and bottlenose dolphin	October 2018 ⁴⁶
Changchun Love of the Sea Plaza	Beluga whale	February 2017 ⁴⁷

Changsha Underwater World	Beluga whale and bottlenose dolphin	December 2014
Chengdu Haichang Polar Ocean World	Beluga whale and bottlenose dolphin	October 2018 ⁴⁸
Chongqing Hanhai Polar Ocean World	Beluga whale and bottlenose dolphin	March 2018 ⁴⁹
Colourful Guizhou Ocean Park	Beluga whale and bottlenose dolphin	October 2016
Dalian Laohutan Ocean Park	Beluga whale and bottlenose dolphin	October 2018 ⁵⁰
Dalian Sun Asia Ocean Park	Beluga whale and bottlenose dolphin	October 2018 ⁵¹
Dalian Whale Mall Beluga Cafe	Beluga whale and bottlenose dolphin	2018
Dongguan City Zoo	Pantropical spotted dolphin	October 2018 ⁵²
Fenjie Island Ocean Museum	Bottlenose dolphin	April 2017 ⁵³
Fuzhou Luoyuan Ocean World	Beluga whale and bottlenose dolphin	March 2017
Fushun Royal Ocean World	Beluga whale and bottlenose dolphin	April 2015
Ganzhou Aquarium	Beluga whale and bottlenose dolphin	2016
Grandview Aquarium	Beluga whale	March 2018 ⁵⁴
Guizhou Colorful Polar Ocean World	Dolphin	October 2016
Haichang Haitang Bay Dream World	Beluga whale and bottlenose dolphin	2019
Hangzhou Changqiao Polar Ocean World	Beluga whale and bottlenose dolphin	December 2014
Harbin Polar Land	Beluga whale	2018 ⁵⁵
Harbin Poseidon OK	Beluga whale and bottlenose dolphin	September 2017 ⁵⁶
Hefei Ocean World	Beluga whale and bottlenose dolphin	July 2016 ⁵⁷
Hengdian Dreamy Valley Dolphin Cove	Bottlenose dolphin	2018
Huaian Dragon Palace Beluga World	Beluga whale	2019
Huhhot Jingfeng Ocean World	Bottlenose dolphin	January 2015
Jinan Ocean Spring Ocean World	Beluga whale and bottlenose dolphin	January 2019 ⁵⁸
Kaifeng Aquarium	Dolphin	2018
Kunming Huadu Aquarium	Dolphin	2018
Lanzhou Haidebao Polar Ocean World	Bottlenose dolphin	March 2017
Leheledu Theme Park	Bottlenose dolphin	March 2017
Linyi Polar Ocean World	Beluga whale and bottlenose dolphin	2018
Linyi Shuseheng Polar Ocean World	Beluga whale and bottlenose dolphin	2018
Luoyang Zhonghe Dolphin Cove Ocean Park	Bottlenose dolphin	2018
Nanchang Wanda Aquarium	Beluga whale and bottlenose dolphin	October 2018 ⁵⁹
Nanchang Zoo	Bottlenose dolphin	November 2017

Nanjing Underwater World	Dolphin	October 2018 ⁶⁰
Nanning Rongsheng Polar Ocean World	Beluga whale and bottlenose dolphin	2018
Nanning Zoo	Dolphin	January 2018
Ningbo Ocean World	Beluga whale and bottlenose dolphin	October 2018 ⁶¹
Penglai Polar Ocean World	Bottlenose dolphin	January 2015
Qingdao Haichang Polar Ocean Park	Beluga whale and bottlenose dolphin	November 2016 ⁶²
Qinhuang Island Xin'ao Undersea World	Dolphin	October 2018 ⁶³
Qinhuang Island Royal Blue Ocean Park	Bottlenose dolphin	2018
Rizhao Aquarium	Bottlenose dolphin	2018
Sanya Atlantis Hotel Dolphin Cove	Beluga whale and bottlenose dolphin	January 2019 ⁶⁴
Shanghai Haichang Ocean Park	Orcas, beluga whale and bottlenose dolphin	December 2018
Shanhaiguan Happy Ocean World	Beluga whale and bottlenose dolphin	October 2018 ⁶⁵
Shijiazhuang Zoo-Aquarium	Dolphin	2018
Shenzhen Safari Park	Dolphin	October 2018 ⁶⁶
Shenzhen Xiaomeisha Seaworld	Beluga whale and bottlenose dolphin	April 2017
Shilin Polar Ocean World	Bottlenose dolphin	October 2016
Suzhou Aquarium	Bottlenose dolphin	January 2019 ⁶⁷
Tianjin Haichang Polar Ocean Park	Beluga whale and bottlenose dolphin	May 2017
Weifang Shouguang Polar Ocean World	Bottlenose dolphin	2018
Weihai Shendiao Mountain Safari Park	Bottlenose dolphin	2018
Wuhan Haichang Polar Ocean Park	Beluga whale and bottlenose dolphin	December 2014
Wuhu Beluga Ocean Park	Beluga whale and bottlenose dolphin	January 2019 ⁶⁸
Wuyishan Polar Ocean Park	Bottlenose dolphin	March 2017
Xiamen Sousa breeding and rescue center	Dolphin	July 2011 ⁶⁹
Xi'an Qujiang Polar Ocean World	Beluga whale and bottlenose dolphin	November 2014
Xi'an Dreamy Aquarium (in a shopping center)	Bottlenose dolphin	January 2019 ⁷⁰
Xuzhou Sanbao Plaza Aquarium	Beluga whale	2019
Yangzhou Polar Ocean World	Bottlenose dolphin	2019
Zhangzhou Mount Tianzhou	Bottlenose dolphin	2019
Zhengzhou Jinyicheng Aquarium		
Zhuhai Chimelong Ocean Kingdom	Beluga whale, false killer whale and bottlenose dolphin	March 2018

From 2015 Report

Captive cetaceans perform a variety of tricks and behaviours during the shows. Routines include the following:

- + Dolphins towing children in inflatable boats around the display tank
- + Dolphins spinning hoops on their rostrums
- + Dolphins jumping through hoops
- + Dolphins jumping across a piece of string stretched across the tank and raised above the water
- + Dolphins asked to solve mathematical equations by pushing a paddle with their rostrum to indicate a certain number
- + Dolphins swimming backwards with their bodies staying vertical (tail walking)
- + Dolphins and beluga whales swimming toward the audiences and waving their tail flukes to 'greet' the audience
- + Dolphins and beluga whales pushing trainers through the water and into the air
- + Dolphins and beluga whales vocalising in air under the trainers' instructions
- + Dolphins and beluga whales beaching themselves onto the stage
- + Dolphins and beluga whales hitting balls with their tail flukes, toward the audience
- + Dolphins and beluga whales being ridden by the trainers and pushing the trainers out of the water onto the stage
- + Dolphins and beluga whales swinging and nodding their heads with the background music
- + Dolphins and beluga whales hitting plastic balls with their rostrums
- + Beluga whales breaching out of the water
- + Beluga whales spraying water toward the audience

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APPENDIX FOUR

Number of each species held in 80 operational ocean theme parks in China:

	Beluga whale (<i>Delphinapterus leucas</i>)	Bottlenose dolphin (<i>Tursiops</i> spp.)	False killer whale (<i>Pseudorca crassidens</i>)	Finless porpoise (<i>Neophocaena phocaenoides</i>)	Indo-Pacific humpback dolphin (<i>Sousa chinensis</i>)	Orca (<i>Orcinus orca</i>)	Pacific whitesided dolphin (<i>Lagenorhynchus obliquidens</i>)	Pan-tropical spotted dolphin (<i>Stenella attenuata</i>)	Risso's dolphin (<i>Grampus griseus</i>)	Short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	Rough-toothed dolphin (<i>Sterna bredanensis</i>)	Spinner dolphin (<i>Stenella longirostris</i>)
ANHUI												
Hefei Aquarium/Hefei Seaworld		11	2						2			
Wuhu Ocean Park	1											
BEIJING												
Beijing Aquarium	2	22					3	2				
CHONGQING												
Chongqing Lehe Ledu Theme Park		5										
Chongqing Hanhai Polar Ocean Park		6										
FUJIAN												
Xiamen Sousa breeding and rescue center		2										
Fuzhou Luoyuanwan Polar Ocean World	6	8										
Shishi Golden Shore Ocean World		2										
Wuyishan Tianhong Polar Ocean World	2	8										
Yongtai Polar Ocean World												
Zhangzhou Mount Tianzhushan Aquarum		17					3	2				
Quanzhou Baxianguo Hai Ocean World												
Xiamen Haichang Polar Ocean World		14										
Zhangzhou East Mountain Polar Ocean World												
GANSU PROVINCE												
Lanzhou Haidebao Polar Ocean World		2										
Baiyin Aquarium												
GUANGDONG PROVINCE												
Guangzhou Aquarium	2	8										
Guangzhou Grandview Aquarium	4											
Shenzhen Safari Park								5				
Shenzhen Xiaomeisha Ocean World	3	6										
Zhuhai Chimelong Ocean Kingdom	22	43	7		5	9	10	7				
Dongguan City Zoo								2				5
Zhanjiang Dinglongwan Ocean Kingdom												
Maoming Haichang Polar Ocean World												

	Beluga whale (<i>Delphinapterus leucas</i>)	Bottlenose dolphin (<i>Tursiops</i> spp.)	False killer whale (<i>Pseudorca crassidens</i>)	Finless porpoise (<i>Neophocaena phocaenoides</i>)	Indo-Pacific humpback dolphin (<i>Sousa chinensis</i>)	Orca (<i>Orcinus orca</i>)	Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	Pan-tropical spotted dolphin (<i>Stenella attenuata</i>)	Risso's dolphin (<i>Grampus griseus</i>)	Short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	Rough-toothed dolphin (<i>Steno bredanensis</i>)	Spinner dolphin (<i>Stenella longirostris</i>)
Shaoguan Yunmen Mountain Aquarium												
GUANGXI AUTONOMOUS REGION												
Nanning Zoo		5			1							
Nanning Rongsheng Polar Ocean World												
Sanniang Bay Dolphin Theatre												
GUIZHOU PROVINCE												
Colorful Guizhou Polar Ocean World	4	8										
HAINAN PROVINCE												
Fenjie Island Ocean Museum							20					
Sanya Atlantis Hotel Dolphin Cove	2	6					4					
R&F Ocean Paradise												
Sanya Haichang Fantasy Town	2											
Sanya Whale World												
Evergrand Ocean Flower Island	6											
Riyue Cove Rongchuan Aquarium												
Sanya Tropical Ocean World (closed)		4										
HEBEI PROVINCE												
Qinhuang Island Royal Blue Ocean Park		6										
Qinhuang Island Xin'ao Undersea World		6										
Shanhaiguan Happy Ocean World	3	16		2								
Shijiazhuang Zoo-Aquarium		2										
HEILONGJIANG PROVINCE												
Harbin Polar Land	5											
Harbin Poseidon Ocean Kingdom		9										
HENAN PROVINCE												
Kaifeng Aquarium	2	10										
Luoyang Zhonghe Dolphin Cove Ocean Park		6										
Zhengzhou Jinyicheng Aquarium		2										
Zhengzhou Changqiao Polar Ocean World				2								
Zhengzhou Haichang Ocean Park												
HUBEI PROVINCE												
Wuhan Baiji Aquarium	6	9		10								
Jingzhou Xiaomeisha Ocean World	2	2										
Wuhan Haichang Polar Ocean World	6	9		10								

	Beluga whale (<i>Delphinapterus leucas</i>)	Bottlenose dolphin (<i>Tursiops</i> spp.)	False killer whale (<i>Pseudorca crassidens</i>)	Finless porpoise (<i>Neophocaena phocaenoides</i>)	Indo-Pacific humpback dolphin (<i>Sousa chinensis</i>)	Orca (<i>Orcinus orca</i>)	Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	Pan-tropical spotted dolphin (<i>Stenella attenuata</i>)	Risso's dolphin (<i>Grampus griseus</i>)	Short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	Rough-toothed dolphin (<i>Steno bredanensis</i>)	Spinner dolphin (<i>Stenella longirostris</i>)
HUNAN PROVINCE												
Changsha Undersea World	3	8										
Changsha Haichang Polar Ocean World												
Chenzhou Huatai City Ocean World												
Zhuzhou Yunlong Ocean Park												
INNER MONGOLIA AUTONOMOUS REGION												
Huhhot Jingfeng Ocean World												
Baotou Aquarium												
JIANGSU PROVINCE												
Huaian Dragon Palace Beluga World	2											
Nanjing Undersea World		2										
Suzhou Aquarium		4										
Taizhou Qin Lake Ocean World												
Xuzhou Polar Ocean World												
Xuzhou Sanbao Plaza Aquarium	2											
Yancheng Dafeng Harbor Ocean World		2										
Yangzhou Polar Ocean World		2										
Nanjing Happy Valley												
Nanjing Wenlv Aquarium												
Wuxi Changqiao Ocean Kingdom						2						
JIANGXI PROVINCE												
Nanchang Rongchuang Park		11										
Nanchang Zoo		3										
Ganzhou Polar Ocean World	1	2										
Changchun Love of Sea Plaza	2											
LIAONING PROVINCE												
Dalian Laohutan Ocean Park	5	36					5	3				
Dalian Sun Asia Ocean World	8	10										
Fushun Royal Ocean World	7	19							3			
Dalian Whale Mall Beluga Cafe	3	1										
Yingkou Beluga City												
QINGHAI PROVINCE												
Xining Xinhualian Mini Aquarium		2										
SHAANXI PROVINCE												
Huaxia Wenlv Ocean Park	2	4										

	Beluga whale (<i>Delphinapterus leucas</i>)	Bottlenose dolphin (<i>Tursiops</i> spp.)	False killer whale (<i>Pseudorca crassidens</i>)	Finless porpoise (<i>Neophocaena phocaenoides</i>)	Indo-Pacific humpback dolphin (<i>Sousa chinensis</i>)	Orca (<i>Orcinus orca</i>)	Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	Pan-tropical spotted dolphin (<i>Stenella attenuata</i>)	Risso's dolphin (<i>Grampus griseus</i>)	Short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	Rough-toothed dolphin (<i>Steno bredanensis</i>)	Spinner dolphin (<i>Stenella longirostris</i>)
Xi'an Qujiang Polar Ocean World	5	11										
Xi'an Dreamy Aquarium		4										
SHANDONG PROVINCE												
Jinan Quancheng Polar Ocean World	6	8		12					10			
Penglai Polar Ocean World	20	18							4		3	
Linyi Polar Ocean World	2	2										
Linyi Shushing Cultural City Ocean Park	2	2										
Qingdao Haichang Polar Ocean World	12	30	4				4					
Rizhao Ocean Park		5										
Weifang Shouguang Polar Ocean World		5										
Weihai Shendiao Mountain Safari Park		4							2			
Weihai Shenyong Ocean World												
Weihai Weigao Ocean Park												
Jinan Wanda Mall Aquarium												
Qingdao Lingshan Bay Ocean Park												
Weifang Seashore Ocean Park												
SHANGHAI MUNICIPALITY												
Shanghai Changfeng Ocean World	2											
Shanghai Haichang Ocean Park	5	4				4						
SICHUAN PROVINCE												
Chengdu Haichang Polar Ocean World	5	11	2					12				
TIANJIN MUNICIPALITY												
Tianjin Haichang Polar Ocean Park	8	33	2	4			5					
YUNNAN PROVINCE												
Shilin Frozen Ocean World	4	6										
Fuxian Lake Happy World		2					2	3	1		1	
Kunming Huadu Ocean World	3	2										
Kunning Beluga Magic World												
ZHEJIANG PROVINCE												
Hangzhou Changqiao Polar Ocean World	19	22							12	4		
Ningbo Undersea World	2	15							8			
Hengdian Dreamy Valley Dolphin Cove		7										
Taizhou Ocean World		3										
Wenzhou Polar Ocean World												
Wuxi Rongchuang Wenlv City												

APPENDIX FIVE

Yangtze Finless Porpoise Reserves

Xijiang Reserve, Anqing City, was founded in January 2014. Five Yangtze finless porpoises were translocated there in April 2014, with one calf born there the following June. A further eight Yangtze finless porpoises were translocated there in November 2016 and six more in November 2017. The *ex situ* plan for the ocean theme parks takes eight of the 20 porpoises who have adapted to this reserve and transfers them to these facilities.

Five Yangtze finless porpoises were introduced to Swan Island Reserve in the 1990s. Currently there are at least 70 porpoises in this

self-sustaining population, with calves born every year. Yangtze finless porpoises from Swan Island Reserve have also been sent to other reserves to help them thrive, including the Xijiang Reserve.

These two reserves provide valuable, natural refuge for the Yangtze finless porpoises. Not only do the Yangtze finless porpoises in these reserves help promote the protection of these sections of the Yangtze River, but other species, including humans, also benefit from the improved natural environment. Removing the porpoises to commercial facilities and concrete tanks, with any offspring born there unlikely ever to be released back into natural habitat, is the wrong approach to their conservation.

APPENDIX SIX

Yangtze River Fisheries Administration, Ministry of Agriculture and Rural Affairs (MOA), PRC

Notice about accelerating the work of *ex situ* conservation of YR finless porpoise

Relevant provincial (municipal) fisheries administrations, fisheries institutions, nature reserve management bodies, National Aquatic Wildlife Conservation Association, and other offices,

In order to implement the MOA's Saving Yangtze River (YR) Finless Porpoises Plan (2016-2025) and Eco-Environmental Protection Plan of the Yangtze River Economic Belt, given the status quo of the wild YR finless porpoise population and the practical needs for rescuing and conserving the YR finless porpoises, the Yangtze River Fisheries Administration and the Fishery Bureau of the MOA have evaluated and approved the Application and Report of Artificial Breeding of YR Finless Porpoises and Technical Protocol for Capturing and Transporting YR Finless Porpoises for *Ex Situ* Conservation submitted by Zhuhai Chimelong Investment and Development Co., Ltd, Shanghai Haichang Ocean Park and the Freshwater Fisheries Research Centre (FFRC) of the Chinese Academy of Fishery Sciences (CAFS). The

National Aquatic Wildlife Conservation Association is in charge of organizing and implementing the work.

According to the *ex situ* plan, six YR finless porpoises will be transferred out of the Xijiang Yangtze River finless porpoise reserve, Anhui province; eight YR finless porpoises will be transferred out of the Tian'ezhou Baiji Nature Reserve, Hubei province. The National Aquatic Wildlife Conservation Association will coordinate and arrange specific plans to ship the YR finless porpoises to Chimelong (Guangdong) and Haichang (Shanghai) in batches, and stage by stage, based on the actual situation. To advance the project in a scientific and orderly manner, the relevant organizations please do the following work.

The involved aquariums please obtain a license for artificial breeding of YR finless porpoises, install the necessary physical facilities and improve training to relevant staff, to provide ideal conditions for domesticating⁷¹ and breeding work after the arrival of the YR finless porpoises.

The National Aquatic Wildlife Conservation Association and the relevant technical supporting organizations please work together with the reserve agencies to continue improving the capture and transportation plan, and to develop a practical schedule and an emergency plan to

附件

农业部长江流域渔政监督管理办公室文件

长渔发〔2018〕15号

关于加快推进长江江豚迁地保护相关工作的通知

有关省（直辖市）渔业行政主管部门、渔政机构、保护区管理机构、全国水生野生动物保护分会、相关单位：

为贯彻落实《长江江豚拯救行动计划（2016—2025）》《长江经济带生态环境保护规划》，根据长江江豚野外种群现状和抢救性保护工作的实际需要，珠海长隆投资发展有限公司、上海海昌极地海洋世界和中国水产科学研究院淡水渔业研究中心提交的《长江江豚人工繁育申请报告》《长江江豚迁地保护捕捞、运输技术方案》业经我办和我部渔业渔政管理局组织评审并获得通过，全国水生野生动物保护分会负责组织实施。

根据本次迁地保护工作方案，由安徽西长江江豚保护区迁

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出6头长江江豚，由湖北天鹅洲白鱄豚保护区迁出8头长江江豚。全国水生野生动物保护分会协调安排具体方案，根据实际情况，分期、分批运至长隆（广东）和海昌（上海）。为了推进项目的科学、有序开展，请有关单位做好以下工作。

请有关水族馆按程序尽快办理《长江江豚人工繁育许可证》，按照技术规范要求落实硬件设施，加强相关人员技术培训，为长江江豚到馆后的驯养和繁育创造优良的软硬件条件。

请全国水生野生动物保护分会同有关技术支撑单位和保护区管理机构继续完善捕捞、运输技术方案，制定切实可行的时间进度安排表和应急预案，确保长江江豚捕捞、选豚、暂养、运输、到馆等各个环节安全、科学、高效、有序实施。

请有关省（直辖市）渔业行政主管部门和保护区管理部门做好监管和协调，保障江豚进馆工作安全、顺利执行。

农业农村部长江流域渔政监督管理办公室（代章）

2018年7月18日

（联系人：王成友，021-62453006，changyuban@126.com）

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ensure that the capture, selection, temporary housing, transport and arrival can be carried out in a safe, scientific, efficient and orderly way.

Relevant provincial (municipal) fisheries administrations and nature reserve management bodies please supervise and coordinate well, so that the relocation of the YR finless porpoises to the aquariums can be guaranteed.

Yangtze River Fisheries Administration, Ministry of Agriculture and Rural Affairs, PRC (substitution seal)

2018. July 18th

(Contact: Wang Youcheng, 021-62453006, changyuban@126.com)

71. This reference to 'domestication' is inaccurate, as captive breeding of wildlife in zoos and ocean theme parks does not lead to domestication. Domestication is a deliberately selective breeding process, wherein a species is bred for certain physical and behavioural traits; over time, it becomes a different species or breed of animal. Cetaceans are still wild animals and no selection for particular traits is occurring in any captive breeding program to date.

APPENDIX SEVEN

Anhui Provincial Agricultural Committee Office

Notice about enhancing the *ex situ* conservation effort of Yangtze River (YR) finless porpoises in 2018 by the Anhui Provincial Agricultural Committee Office

Anqin City Agricultural Committee,

In order to enforce the MOA's Saving Yangtze River Finless Porpoises Plan (2016-2025), six YR finless porpoises from the Xijiang Finless Porpoises Reserve and eight from Tian'ezhou Baiji Nature Reserve are to be sent to Chimelong (Guangdong) and Haichang (Shanghai). Please strictly follow the law and the requirements from the Notice about speeding up the related work of *ex situ* conservation of YR finless porpoise, and work together with the National Aquatic Wildlife Conservation Association and technical supporting organizations to implement the plan.

Attachment: Notice about speeding up the related work of *ex situ* conservation of the YR finless porpoise

Anhui Provincial Agricultural Committee Office
2018 July 27

安徽省农业委员会办公室

皖农办渔函〔2018〕126号

安徽省农业委员会办公室关于做好 2018年长江江豚迁地保护工作的通知

安庆市农业委员会:

为落实原农业部《长江江豚拯救行动计划》(2016-2025), 农业农村部长江办根据江豚保护工作需要, 近日计划由西江长江江豚保护区迁出6头长江江豚, 从湖北天鹅洲白鱘豚自然保护区迁出8头江豚, 分期分批运至长隆(广东)和海昌(上海)。请严格依据相关法规规定和农业农村部长江流域渔政监督管理办公室《关于加快推进长江江豚迁地保护相关工作的通知》(长渔发〔2018〕15号)要求, 配合全国水生野生动物保护分会和技术支撑单位做好本次江豚迁地的组织实施工作。

附件: 农业农村部长江流域渔政监督管理办公室关于加快推进长江江豚迁地保护相关工作的通知

安徽省农业委员会办公室

2018年7月27日

APPENDIX EIGHT

IUCN-SSC Cetacean Specialist Group statement on *ex situ* plans for Yangtze River subspecies of narrow-ridged finless porpoise (*Neophocaena asiaeorientalis asiaeorientalis*)

Since 2013, the Yangtze River subspecies of narrow-ridged finless porpoise (*Neophocaena asiaeorientalis asiaeorientalis*) has been red-listed as Critically Endangered. As noted in a news item on this website posted 10 December 2015, the population of Yangtze finless porpoises in the semi-natural reserve at Tian-E-Zhou oxbow had increased rapidly and was more than 60 at that time. Chinese scientists were hopeful that improved management of this reserve would allow its fish resources to increase and the porpoise population there to maintain its positive trajectory. At the same time, a new,

considerably larger semi-natural reserve in nearby He-Wang-Miao oxbow was being developed and stocked at least partly by animals from Tian-E-Zhou. The report of the 2018 meeting of the IWC Subcommittee on Small Cetaceans listed as one of the measures needed for a 'sustained recovery' of the Yangtze finless porpoise subspecies as a whole, "Strengthening the *ex situ* conservation management programs and moving towards releasing animals from the semi-natural reserves into the Yangtze River and adjoining lakes as part of a step-wise restocking plan."

In the light of the above, it was surprising to learn in late July of this year that the Anhui Provincial Agricultural Committee had approved sending six porpoises from the Xijiang Finless Porpoise Reserve

(established in Anhui province in 2016 and currently stocked with about 20 animals including some taken from the wild and some from Tian-E-Zhou) and eight directly from the Tian-E-Zhou reserve (Hubei province) to commercial display facilities at Chimelong (Guangdong) and Haichang (Shanghai). There is no evidence to suggest that either of these facilities has the capability or commitment to carry out a captive breeding program. Even if some of the porpoises brought into the commercial enclosures were to survive and reproduce, such a program has little potential to contribute to the ultimate goal of enhancing the wild population in the Yangtze River and its lakes. In contrast, the steadily growing network of semi-natural reserves appears to be a promising approach with real potential, and removing animals from those reserves to supply commercial display facilities is bound to be counterproductive.

From the information available, this initiative does not appear to be consistent with the mandate of the Saving Yangtze Finless Porpoise Alliance announced by the Chinese Ministry of Agriculture in June 2017 (<http://en.people.cn/n3/2017/0614/c90000-9228521.html>). Nor is it clear that such a program has the support of China's internationally recognized finless porpoise experts. The Cetacean Specialist Group sent a letter to the Minister of Agriculture and Rural Affairs in China on 17th August 2018 strongly urging a reconsideration of the approach and requesting them to refrain from depleting the populations in reserves to supply commercial facilities.

<http://iucn-csg.org/2018/08/14/update-on-yangtze-finless-porpoise-in-china/>

APPENDIX NINE

Data on imports into China to the end of 2017

Data retrieved from CITES trade database on 15 April 2019

https://trade.cites.org/en/cites_trade/#

Species	CITES trade data
common bottlenose dolphin (<i>Tursiops truncatus</i>) and Indo-Pacific bottlenose dolphin (<i>Tursiops aduncus</i>)	674
beluga whale (<i>Delphinapterus leucas</i>)	260
Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	39
Risso's dolphin (<i>Grampus griseus</i>)	33
false killer whale (<i>Pseudorca crassidens</i>)	22
orca (<i>Orcinus orca</i>)	15
pantropical spotted dolphin (<i>Stenella attenuata</i>)	9
Indo-Pacific humpbacked dolphin (<i>Sousa chinensis</i>)	5
short-finned pilot whale (<i>Globicephala macrorhynchus</i>)	4
rough-toothed dolphin (<i>Steno bredanensis</i>)	0
narrow-ridged finless porpoise (<i>Neophocaena asiaorientalis</i>)	0

APPENDIX TEN

Live Cetacean Capture Methods

There are various techniques for capturing cetaceans, depending on the species and the depth of the water. The most popular capture method is by seine net—a large fish net that is positioned vertically in the water column with weights at the bottom and floats at the top. The seine is used in conjunction with a high speed boat or boats to chase a pod of animals into shallow waters and encircle them with the net. The net is then closed around the animals and pulled very tightly at the bottom, trapping the animals in a ‘purse’. The animals thrash around and may become entangled or drown. They are then manhandled into slings and hauled on board a capture vessel or herded into shallow holding pens.

Probably the most brutal capture method is the drive hunt, whereby pods of animals, once spotted, are chased and driven toward shore using boats and noise. Bays with narrow necks are typically chosen so that once close to shore, a net can be extended across the mouth, cutting off escape. Once confined, the exhausted animals are scrutinised for

suitability for captivity, while the rest are either butchered for meat and other products, or occasionally freed to an unknown fate.

Information retrieved from Rose and Parsons, 2019.

Holding and Transport

Once captured, animals are held until they can be transported to a final destination. Holding conditions can be very crude and may consist of only a wet sling in a boat, or a small sea pen or makeshift tank lined with plastic and lacking a proper filtration system.

Small motor boats are usually used to move animals from the ocean to the shore. For short distances, animals are transported by trucks in wet slings. For longer distances, animals are kept in slings and crated and moved by air. The physiological effects of confining and moving cetaceans great distances via ground transport or pressurised airplanes are largely unknown, but the stressful impacts are being documented by a growing number of studies.⁷²

APPENDIX ELEVEN

Companies involved in cetacean transportation to China

Air Bridge Cargo⁷³

China Postal Airlines⁷⁴

Dalian Dragon-Leader Import & Export⁷⁵

Hainan Airlines⁷⁶

Japan Airlines⁷⁷

Liaoning Tycoon Logistics Ltd⁷⁸

Uni Top Airlines⁷⁹

Yangtze River Cargo⁸⁰

Yuantong Airline⁸¹

Volga-Dneper Airline⁸²

Turkey USL cargo flight⁸³

COSCO Shipping Air Freight Co., Ltd.⁸⁴

APPENDIX TWELVE

Purchase costs

Facility	Species	Country of origin	Date	Price
Hefei Polar Ocean World	Bottlenose dolphin x 8	Japan	November 2015	US\$1.2 million
Hefei Polar Ocean World	Bottlenose dolphin x 3	Japan	July 2011 ⁸⁵	US\$725,000 (RMB 4.5 million)
Hangzhou Changqiao Polar Ocean World	Beluga whale	Russia	December 2014 ⁸⁶	RMB 1.8 million
Linyi Polar Ocean World*	Orca	Russia	January 2016 ⁸⁷	US\$6.5 million RMB 45 million
Wuyi Mountain Tianhong Polar Ocean Park	Bottlenose dolphin x 8	Japan	June 2015 ⁸⁸	US\$520,000 (RMB 3.2 million)
Kaifeng Ocean Park	Beluga whale x 2	Russia	September 2014 ⁸⁹	US\$250,000 (RMB 1.6 million)
Fushun Royal Ocean World Marine Park	Dolphin x 4	Japan	July 2010 ⁹⁰	US\$738,000 (RMB 4.5 million)
Guangzhou Ocean World	Dolphin x 4	Japan	July 2007 ⁹¹	US\$645,000 (RMB 4 million)
Guangzhou Ocean World	Beluga whale x 2	Russia	November 2005 ⁹²	US\$480,000 (RMB 3 million)

* This transaction was not completed and no orcas are currently held at Linyi POW

72. <https://awionline.org/content/capture-marine-life>
 73. <http://news.sina.com.cn/s/2018-03-25/doc-ifysqqu4928494.shtml> and <http://ori.hiciq.gov.cn/html/xinxidongtai/worknews/201803/8078.html>
 74. http://news.dlxw.com/news/content/2016-08/24/content_1800434.htm
 75. http://hznews.hangzhou.com.cn/jingji/content/2015-06/24/content_5819680.htm
 76. http://xm.fjnews.com/2018-04/28/content_20985748.htm
 77. <http://news.enorth.com.cn/system/2017/07/10/033316927.shtml>
 78. http://dalian.runsky.com/2018-06/16/content_5910637.html
 79. <http://sanya.hinews.cn/system/2017/10/29/031307470.shtml>
 80. http://dalian.runsky.com/2018-06/16/content_5910637.html
 81. http://fjnews.fjnews.com/2019-02/21/content_21997519.htm
 82. <https://wx.abbao.cn/a/14849-8e1b56e4b02abb97.html>

83. <http://www.gd.chinanews.com/2011/2011-11-19/2/157758.shtml>
 84. https://www.sohu.com/a/159825875_672776
 85. <http://news.hf365.com/system/2011/07/30/011039807.shtml>
 86. Personal comms with ocean park staff
 87. <http://linyi.qlwb.com.cn/2016/0126/542248.shtml>
 88. http://hznews.hangzhou.com.cn/jingji/content/2015-06/24/content_5819680_2.htm
 89. <http://www.kfdjdd.com/news/hyg/22.html>
 90. http://www.huffingtonpost.com/2010/07/09/dolphins-help-treat-autis_n_640963.html
 91. http://www.lifeofguangzhou.com/node_10/node_37/node_85/2007/07/22/118506808823884.shtml
 92. <http://www.newsgd.com/citiesandtowns/guangzhou/news/200511140064.htm>

APPENDIX THIRTEEN

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Articles II, III & VIII

Signed 3 March 1973 in Washington, DC, United States

Amended 22 June 1979 in Bonn, Switzerland

Amended 30 April 1983 in Gaborone, Botswana

Article II

Fundamental Principles

1. Appendix I shall include all species threatened with extinction which are or may be affected by trade. Trade in specimens of these species must be subject to particularly strict regulation in order not to endanger further their survival and must only be authorized in exceptional circumstances.
2. Appendix II shall include:
 - (a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation to avoid utilization incompatible with their survival; and
 - (b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in sub-paragraph (a) of this paragraph may be brought under effective control.
3. Appendix III shall include all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties in the control of trade.
4. The Parties shall not allow trade in specimens of species included in Appendices I, II and III except in accordance with the provisions of the present Convention.

Article III

Regulation of Trade in Specimens of Species Included in Appendix I

1. All trade in specimens of species included in Appendix I shall be in accordance with the provisions of this Article.
2. The export of any specimen of a species included in Appendix I shall require the prior grant and presentation of an export permit. An export permit shall only be granted when the following conditions have been met:
 - (a) A Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species;
 - (b) A Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the

- laws of that State for the protection of fauna and flora;
 - (c) A Management Authority of the State of export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment; and
 - (d) A Management Authority of the State of export is satisfied that an import permit has been granted for the specimen.
3. The import of any specimen of a species included in Appendix I shall require the prior grant and presentation of an import permit and either an export permit or a re-export certificate. An import permit shall only be granted when the following conditions have been met:
 - (a) a Scientific Authority of the State of import has advised that the import will be for purposes which are not detrimental to the survival of the species involved;
 - (b) a Scientific Authority of the State of import is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it; and
 - (c) a Management Authority of the State of import is satisfied that the specimen is not to be used for primarily commercial purposes.

Article VIII

Measures to Be Taken by the Parties

1. The Parties shall take appropriate measures to enforce the provisions of the present Convention and to prohibit trade in specimens in violation thereof. These shall include measures:
 - (a) to penalize trade in, or possession of, such specimens, or both; and
 - (b) to provide for the confiscation or return to the State of export of such specimens.
2. In addition to the measures taken under paragraph 1 of this Article, a Party may, when it deems it necessary, provide for any method of internal reimbursement for expenses incurred as a result of the confiscation of a specimen traded in violation of the measures taken in the application of the provisions of the present Convention.
3. As far as possible, the Parties shall ensure that specimens shall pass through any formalities required for trade with a minimum of delay. To facilitate such passage, a Party may designate ports of exit and ports of entry at which specimens must be presented for clearance. The Parties shall ensure further that all living specimens, during any period of transit, holding or shipment, are properly cared for so as to minimize the risk of injury, damage to health or cruel treatment.

4. Where a living specimen is confiscated as a result of measures referred to in paragraph 1 of this Article:
 - (a) the specimen shall be entrusted to a Management Authority of the State of confiscation;
 - (b) the Management Authority shall, after consultation with the State of export, return the specimen to that State at the expense of that State, or to a rescue centre or such other place as the Management Authority deems appropriate and consistent with the purposes of the present Convention; and
 - (c) the Management Authority may obtain the advice of a Scientific Authority, or may, whenever it considers it desirable, consult the Secretariat in order to facilitate the decision under sub-paragraph (b) of this paragraph, including the choice of a rescue centre or other place.
5. A rescue centre as referred to in paragraph 4 of this Article means an institution designated by a Management Authority to look after the welfare of living specimens, particularly those that have been confiscated.
6. Each Party shall maintain records of trade in specimens of species included in Appendices I, II and III which shall cover:
 - (a) the names and addresses of exporters and importers; and
 - (b) the number and type of permits and certificates granted; the States with which such trade occurred; the numbers or quantities and types of specimens, names of species as included in Appendices I, II and III and, where applicable, the size and sex of the specimens in question.
3. Each Party shall prepare periodic reports on its implementation of the present Convention and shall transmit to the Secretariat:
 - (a) an annual report containing a summary of the information specified in sub-paragraph (b) of paragraph 6 of this Article; and
 - (b) a biennial report on legislative, regulatory and administrative measures taken to enforce the provisions of the present Convention.
3. The information referred to in paragraph 7 of this Article shall be available to the public where this is not inconsistent with the law of the Party concerned.

APPENDIX FOURTEEN

CITES 'commercial purposes' definition

Resolution Conf. 5.10 (Rev. CoP15)

Definition of 'primarily commercial purposes'

OBSERVING that, under Article III, paragraphs 3 (c) and 5 (c), of the Convention, a permit for the import or a certificate for the introduction from the sea of specimens of Appendix-I species may be issued only if certain conditions are met, including that the Management Authority of the State of import (or introduction from the sea) is satisfied that the specimens are not to be used for primarily commercial purposes;

RECOGNIZING that, because the Convention does not define the terms 'primarily commercial purposes', 'commercial purposes' in paragraph 4 of Article VII, or 'non-commercial' in paragraph 6 of Article VII, the term 'primarily commercial purposes' (as well as the other terms mentioned above) may be interpreted by the Parties in different ways;

ACKNOWLEDGING that the Parties' differing legislation and legal traditions will make it difficult to reach agreement on a simple 'objective' interpretation of the term and that the facts concerning each import will determine whether a proposed use would be for primarily commercial purposes;

RECOGNIZING that lack of specific definitions for terms involving 'commercial' and the importance of the facts concerning each proposed transaction create a need for consensus by the Parties regarding general principles and examples to guide the Parties in assessing the commerciality of the intended use of those specimens of Appendix-I species to be imported;

AWARE that agreement on interpreting the term 'primarily commercial purposes' is important because of the fundamental principle in Article II, paragraph 1, of the Convention that trade in specimens of Appendix-I species must be subject to particularly strict regulation and only authorized in exceptional circumstances;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

RECOMMENDS that for the purposes of Article III, paragraphs 3 (c) and 5 (c), of the Convention, the following general principles and the examples in the Annex attached to the present Resolution be used by the Parties in assessing whether the import of a specimen of an

Appendix-I species would result in its use for primarily commercial purposes:

General principles

1. Trade in Appendix-I species must be subject to particularly strict regulation and authorized only in exceptional circumstances.
2. An activity can generally be described as 'commercial' if its purpose is to obtain economic benefit (whether in cash or otherwise), and is directed toward resale, exchange, provision of a service or any other form of economic use or benefit.
3. The term 'commercial purposes' should be defined by the country of import as broadly as possible so that any transaction which is not wholly 'non-commercial' will be regarded as 'commercial'. In transposing this principle to the term 'primarily commercial purposes', it is agreed that all uses whose non-commercial aspects do not clearly predominate shall be considered to be primarily commercial in nature, with the result that the import of specimens of Appendix-I species should not be permitted. The burden of proof for showing that the intended use of specimens of Appendix-I species is clearly non-commercial shall rest with the person or entity seeking to import such specimens.
4. Article III, paragraphs 3 (c) and 5 (c), of the Convention concern the intended use of the specimen of an Appendix-I species in the country of import, not the nature of the transaction between the owner of the specimen in the country of export and the recipient in the country of import. It can be assumed that a commercial transaction underlies many of the transfers of specimens of Appendix-I species from the country of export to the country of import. This does not automatically mean, however, that the specimen is to be used for primarily commercial purposes.

<https://cites.org/eng/res/05/05-10R15.php>

APPENDIX FIFTEEN

Import of Indo-Pacific humpbacked dolphin (*Sousa chinensis*) -
CITES permits

农业部水生野生动植物保护办公室 水生野生动物及其产品进出口审批表

编号：国渔野审[2016]第 049 号		有效期至：2016 年 8 月 21 日			
进口单位：珠海长隆投资发展有限公司		出口、再出口单位：			
序号	物种名称 (中文名、拉丁学名)	保护 级别	数量、重量 及单位	来源地或 目的地	进出 口岸
1	中华白海豚 <i>Sousa chinensis</i>	公约 一级	5 头	新加坡	广州 海关：I
2	以下无。				
农业部水生野生动植物保护办公室 审批意见： 同意该公司持本审批表办理进 出口手续。		签发人：  审批机关：  2016 年 2 月 27 日			

说明：进出口岸栏在相关口岸后附 I 的为进口口岸，附 E 或 RE 的为出口或再出口口岸。



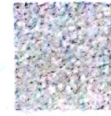
由 扫描全能王 扫描创建



CONVENTION ON
INTERNATIONAL TRADE IN
ENDANGERED SPECIES OF WILD
FAUNA AND FLORA

EXPORT

1. Permit No: 163004259AF
2. Valid until: 27/09/2016



3. Consignee (Name and address, country)
ZHUHAL CHIMELONG INVESTMENT & DEVELOPMENT CO., LTD
FUXIANG BAY, HENGGUIN NEW DISTRICT, ZHUHAL
GUANGDONG
CHINA

4. Permittee (Name and address, country)
UNDERWATER WORLD SINGAPORE PTE LTD
BLK 401 COMMONWEALTH DRIVE
#03-03 HAW PAR TECHNO CENTRE
SINGAPORE 149598

5. Special Conditions
BODY IS OF PERMIT MUST BE ENDORSED BY AVA OR ICA PRIOR TO
OR AT THE TIME OF EXPORT/RE-EXPORT, THIS PERMIT IS VALID FOR
ONE CONSIGNMENT ONLY. UWS FACILITY IS LOCATED AT 80 SILOSO
ROAD SENTOSA.

6. Name, address, national seal/stamp and country of
Management Authority

AGRI-FOOD AND VETERINARY AUTHORITY
MINISTRY OF NATIONAL DEVELOPMENT
52 Jurong Gateway Road
#14-01
Singapore 608550
REPUBLIC OF SINGAPORE



For live animals, must comply with IATA Live Animals
Regulations (air) or CITES guidelines for transport (other).

7/8. SCIENTIFIC NAME AND COMMON NAME (genus and species) OF ANIMAL OR PLANT	9. Description & Markings	10. Appendix No. & Source *12a. Country of Origin	11. Quantity and/or Unit *12b. Permit No
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1. SCUSA CHINENSIS INDO-PACIFIC HUMPBACK DOLPHIN	LIVE	1F SINGAPORE	2 HEAD(S)
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*****LAST ITEM*****

*12. Country in which the specimens were taken from the wild, bred in captivity or artificially propagated

13. Purpose: Z

14. THIS PERMIT IS ISSUED BY:

SINGAPORE
Place of issue

31/03/2016
Date

Ms LYE FONG KENG
Signature

Official Stamp and Title



15. IMPORT/EXPORT ENDORSEMENT BY CUSTOMS/CITES AUTHORITY:
(SEE BLOCK 7)

16. Bill of Lading/Air-
Way-Bill No:

17. Validity Extended to:

S/N	Quantity & Unit	S/N	Quantity & Unit

Post

Date

Signature

Official Stamp and Title

Stamp

Signature



由 扫描全能王 扫描创建

PERMIT NO: T&S-GOATS-PAE



CITES PERMIT CONDITIONS

1. All import/export/re-export must be in compliance with CITES and AVA's regulations. This CITES permit is issued in pursuant to the Endangered Species (Import and Export) Act (ESA). Any import/export/re-export of species not under and in accordance with ESA is an offence under Section 4(1) of the Act, and offender shall be liable on conviction to a fine not exceeding \$50,000 for each species (but not to exceed in the aggregate \$500,000) or to an imprisonment for a term not exceeding two years or to both, and forfeiture of the consignment.
2. This CITES permit is valid for one consignment only.
3. This CITES permit is valid only:
 - a. when it is used for import, export or re-export within the validity period of the permit.
 - b. if it bears the signature of an authorised officer and stamp of AVA.
 - c. if the species it covers matches the species in the consignment.
 - d. if the quantity of each species in the consignment is equal to or less than the quantity of the corresponding species stated on the permit.
4. If this CITES permit is issued for export or re-export for live animals or plants, it shall valid only if the transport conditions comply with the CITES Guidelines for transport and preparation for shipment of live wild animals and plants (CITES Guidelines for transport) or, in the case of air transport, with the International Air Transport Association or IATA Live Animals Regulations.
5. This CITES permit and the species it covers may be subject to inspection by an authorised inspector prior to or at the time the consignment is affected, and at a place as specified by the authorised inspector. All relevant supporting documents, including the originals of the CITES import and export/re-export permits, must be presented to the authorised inspector for verification and endorsement during the inspection. The authorised inspector may refuse to endorse or release the consignment if he is not satisfied with the documentation or if the consignment is in contravention of any conditions specified on the permits.
6. For import consignment, the foreign CITES export/re-export permit and CITES import permit issued by AVA must be valid at the point of import. The original CITES export/re-export permit from the country of export/re-export must be surrendered to AVA for retention and cancellation immediately after inspection or Customs clearance of consignment.
7. This CITES permit is valid only if the specimens are marked in accordance with the specification as directed by the Director-General, AVA. The identification numbers (eg. microchip) of the specimens must match those on the tag list accompanying the permit.
8. This CITES permit is not transferable and shall not be valid for import/export/re-export of species other than used by the permittee or his/her agent.
9. Any unused or expired CITES permit and certificate issued by AVA must be returned to AVA (Wildlife Section) for cancellation. There is no refund for any unused or expired permit or certificate.
10. The original CITES export/re-export permit issued by AVA shall accompany the consignment to the destination. Export/re-export endorsement shall only be done on Box 15 of the original CITES export/re-export permit.
11. Any breach of conditions of this CITES permit is in contravention of the ESA and would render this permit null and void. Failure to comply with any of the conditions could result in detention of goods or rejection of import/export/re-export and follow up action could be taken against the permittee and/or his/her agent.
12. The permittee or his/her agent must ensure that the correct documentation accompany the import/export/re-export consignment.
13. This CITES permit does not exempt the permittee from the provisions of other applicable legislation. The permittee should ensure that all necessary permits/licenses/certificates required under other laws or regulations are obtained.

(Handwritten signature)

31/05/2015
Date

Ms LYE FONG KENG
Signature



Official Stamp and Title



由 扫描全能王 扫描创建



CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

RE-EXPORT

- 1. Permit No: 16SG004260AR
- 2. Valid Until: 29/09/2016



3. Consignee (Name and address, country) ZHUHAI CHIMELONG INVESTMENT & DEVELOPMENT CO., LTD FUJIANG BAY, HENGQIN NEW DISTRICT, ZHUHAI, GUANGDONG CHINA	4. Permittee (Name and address, country) UNDERWATER WORLD SINGAPORE PTE LTD BLK 401 COMMONWEALTH DRIVE #03-03 HAW PAR TECHNO CENTRE SINGAPORE 149598
---	---

5. Special Conditions BOX 15 OF PERMIT MUST BE ENDORSED BY AVA OR ICA PRIOR TO OR AT THE TIME OF EXPORT/RE-EXPORT. THIS PERMIT IS VALID FOR ONE CONSIGNMENT ONLY. UWS FACILITY 4S LOCATED AT 80 SILOSO ROAD SENTOSA. For live animals, must comply with IATA Live Animals Regulations (air) or CITES guidelines for transport (other).	6. Name, address, national seal/stamp and country of Management Authority AGRI-FOOD AND VETERINARY AUTHORITY MINISTRY OF NATIONAL DEVELOPMENT 52 Jurong Gateway Road #14-01 Singapore 608550 REPUBLIC OF SINGAPORE <div style="text-align: right;"> </div>
---	---

7/8. SCIENTIFIC NAME AND COMMON NAME (genus and species) OF ANIMAL OR PLANT	9. Description & Markings	10. Appendix No. & Source *12a. Country of Origin	11. Quantity and/or Unit *12b. Permit No
1. SOUSA CHINENSIS INDO-PACIFIC HUMPBACK DOLPHIN	LIVE	IW THAILAND	2 HEAD(S) A.C.0528.3/796 19/01/1999
2. SOUSA CHINENSIS INDO-PACIFIC HUMPBACK DOLPHIN	LIVE	IF THAILAND	1 HEAD(S) A.C.0528.3/796 19/01/1999
***** LAST ITEM *****			

*12. Country in which the specimens were taken from the wild, bred in captivity or artificially propagated.	13. Purpose: Z
---	----------------

14. THIS PERMIT IS ISSUED BY:

SINGAPORE <small>Place of issue</small>	31/03/2016 <small>Date</small>	Ms LYE FONG KENG <small>Signature</small>	
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15. IMPORT/EXPORT ENDORSEMENT BY CUSTOMS/CITES AUTHORITY: (SEE BLOCK 7) <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 15%;">S/N</th> <th style="width: 35%;">Quantity & Unit</th> <th style="width: 15%;">S/N</th> <th style="width: 35%;">Quantity & Unit</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	S/N	Quantity & Unit	S/N	Quantity & Unit									16. Bill of Lading/Air-Way-Bill No:	17. Validity Extended to:
S/N	Quantity & Unit	S/N	Quantity & Unit											
<small>Port</small>	<small>Date</small>	<small>Signature</small>	<small>Official Stamp and Title</small>	<small>Stamp</small>	<small>Signature</small>									



由 扫描全能王 扫描创建

PERMIT NO.: 16SG004260AR



CITES PERMIT CONDITIONS

1. All import/export/re-export must be in compliance with CITES and AVA's regulations. This CITES permit is issued in pursuant to the Endangered Species (Import and Export) Act (ESA). Any import/export/re-export of species not under and in accordance with ESA is an offence under Section 4(1) of the Act, and offender shall be liable on conviction to a fine not exceeding \$50,000 for each species (but not to exceed in the aggregate \$1,500,000) or to an imprisonment for a term not exceeding two years or to both, and forfeiture of the consignment.
2. This CITES permit is valid for one consignment only.
3. This CITES permit is valid only:
 - a. when it is used for import, export or re-export within the validity period of the permit.
 - b. if it bears the signature of an authorised officer and stamp of AVA.
 - c. if the species it covers matches the species in the consignment.
 - d. if the quantity of each species in the consignment is equal to or less than the quantity of the corresponding species stated on the permit.
4. If this CITES permit is issued for export or re-export for live animals or plants, it shall valid only if the transport conditions comply with the *CITES Guidelines for transport and preparation for shipment of live wild animals and plants (CIILS Guidelines for transport)* or, in the case of air transport, with *the International Air Transport Association or IATA Live Animals Regulations*.
5. This CITES permit and the species it covers may be subject to inspection by an authorised inspector prior to or at the time the consignment is affected, and at a place as specified by the authorised inspector. All relevant supporting documents, including the originals of the CITES import and export/re-export permits, must be presented to the authorised inspector for verification and endorsement during the inspection. The authorised inspector may refuse to endorse or release the consignment if he is not satisfied with the documentation or if the consignment is in contravention of any conditions specified on the permits.
6. For import consignment, the foreign CITES export/re-export permit and CITES Import permit issued by AVA must be valid at the point of import. The original CITES export/re-export permit from the country of export/re-export must be surrendered to AVA to retention and cancellation immediately after inspection or Customs clearance of consignment.
7. This CITES permit is valid only if the specimens are marked in accordance with the specification as directed by the Director-General, AVA. The identification numbers (eg. microchip) of the specimens must match those on the tag list accompanying the permit.
8. This CITES permit is not transferable and shall not be valid for import/export/re-export of species other than used by the permittee or his/her agent.
9. Any unused or expired CITES permit and certificate issued by AVA must be returned to AVA (Wildlife Section) for cancellation. There is no refund for any unused or expired permit or certificate.
10. The original CITES export/re-export permit issued by AVA shall accompany the consignment to the destination. Export/re-export endorsement shall only be done on Box 15 of the original CITES export/re-export permit.
11. Any breach of conditions of this CITES permit is in contravention of the ESA and would render this permit null and void. Failure to comply with any of the conditions could result in detention of goods or rejection of import/export/re-export and follow up action could be taken against the permittee and/or his/her agent.
12. The permittee or his/her agent must ensure that the correct documentation accompany the import/export/re-export consignment.
13. This CITES permit does not exempt the permittee from the provisions of other applicable legislation. The permittee should ensure that all necessary permits/licenses/certificates required under other laws or regulations are obtained.

31/03/2016
Date

Ms LYE FONG KENG
Signature



Official Stamp and Title



由 扫描全能王 扫描创建



CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

濒危野生动植物种国际贸易公约

PERMIT/CERTIFICATE FOR IMPORT/EXPORT & RE-EXPORT

允许进出口证明书

- EXPORT 出口
- RE-EXPORT 再出口
- IMPORT 进口
- OTHER 其它

PERMIT/CERTIFICATE
2016C/NAC/05A11GZ
Valid Until 有效期至
Sep. 11, 2016

3a Importer (Name, Address and Country) 进口商(名称、地址和国家)
**ZHUHAICHENGLONG INVESTMENT & DEVELOPMENT COMPANY LTD.
FUXIANG BAY, HENGQIN NEW DISTRICT, ZHUHAI THE PEOPLE'S REPUBLIC OF CHINA**

4 Exporter (Name, Address and Country) 出口商(名称、地址和国家)
**UNDERWATER WORLD SINGAPORE PTE LTD.
401 COMMONWEALTH DRIVE, #03-03, SINGAPORE**

3b Import Port 进口口岸 **QH GUANGZHOU**

4a Export Port 出口口岸 **SG SINGAPORE**

6 HS Code and Special Conditions 海关税则编码及特殊条件
0106121100,改良种用, Pet, male, Pann and Euang, female, Splash and Splish, male.

6 Name, Address, National Seal of Management Authority
管理机构名称、地址、国家印记



The Endangered Species Import and Export Management Office of the People's Republic of China
Add: 10 Midong Avenue, Beijing 100714
The People's Republic of China
Tel: 86-10-84295001-84295010
Fax: 86-10-84214100-84295010
中华人民共和国濒危物种进出口管理办公室
地址: 中华人民共和国
北京市中动路10号
邮政编码: 100714
电 话: 86-10-84295001-84295010
传 真: 86-10-84214100-84295010

For live animals, this permit/certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in case of air transport, to the IATA Live Animals Regulations. This permit/certificate is only valid for ONE consignment. 对于活体动物, 只有当运输条件符合《活体动物运输指南》或在空运条件下符合 IATA《活体动物运输规则》要求的情况下, 本证明书有效。本证书仅限一次使用。

5a Purpose of Transaction 贸易目的 **Z** 5b Security Stamp No. 安全印号

7a No. 序号	7b Species (Chinese & Scientific Name) 种类(中文名、学名)	7c Appendix Source 附录来源	7d Description 标本类型	7e Quantity or Weight Unit 数量或净重/单位	7f Country/Region of Origin 原产国/地区
1	中华白海豚 <i>Sous chinensis</i>	I	F 活体 Live	*1 Pc *****	TH
		LAST RE-EXPORT: SG IMPORT.			
2	中华白海豚 <i>Sous chinensis</i>	I	W 活体 Live	*2 Pcs *****	TH
		LAST RE-EXPORT: SG IMPORT.			
3	中华白海豚 <i>Sous chinensis</i>	I	F 活体 Live	*2 Pcs *****	SG
*****LAST ITEM*****					

A THIS PERMIT/CERTIFICATE IS ISSUED BY 发证机关
No. 313, Zhongshan Qihu, Guangzhou, Guangdong Province Mar. 10, 2016
地点 日期 签名 安全印和官方印章



8a Per Customs Use Only 海关专用
8b Bill of Lading/Airway Bill Number 提单/空运单号
单位报关编号: ***

9a Port of Import 进口口岸 9b Date 日期 9c Signature 签名 9d Official stamp and Title 印章

NOTE: This permit/certificate is composed of 5 pages and this page is original. For export and re-export, the original should accompany the goods described in Box 7. For import, it must be returned to the issuing authority by its transporter endorsed by Customs.

0319280



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APPENDIX SIXTEEN

Captive breeding records

Facility	Species	Date of birth	Current status
Beijing Aquarium	Bottlenose dolphin	April 2007	Alive ⁹³
Changsha Underwater World	Bottlenose dolphin	September 2017 ⁹⁴	
Changsha Underwater World	Bottlenose dolphin	July 2017 ⁹⁵	
Changsha Underwater World	Bottlenose dolphin	July 2017 ⁹⁶	
Changsha Underwater World	Bottlenose dolphin	May 2017 ⁹⁷	
Changsha Underwater World	Beluga whale	September 2016 ⁹⁸	Alive ⁹⁹
Changsha Underwater World	Beluga whale	October 2014	Died in November 2014 ¹⁰⁰
Chengdu Haichang Polar Ocean World	Bottlenose dolphin	Unknown but calf seen in December 2014	
Chimelong Ocean Kingdom	Beluga whale x 3	December 2018 ¹⁰¹	
Chimelong Ocean Kingdom	Bottlenose dolphin	Date unknown ¹⁰²	
Chimelong Ocean Kingdom	Bottlenose dolphin	Date unknown ¹⁰³	
Chimelong Ocean Kingdom	Bottlenose dolphin	July 30 2013 ^{104, 105}	
Chimelong Ocean Kingdom	Bottlenose dolphin	October 2014 ¹⁰⁶	
Chimelong Ocean Kingdom	Bottlenose dolphin	December 2014 ¹⁰⁷	
Chimelong Ocean Kingdom	Bottlenose dolphin	July 2013 ¹⁰⁸	Presumed dead ¹⁰⁹
Dalian Laohutan Ocean Park	Bottlenose dolphin	July 2015 ¹¹⁰	
Dalian Laohutan Ocean Park	Bottlenose dolphin	July 2015 ¹¹¹	
Dalian Laohutan Ocean Park	Bottlenose dolphin	May 2013 ¹¹²	
Dalian Sun Asia Ocean Park	Bottlenose dolphin	March 2015 ¹¹³	
Fushun Royal Ocean World	Hybrid	May 2012 ¹¹⁴	
Fushun Royal Ocean World	Bottlenose x Risso's dolphin	July 2011	Dead ^{115,116}
Jinan Quancheng Polar Ocean Park ¹¹⁷	Finless porpoise	April 2015	Stillborn
Jinan Quancheng Polar Ocean Park	Finless porpoise	April 2016	Died after 3 days
Jinan Quancheng Polar Ocean Park	Finless porpoise	June 2016	Alive
Jinan Quancheng Polar Ocean Park	Finless porpoise	April 2017	Died after 7 days
Jinan Quancheng Polar Ocean Park	Finless porpoise	April 2017	Dead
Jinan Quancheng Polar Ocean Park	Finless porpoise	April 2017 ¹¹⁸	
Jinan Quancheng Polar Ocean Park	Bottlenose dolphin	August 2015 ¹¹⁹	

Penglai Ocean World	Bottlenose dolphin	May 2017 ¹²⁰	
Qingdao Haichang Polar Ocean Park	Bottlenose dolphin	July 2014 ¹²¹	
Qingdao Haichang Polar Ocean Park	False killer whale	May 2017 ¹²²	
Shendiao Mountain Safari Park	Bottlenose dolphin	May 2017 ¹²³	
Shendiao Mountain Safari Park	Bottlenose dolphin	July 2017 ¹²⁴	
Shendiao Mountain Safari Park	Bottlenose dolphin	June 2014 ¹²⁵	

APPENDIX SEVENTEEN

Rescue and rehabilitation records

Facility	Species	Outcome
Beijing Aquarium ¹²⁶	Finless porpoise in Bohai Bay	Rescued, treated and released in 2008
Dalian Sun Asia Ocean World ¹²⁷	Harbour seal x 5	May 2018
Zhuhai Chimelong Ocean Park ¹²⁸	Rough toothed dolphin from Pearl River estuary	Rescued in May 2017, released in July 2017

93. <http://www.hinews.cn/news/system/2017/04/08/031051859.shtml>

94. <http://www.cetabase.org/captive/cetacean/pregnancies/>

95. <http://cs.rednet.cn/c/2017/07/24/4368088.htm>

96. <http://cs.rednet.cn/c/2017/07/24/4368088.htm>

97. http://hunan.ifeng.com/a/20160601/4608494_0.shtml

98. http://news.xinhuanet.com/english/2016-11/21/c_135846767.htm

99. https://weibo.com/2632453183/GhnXoCZUm?from=page_1001062632453183_profile&wvr=6&mod=weibotime&type=comment#_rnd1532915745707

100. <http://www.dailymail.co.uk/news/article-2815079/Incredible-video-captures-moment-white-whale-Zhou-Ya-gives-birth-calf-Chinese-aquarium.html>

101. <https://www.prnasia.com/story/235390-1.shtml>

102. Figures from Dr Zhang Xianfeng, Chinese Academy of Sciences Centre for Aquatic Biodiversity and Resource Conservation delivered via a PPT at a Yangtze Bioresource Conservation workshop in November 2018

103. Figures from Dr Zhang Xianfeng, Chinese Academy of Sciences Centre for Aquatic Biodiversity and Resource Conservation delivered via a PPT at a Yangtze Bioresource Conservation workshop in November 2018

104. <http://www.xzfamily.com/portal.php?mod=view&aid=32896>

105. <http://gzcrocpark.chimelong.com/group/news/news-detail.aspx?id=3641>

106. <http://www.chinanews.com/df/2015/05-07/7260577.shtml>

107. <http://www.chinanews.com/df/2015/05-07/7260577.shtml>

108. <http://www.xzfamily.com/portal.php?mod=view&aid=32896>

109. Chimelong make no reference to this calf following announcement of 'first' calves born in 2014

110. http://dalian.runsky.com/2015-07/10/content_5308614.htm

111. http://dalian.runsky.com/2015-07/10/content_5308614.htm

112. <http://www.cetabase.org/captive/cetacean/pregnancies/>

113. <http://www.cetabase.org/captive/cetacean/pregnancies/>

114. <http://www.cetabase.org/captive/cetacean/pregnancies/>

115. http://www.dailymotion.com/video/xjv0zj_baby-wholphin_news

116. http://news.xinhuanet.com/society/2011-07/05/c_121624004.htm

117. Figures from Dr Zhang Xianfeng, Chinese Academy of Sciences Centre for Aquatic Biodiversity and Resource Conservation delivered via a PPT at a Yangtze Bioresource Conservation workshop in November 2018

118. http://www.sd.xinhuanet.com/travel/2017-04/28/c_1120886371.htm

119. http://sd.ifeng.com/view/detail_2015_08/07/4204457_0.shtml

120. http://travel.shm.com.cn/2018-05/26/content_4726670.htm

121. <http://www.cetabase.org/captive/cetacean/pregnancies/>

122. http://www.qingdaonews.com/content/2012-07/04/content_9307158.htm and <http://news.cntv.cn/2015/06/21/VIDE1434833761921465.shtml>

123. http://xx.sdxnews.com.cn/xx/201705/t20170526_2246354.htm

124. <http://www.cetabase.org/captive/cetacean/pregnancies/>

125. <http://www.cetabase.org/captive/cetacean/pregnancies/>

126. https://www.aquarium.co.za/uploads/files/Weiyoung_Hu_-_The_development_of_Chinese_aquarium_industry.pdf

127. https://www.dzwww.com/xinwen/shehuixinwen/201805/t20180526_17420881.htm

128. <http://www.cwd.gov.cn/more.asp?id=710>

APPENDIX EIGHTEEN

Definition of Animal Welfare

An animal's 'welfare' refers to the feelings and sensations the animal experiences within itself. These 'feelings and sensations' are known as affective states (Mellor and Reid, 1994).

- + An animal can be said to be experiencing 'negative' welfare when it is experiencing negative affective states, e.g., fear, hunger, pain. These are states that the animal is motivated to minimise.
- + An animal can be said to be experiencing 'positive' welfare when it is experiencing positive affective states, e.g., confidence, comfort, reward. These are states the animal is motivated to experience.

In captivity, good welfare practice can be regarded as minimising negative states while promoting positive states. An animal's affective state varies along a spectrum from poor welfare to good welfare depending upon whether or not the management conditions satisfy an individual animal's needs. The way in which an animal in captivity is managed will have a direct impact upon that individual animal's welfare. Changes in an animal's physical and behavioural circumstances can either directly improve or directly harm its welfare.

Animal Welfare – Five Welfare Domains Model

To ensure that the physical, psychological and behavioural needs of captive wild animals are being met, captive facilities must adopt the principles of the Five Welfare Domains (Mellor and Reid, 1994).

The five welfare domains advocate for management practices that allow animals to experience 'positive affective states'.

Five Welfare Domains Model

Physical Domains

1. Nutrition: appropriate consumption of nutritious foods is a pleasurable experience

Negative influences: deprivation of food and/or water, poor quality food/water

Leading to negative states: hunger, thirst, nausea, weakness, dizziness

Positive influences: appropriate nutrition, readily available food

Leading to positive states: satiety, consummatory satisfaction, reward

2. Environmental: benign conditions offering adaptive choices and variety

Negative influences: environmental challenge (e.g., animals in restricted environments)

Leading to negative states: isolation, fear, boredom, frustration

Positive influences: environmental choice (e.g., animals in enriched, naturalistic environments)

Leading to positive states: contentment, affectionate companionability, security, goal-directed engagement, curiosity

3. Health: physically sound animals enjoy good health

Negative influences: disease, injuries

Leading to negative states: pain, distress, discomfort, debility

Positive influences: fitness

Leading to positive states: vitality

4. Behaviour: environment-focused and inter-animal activities are satisfying and engaging

Negative influences: behavioural frustration (e.g., social animal held in isolation)

Leading to negative states: boredom, frustration, anger

Positive influences: behavioural expression (e.g., social animal in a secure social group)

Leading to positive states: reward, playfulness, calmness

The negative and positive influences within these four domains lead to the fifth domain, i.e., what the animal actually experiences due to these influences.

Mental Domain

5. Mental or Affective State: e.g., animals experience comfort, pleasure, interest and confidence

Incorporation of the five welfare domains within a captive setting would ensure animals are managed in ways that reduce the negative states and promote the positive states.

APPENDIX NINETEEN

Observations of aggressive behaviours / evidence of aggressive behaviours

Facility	Observation/Evidence	Date
Nanning Rongsheng Ocean World	beluga whale with rake marks and scars on its back	March 2019
Beijing Aquarium	male bottlenose dolphins displaying aggressively at separation gate	December 2018
Shanghai Haichang Ocean Park	orca with rake marks	December 2018
Chimelong Ocean Kingdom	bottlenose dolphins observed expressing aggressive behaviours, including chasing and open mouth threats toward pantropical spotted dolphins	2018 ¹²⁹
Chimelong Ocean Kingdom	beluga whale with rake marks	March 2018
Nanchang Zoo	dolphin with rake marks across its head	Nov 2017
Grandview Aquarium	beluga whales observed expressing aggressive behaviours toward each other	December 2016
Chimelong Ocean Kingdom	bottlenose dolphins observed fighting, using open mouth threats, biting each other, and chasing and pushing each other; some had significant scarring from conspecifics / one dolphin gave an open mouth threat to the people in the underwater viewing area; its teeth were in poor condition—they were brown and worn, and in places looked damaged or rotting (the gums seemed to have periodontal disease)	December 2016
Chimelong Ocean Kingdom	beluga whales observed expressing aggressive behaviours, including chasing and open mouth threats toward each other / many had rake marks and nicks in the flukes and pectoral fins and some had sores on their rostrums	December 2016
Yunnan Shilin Frozen World	four beluga whales with rake marks	October 2016
Colorful Guizhou Ocean World	beluga whales with rake marks	October 2016
Penglai Polar Ocean World	beluga whale with rake marks	February 2015
Dalian Laohutan Ocean Park	beluga whales observed interacting aggressively	Jan 2015
Jinan Polar Springs Ocean World	beluga whale exhibited open mouth threat to member of the public banging on the display tank glass	Jan 2015
Changsha Underwater World	bottlenose dolphin with rake marks	December 2014 ¹³⁰
Changsha Underwater World	a facility vet told an investigator that they had to separate a male and female beluga whale due to the male acting aggressively toward the female	December 2014
Hangzhou Changqiao Polar Ocean World	beluga whale with rake marks	December 2014
Chengdu Haichang Polar Ocean World	beluga whale with rake marks	October 2014

129. <https://www.aljazeera.com/programmes/101east/2018/09/china-caging-ocean-wild-180919055944863.html>

130. Changsha Underwater World investigation report

APPENDIX TWENTY

Observations of stereotypies

Facility	Observation/Evidence	Date
Chengdu Haichang Polar Ocean World	bottlenose dolphins pattern swimming	December 2018
Tianjin Haichang Polar Ocean Park	beluga whales pattern swimming	May 2017
Chengdu Haichang Polar Ocean World	bottlenose dolphins pattern swimming	December 2014
Xi'an Qujiang Polar Ocean World	beluga whale mouthing the enclosure wall	November 2014
Ningbo Ocean Park	bottlenose dolphin pattern swimming	February 2011

APPENDIX TWENTY-ONE

Observations of stereotypies

Facility	Observation/Evidence	Date
Chengdu Haichang Polar Ocean World	panropical spotted dolphin with wound on lower jaw tip	December 2018
Chengdu Haichang Polar Ocean World	bottlenose dolphin with bleeding wound on body and missing section on flipper	May 2017
Chengdu Haichang Polar Ocean World	beluga whale with wound on lower jaw tip	December 2014
Shanghai Haichang Ocean Park	orca with bruises and tissue damage	November 2014
Yangzhou Polar Ocean World	dolphin reportedly stopped eating and on inspection it was found that it had swallowed plastic debris	February 2011
Chimelong Ocean Park	Indo-Pacific humpbacked dolphin with a snout injury; facility claimed the individual hit the wall of the tank	May 2018
Nanchang Zoo	dolphin swimming with eyes shut	Nov 2017 ¹³¹
Changsha Underwater World	three dolphins reported to have a poor appetite; the facility consulted paediatricians from the Children's Hospital of Hunan Province for advice; doctors performed a gastroscopy on the male dolphin and diagnosed a rough gastric mucosa and poor digestion	October 2017 ¹³²
Tianjin Haichang Polar Ocean Park	dolphin with flipper injury	May 2017 ¹³³
Shenzhen Xiaomeisha Seaworld	beluga swimming with eyes shut	April 2017
Wuyishan Tianhong Ocean Park	beluga whale with black tooth	March 2017
Wuyishan Tianhong Ocean Park	beluga whale with an injury	March 2017
Chimelong Ocean Kingdom	dolphin with possible cataract	December 2016
Chimelong Ocean Kingdom	false killer whale appeared to be underweight with ribs evident	December 2016

Chimelong Ocean Kingdom	dolphin's teeth in poor condition, brown and worn, and in places looked damaged or rotting (the gums seemed to have periodontal disease)	December 2016
Harbin Polar Land	beluga whale with injury	April 2015
Nanchang Zoo	a dolphin was reported to have swallowed a steel cleaning ball during a training session, and the report claimed that the dolphin 'stole' it; the surgery to remove it the next day reportedly took 40 minutes	February 2015 ¹³⁴
Hangzhou Changqiao Polar Ocean World	a beluga whale was reported to have swallowed a plastic ball; in April 2015, staff made an attempt to remove the ball using a suction tube, but after some seven hours of trying the attempt failed	February 2015 ¹³⁵
Hangzhou Changqiao Polar Ocean World	four Risso's dolphins were being held in a net during the investigative visit; staff at the facility confirmed this was due to an illness	December 2014 ¹³⁶
Harbin Polar Land	beluga whale had to be force fed to encourage it to eat; reports suggest it had stopped eating after arrival at the park; ¹³⁷ a Russian veterinarian was brought to the park to carry out the force feeding; the whale is reportedly still alive	July 2014 ¹³⁸
Nanchang Zoo	a dolphin reportedly swallowed a large ball; reports suggest the veterinarians took some 17 hours to remove the foreign object	November 2013 ¹³⁹
Nanning Zoo	Indo-Pacific humpbacked dolphin reportedly broke its jaw	2013 ¹⁴⁰
Dalian Laohutan Ocean Park	injury to a bottlenose dolphin, which was reportedly caused through fighting with another dolphin; ¹⁴¹ reports suggested the eight-year-old female suffered a torn dorsal fin; the wound reportedly became infected, prompting the park to bring in a Japanese expert to perform a dorsal fin amputation	March 2012 ¹⁴²
Nanjing Underwater World	a dolphin reportedly swallowed a volleyball, which was removed after two hours of physical intervention by the staff	January 2012 ¹⁴³

APPENDIX TWENTY-TWO

Reported deaths

Facility	Species	Death date / date of information regarding the death
Changfeng Ocean World	Beluga whale	July 2017 ¹⁴⁴
Changsha Underwater World	Beluga whale	November 2014 ¹⁴⁵
Chengdu Haichang Polar Ocean World	False killer whales (2)	October 2010 ¹⁴⁶
Hangzhou Changqiao Polar Ocean World	Pilot whales (2)	December 2014 ¹⁴⁷
Hangzhou Changqiao Polar Ocean World	Beluga whale	December 2014

131. http://news.yznews.com.cn/2018-07/12/content_6173078.htm

132. <http://gongyi.people.com.cn/n1/2017/1027/c151132-29611500.html>

133. <http://hk.apple.nextmedia.com/realtime/china/20170511/56677847>

134. <http://jiangxi.jxnews.com.cn/system/2015/02/13/013626249.shtml>

135. http://hjlj.ifeng.com/world/detail_2015_04/26/3829092_

136. During a second visit in September 2015, one of the four net-held Risso's dolphins had disappeared, and staff did not reply if it was dead or transferred to another institution.

137. <http://shanghaiist.com/2014/07/25/force-feeding-saves-beluga-whale-harbin.php>

138. Personal communication with Harbin Polar Land staff in July 2015.

139. <http://www.jxnews.com.cn/xrb/system/2013/11/30/012824839.shtml>

140. <http://news.sina.com.cn/o/2017-12-20/doc-ifypxmsq8640518.shtml>

141. <http://digitaljournal.com/article/321391#ixzz2ZCoEyMVC>

142. http://news.lnd.com.cn/hm/2012-03/17/content_2213340.htm

143. <http://v.ifeng.com/news/society/201201/dc1f2777-8dc9-4622-8ec1-2261ccca61d1.shtml>

144. <https://uk.whales.org/news/2017/06/captive-beluga-jun-jun-dies>

145. <http://www.dailymail.co.uk/news/article-2815079/Incredible-video-captures-moment-white-whale-Zhou-Ya-gives-birth-calf-Chinese-aquarium.html>

146. Personal communication with Chengdu Haichang Polar Ocean World staff.

147. <http://www.xsnet.cn/news/yc/2008/10/19/763042.shtml>

APPENDIX TWENTY-THREE

Regulations of the People's Republic of China for the Implementation of Wild Aquatic Animal Protection of Wildlife

Chapter III Article 17: "A domestication and breeding license is required for the domestication and breeding of wild aquatic animal under class I special protection by the State, to be issued by the competent department of the fishery administration under the State Council. A domestication and breeding license is required for the domestication and breeding of wild aquatic animal under class II special protection by the State, to be issued by the competent department of fishery administration under the people's governments of the relevant provinces, autonomous regions or municipalities directly under the Central Government. The competent department of fishery administration may entrust the competent department of construction administration at the same level to issue domestication and breeding licenses if any zoo intends to domesticate and breed wild aquatic animals under special protection by the State."

Chapter III Article 18: "The sale and purchase of wild aquatic animals under special State protection or the products thereof shall be prohibited. Where the sale, purchase or utilization of wild aquatic animals under class I State protection or the products thereof is necessary for scientific research, domestication and breeding, exhibition or other special purposes, the unit concerned must put forward the application to the competent department of fishery administration under the people's government of the relevant provinces, autonomous regions and municipalities directly under the Central Government, which shall, together with its remarks, submit the application to the competent department of fishery administration under the State Council for approval. Where the sale, purchase or utilization of wild aquatic animals under class II State protection or the products thereof is necessary, the unit concerned must submit the application to the competent department of fishery administration under the people's government of the relevant province, autonomous region or municipality directly under the Central Government for approval."

Chapter III Article 22: "With respect to the species of wild aquatic animals to be imported or introduced from abroad, the unit concerned shall apply to the competent department of fishery administration under the people's government of the relevant province, autonomous region or municipality directly under the Central Government, and such application shall be submitted to and approved by the competent department of fishery administration under the State Council, after going through scientific authentication by the science

research institution designated by the competent department of fishery administration under the people's government at or above the provincial level. "

Chapter III Article 23: "With respect to the export of wild aquatic animals under special protection by the State or the products thereof, and the import or export of wild aquatic animals or products thereof which are restricted by international conventions to which China is a party, an application shall be filed to the competent department of fishery administration under the people's government of the relevant province, autonomous region or municipality directly under the Central Government where the unit or individual concerned is located for scrutiny. Such application shall then be submitted to and approved by the competent department of fishery administration under the State Council. Where the import or export is made for trade purposes, the same must be undertaken by the unit which has the right to be engaged in import and export trade in the relevant commodities. Where any zoo intends to import or export wild aquatic animals described in the preceding paragraph for the purpose of mutual exchanges, the same shall be scrutinized and agreed to by the competent department of construction administration under the State Council, pending submission to the competent department of fishery administration under the state Council for approval."

Chapter III Article 24: "The economic benefits derived from the exhibition of wild aquatic animals or the products thereof and from other activities shall be mainly used for the purpose of wild aquatic animal protection."

APPENDIX TWENTY-FOUR

Relevant articles of the revised Law of the People's Republic of China on the Protection of Wildlife. Effective from January 1, 2017.

Chapter Three: Administration of Wildlife

Article 21: The hunting, catching or killing of wildlife under special state protection shall be prohibited. Where the hunting or catching of wildlife under first class state protection is necessary for scientific research, population control, epidemic monitoring or other special purposes, the unit concerned shall apply to the department of wildlife protection under the State Council for a special hunting and catching licence. Where the hunting or catching of wildlife under second class state protection is necessary, the unit concerned shall apply to the department of wildlife protection under the people's government of the province, autonomous region or municipality for a special hunting and catching licence.

Article 23: Anyone engaged in the hunting or catching of wildlife shall observe the prescriptions in his special hunting and catching license or his hunting license with respect to the species, quantity, area, implement, method and time limit.

Anyone hunting with guns shall obtain a gun licence from the public security bureau in accordance with the law.

Article 25: The state shall support relevant scientific research institutions in conducting captive breeding of wildlife under special state protection for the purposes of protection of the species. For captive breeding of wildlife under special state protection for reasons other than that stipulated in the paragraph above the state shall implement a permit system. Anyone intending to breed wildlife under special state protection shall obtain the approval of departments of wildlife protection under the people's government of the province, autonomous region or municipality and shall obtain a captive breeding permit.

Exemptions may be provided by other regulations that designated a different authorization agency by the State Council.

Anyone intending to breed wildlife under special state protection shall use captive-bred offspring as founder stock, and shall establish a species genealogy, breeding records and records of individual data. Where it is absolutely necessary to use wild founder stock for the purposes of protecting the species, Articles 21 and 23 shall apply.

Captive-bred offspring as referred to in this law are those individuals born in human-controlled conditions whose parent stock were also born under human-controlled conditions.

Article 26: Captive breeding of wildlife under special state protection shall benefit the protection of the species and scientific research, and may not damage wild populations. Anyone intending to breed wildlife under special state protection shall ensure that they have the necessary living space and conditions for the movement, reproduction, hygiene and health of the animal according to its habits and properties; that they are equipped with adequate premises, facilities and technology in line with the purpose, type and scale of the captive breeding operation; that they can satisfy relevant technical standards and disease prevention requirements; and that the wildlife is not abused.

Departments of wildlife protection under the people's government at the provincial level and above may, where necessary for the protection of species under special state protection, organise and carry out the release of species under special state protection into the wild.

Article 27: The sale, purchase and utilization of wildlife under special state protection or the products thereof shall be prohibited.

Where the sale, purchase or utilization of wildlife under special state protection or the products thereof is necessary for scientific research, captive breeding, public exhibition or performances, heritage conservation or other special purposes, the unit involved shall obtain the approval of departments of wildlife protection under the people's government of the province, autonomous region or municipality, and shall obtain and use special markings in line with regulations, and shall guarantee traceability.

Exemptions may be provided by other regulations that designated a different authorization agency by the State Council.

The scope and administration of the system of special markings for wildlife under special state protection and the products thereof shall be stipulated by the department of wildlife protection under the State Council.

The sale and utilization of wildlife that is not under special state protection shall require provision of proof of legal origin, such as hunting, import or export permit.

The sale of wildlife as stipulated in the second and fourth paragraphs of this Article shall also require proof of quarantine, in accordance with the law.

Article 28: Wildlife under special state protection for which there exists established knowledge and techniques for captive breeding may, following scientific deliberation, be included on a list drawn up by the department of wildlife protection under the State Council of captive-bred wildlife under special state protection. A special marking will be issued for wildlife included on this list and the products thereof which have a captive breeding permit, issued in line with annual production quotas verified by the departments of wildlife protection under the people's government of the province, autonomous region or municipality. The wildlife and products thereof with this special marking may be sold and utilized, providing traceability is guaranteed.

When lists of wildlife under special state protection are amended according to Article 10, based on the conservation status of relevant wild populations, this may mean that the captive populations of species mentioned in the paragraph above, for which there exists established knowledge and techniques for captive breeding, are no longer listed as wildlife under special state protection and are subject to different protection measures from wild populations. In this case, a captive breeding permit and special marking shall be obtained in accordance with the second paragraph of Article 25 and the first paragraph of this Article.

Article 33: Anyone transporting, carrying or posting wildlife under special state protection or the products thereof, or the wildlife or products thereof stipulated in the second paragraph of Article 28 of this Law, outside the borders of their county shall hold or present a licence, a copy of an approval document or a special label as stipulated in Articles 21, 25, 27 and 28 of this Law, and proof of quarantine.

Anyone transporting wildlife that is not under special state protection outside the borders of their county shall obtain proof of legal origin, such as hunting licence, import or export permit, and proof of quarantine.

Article 35: Lists of wildlife and products thereof the trade in which is prohibited or restricted by international conventions which China has concluded or to which China is a party shall be drawn up, revised and announced by the Chinese CITES Management Authority.

The import and export of wildlife and the products thereof included in the list mentioned in the previous paragraph and the export of

wildlife under special state protection and the products thereof shall be approved by the department of wildlife protection under the State Council or by the State Council, and an import or export permit must be obtained from the Chinese CITES Management Authority. Entry and exit quarantine procedures shall be conducted in accordance with the law. Customs shall conduct entry procedures according to regulations where there is an import permit document.

The export of the species of wildlife involving scientific and technological secrets shall be dealt with in accordance with relevant provisions of the State Council.

The wildlife included in the list mentioned in the first paragraph, subject to approval by the department of wildlife protection under the State Council, can be managed as wildlife under special state protection where this law applies.

Article 37: Introductions/import of wildlife species from outside Chinese borders shall be approved by the department of wildlife protection under the State Council. Introductions/imports of wildlife included in the lists stipulated in the first paragraph of Article 35 of this Law from outside Chinese borders shall require an import and export permit document, in accordance with the law. Entry and exit quarantine procedures shall be conducted in accordance with the law. Customs shall conduct entry procedures according to regulations where there is an import permit or other import-export permission documentation and proof of quarantine.

Anyone introducing non-native wildlife species shall take appropriate preventative measures to prevent their entering the wild and avoid harm to ecosystems. Where it is absolutely necessary to release them into the wild, this shall be conducted in accordance with relevant national regulations.

Article 39: The forgery, modification, sale, purchase, transfer, borrowing or lending of special hunting and catching licences, hunting licences, captive breeding permits and special labels, documents which approve the sale purchase or utilization of wildlife under special state protection and the products thereof, or import and export permits is prohibited.

Information relating to the granting of permits, special markings and approval documents stipulated above shall be made public in accordance with the law.

APPENDIX TWENTY-FIVE

National Aquatic Wildlife Conservation Association

<http://www.nawca.org.cn/>

President: Li Yanliang, Office Head of Yangtze River Fisheries Administration, Ministry of Agriculture and Rural Affairs

Vice President (in the surname stroke order): 14 persons

Wang Defen, Vice Master of National Fisheries Technology Extension Centre

<http://www.nftec.agri.cn/>

Liu Qing, Deputy Director of Chinese Academy of Fishery Sciences

<https://www.cafs.ac.cn/>

Li Haifeng, Chairman of Baxian Group

<http://www.baxian.cn/group/>

Li Shengzong, Chief Executive of Hong Kong Ocean Park

<https://www.oceanpark.com.hk/en/press-release/ocean-park-appoints-matthias-li-new-chief-executive%20%20>

Song Zhijun, Deputy Director of the Regional Bureau of the East China Sea Fishery Management

<https://baike.baidu.com/item/%E5%86%9C%E4%B8%9A%E9%83%A8%E4%B8%9C%E6%B5%B7%E5%8C%BA%E6%B8%94%E6%94%BF%E5%B1%80>

Chen Jiuhua, General Manager of Ningshan Longquan Giant Salamander Breeding Co., Ltd

<http://www.hfssck.com/showpage/id/2.html>

Chen Jianfeng, Vice Chairman of China Fishery Mutual Insurance

<http://cfmi.org.cn/>

Chen Wancheng, Vice President of Chimelong Group

http://www.sohu.com/a/159318258_119778

Zhou Zhihua, Vice Office Head of the Endangered Species Import and Export Management Office of the P. R. C.

<http://www.customs.gov.cn/>

customs/302249/302266/302269/1867727/index.html

Zhao Shengli, Vice Chairman of China Wildlife Conservation Association

<http://www.cwca.org.cn/>

Hu Weiyong, General Manager of Beijing Aquarium

<https://baike.baidu.com/item/%E5%8C%97%E4%BA%AC%E6%B5%B7%E6%B4%8B%E9%A6%86>

Cao Wenxuan, Member of Chinese Academy of Science, Wuhan Institute of Hydrobiology

<http://english.ihb.cas.cn/>

Cui Lifeng, Deputy Director of the Fisheries Bureau, MOA

<http://www.yyj.moa.gov.cn/>

Liang Yongjin, Chairman of Hanshui Giant Salamander Development Co., Ltd

<http://www.agronet.com.cn/c/532146/>

Tan Guangyuan, Vice President of Haichang Group

<http://www.haichangchina.com/hcop/index.htm>

Executive Members (in the surname stroke order): 75 persons, consisting of representatives from aquaria, administrative bodies, research facilities, NGOs and animal product companies

For details, see <http://www.nawca.org.cn/list.asp?unid=1383>

Science Committee of National Endangered Aquatic Wildlife Species (2018)

The '*Management regulation of aquatic wildlife licence*' stipulates this committee must approve the imports and provide the capture licence (alongside the provincial fishery administrative authority).

Director: Cao Wenxuan, IHBCAS

<http://english.ihb.cas.cn/>

Deputy Director: Liu Zheng, CAFS

<https://www.cafs.ac.cn/>

Xiao Fang, National Fisheries Technology Extension Centre

<http://www.nftec.agri.cn/>

Li Yanliang, NAWCA

<http://www.nawca.org.cn/more.asp?id=32&cid=34>

Zhuang Ping, ECSF

<http://www.ecsf.ac.cn/>

Liu Wenhua, Shantou University

<https://www.stu.edu.cn/>

Members

Mammals

Wang Ding, researcher, Institute of Hydrobiology Chinese Academy of Sciences

Zhu Qian, professor, Shandong University

Yang Guang, professor, Nanjing Normal University

Han Jiabo, researcher, Liaoning Ocean Fishery Science Academy

Xu Xiaomei, professor, Xiamen University

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APPENDIX TWENTY-SIX

Measures of the People's Republic of China for Special Licenses for Exploitation of Aquatic Wild Animals (2017 Revision)

Article 2: Where activities of capture, artificial breeding, performance, sale, purchase, import and export and other exploitations of aquatic wildlife and its products are necessary, those activities shall be regulated in compliance with these Measures.

Except for Article 38 and 40: For the purposes of these Measures, aquatic wildlife refers to rare and endangered aquatic wild animals; and products of aquatic wildlife refer to any part of aquatic wild animals and their derivatives.

Article 3: The Ministry of Agriculture and Rural Affairs (hereinafter referred to as the MOA) of the People's Republic of China shall take charge of the administration of special licenses for exploitation of aquatic wildlife, and be responsible for the capture, the import and export of Grade-one conservation aquatic wildlife and its products, as well as the approval of artificial breeding, sale and purchase of aquatic wildlife and its products, which are under national major conservation and assigned to the MOA's administration by the State Council.

Unless otherwise specified by the State Council, a fishery administrative department of a provincial people's government shall take charge of the approval of special licenses for exploitation of aquatic wildlife and its products under national major conservation within its administrative region; a fishery administrative department of a people's government at the county level and above shall take charge of the approval of special licenses for exploitation of aquatic wildlife and its products within its administrative region.

Article 4: The MOA shall organize the Scientific Committee on national endangered aquatic wildlife to provide consultancy and assessment of the conservation and administration on aquatic wildlife.

Before approval, the examining and approving authorities shall entrust the Scientific Committee on national endangered aquatic wildlife to assess any application for special licenses for exploitation of aquatic wildlife on artificial breeding and exploitation, as well as important import and export of aquatic wildlife and its products. The examining and approving authorities shall not approve the applications which fail to pass the assessment.

Article 8: It is prohibited to capture or kill any aquatic wildlife. Where the capture of aquatic wildlife is necessary for scientific research, education,

artificial breeding, exhibition, donation and other special purposes, the unit concerned must apply for the Hunting and Catching License.

Article 16: To apply for an Artificial Breeding License, the following conditions shall be met:

- (1) have designated sites and necessary facilities which are appropriate to artificially breed aquatic wildlife;
- (2) have technologies and staff, as well as funds, suitable to the types and scales of artificial breeding of aquatic wildlife; and
- (3) have abundant food sources to artificially breed aquatic wildlife.

Article 21: The unit or individual that has obtained an Artificial Breeding License shall observe the following regulations:

- (1) comply with national and local wildlife protection laws, regulations and policies;
- (2) aquatic wildlife that are used for artificial breeding come from a legitimate source;
- (3) establish an archive and analysis system for artificial breeding of species;
- (4) report the growth, breeding, death and other information of aquatic wildlife to the approving authority regularly;
- (5) prohibit the unlawful use of artificially bred aquatic wildlife and its products; and
- (6) accept supervision and guidance from a fishery administrative department of a local people's government.

Article 25: To apply for an Operation and Exploitation License, the following conditions shall be met:

- (1) the source of aquatic wildlife to be sold, purchased and used is clear or stable;
- (2) the aquatic wildlife resource will not be damaged; and
- (3) the national image on wildlife conservation and foreign economic exchanges will not be affected.

Article 33: To import aquatic wildlife or its products, the following conditions shall be met:

- (1) the purpose of the import complies with laws, regulations and policies of the State;
- (2) having proper and necessary facilities and technologies for keeping the imported aquatic wildlife alive;
- (3) imported aquatic wildlife will not affect or damage the ecological balance in China; and
- (4) the national image on wildlife conservation and foreign economic exchanges will not be affected.

APPENDIX TWENTY-SEVEN

Recording requirements for studbook keeping of captive aquatic mammals

A.6 ANIMAL DEATH PROCESSING RECORD

Autopsy by:

Recorded by:

Animal ID					
Time of death		Time estimation			
Time of autopsy		Time estimation			
Place of death		Place of autopsy			
Time lag between death until found					
<u>Reason of death</u>	<u>Cadaver handling</u>	<u>Receiving organisation</u>	<u>Autopsy</u>	<u>Etiological factor</u>	
Anaesthesia or drug inhibition	Bury		Cardiovascular disease	Bacteria infection	
During transportation	Discard		Digestive disease	Fungal infection	
Abnormal environment or behaviour	Make specimen		Endocrine disease	Virus infection	
Euthanasia	Burn		Blood or lymphatic disease	Rickettsia	
Disease	Contribute to research institution		Skin organ disease	Prototheca	
Injury from performance	Other		Musculoskeletal disorders	Mycoplasma	
Intentional injury			Neuro disease	Protozoa	
Aging			Genital disease	Metazoa	
Premature delivery			Respiratory system disease	Poisoning	
Dead birth			Urinary system disease	Metabolic disorder	
Stranded			Sensory organ diseases	Mechanical injury	
Other			Other		
Brief summary of cause of death based on autopsy result					

APPENDIX TWENTY-EIGHT

Requirements for aquatic mammal rearing facility

4.3.2 Housing pool

Minimum Horizontal Distance (MHD) should not be less than four times the average length of adults (the horizontal distance from nasal end to the central point between the tips of two tail fins). MHD should be 10m, when the cetaceans' body length is less than 2.3 m.

The depth of pools should not be less than 1.5 times the average body length of adults of this species. When a cetacean's body length is less than 2m, the depth of housing pools should be more than 3m and the water volume should be no less than 236m³. Where water depth does not reach the minimum water depth, it should not be counted toward minimum volume.

The smallest housing space for certain cetaceans, see table B.1

Observations of stereotypies

Latin names	Average adult body length m	MHD m	Water depth m	Volume m ³
<i>Neophocaena asiaeorientalis asiaeorientalis</i>	1.70	10.00	3.00	236
<i>Stenella attenuata</i>	1.95	10.00	3.00	236
<i>Neophocaena asiaeorientalis sunameri</i>	2.00	10.00	3.00	236
<i>Neophocaena phocaenoides</i>	2.00	10.00	3.00	236
<i>Lagenorhynchus obliquidens</i>	2.30	10.00	3.45	271
<i>Sousa chinensis</i>	2.50	10.00	3.75	295
<i>Lipotes vexillifer</i>	2.50	10.00	3.75	295
<i>Tursiops truncatus</i>	3.00	12.00	4.50	509
<i>Tursiops aduncus</i>	2.50	10.00	3.75	295
<i>Grampus griseus</i>	4.00	16.00	6.00	1,206
<i>Delphinapterus leucas</i>	4.00	16.00	6.00	1,206
<i>Pseudorca crassidens</i>	4.00	16.00	6.00	1,206
<i>Globicephala macrorhynchus</i>	5.50	22.00	8.25	3,136
<i>Orcinus orca</i>	7.32	29.28	10.98	7,393

4.3.5 Show pool

The show pool should be larger than the housing pool. The horizontal distance should be no less than 20m and the depth should be no less than 6m, which should be increased according to the body size, numbers of animals and the needs of the show. The show pool can also be used as a housing pool.

4.6.1.2 Lighting

Use adequate natural or artificial lighting, to meet living and management needs, and avoid the use of strong spotlights.

4.6.4 Requirements for barriers

Use barriers to ensure a safe distance between animals and audience, and prevent animal escape.

APPENDIX TWENTY-NINE

Grade of aquatic mammal rearing techniques in aquaria

Facilities with cetacean 'show pools' are classified as Grade 3. Grade 3 facilities must be

- + staffed with aquatic mammal training and caregiving personnel, including a training technician;
- + staffed with at least two full-time veterinarians, one of whom should have a minimum of five years or longer clinical experience with aquatic mammals;
- + staffed with professional personnel to perform research, with papers being published in mainstream domestic magazines, international professional journals or presented at international conferences; and
- + able to professionally collaborate with international institutions.

AQUATIC MAMMAL TRAINER

1. General Job Description

1.1 Name: Aquatic Mammal Trainer

1.2 Definition: The personnel who takes care of, trains, performs with and manages aquatic mammals

1.3 Grades: There are five grades: primary, medium, advanced, technician and advanced technician

1.4 Working environment: Indoors and waterwork

1.5 Vocational requirements: Have good senses of vision, smell and hearing; have flexible body, have good communication skills

1.6 Education level: Senior Middle School (or similar level)

1.7 Training requirements

1.7.1 Training sessions: Full time vocational school education to be decided by the training goals and teaching plan. The training period to upgrade to primary grade should not be fewer than 180 hrs (135 class hrs); to medium grade should not be fewer than 120 hrs; to advanced grade should not be fewer than 90 hrs; and to technician and advanced technician grade should not be fewer than 67.5 hrs.

1.7.2 Lecturers: Only higher grade trainers can train lower grade trainers.

1.7.3 Training facility and devices: The theoretical training place should be a standard classroom with multiple media devices; the hands-on training should take place where the

needs for training aquatic mammals can be met, with necessary training tools.

1.8 Appraisal requirement

1.8.1 Applicant: Persons who are doing, or planning to do, aquatic mammal training

1.8.2 Application conditions

Primary (must meet one of these conditions):

- (1) Continuously work as an aquatic mammal trainer for at least one year and be certified on completion of the required class hours for primary grade.
- (2) Continuously work as an aquatic mammal trainer for two or more years.

Medium (must meet one of these conditions)

- (1) Continuously work as an aquatic mammal trainer for two to three years after receiving primary grade certificate and be certified on completion of the required class hours for medium grade.
- (2) Continuously work as an aquatic mammal trainer for four years after receiving a primary grade certificate.
- (3) Continuously work as an aquatic mammal trainer for six years.
- (4) Get a college degree in biology, medicine etc., or above, and continuously work as an aquatic mammal trainer for at least one year.

Advanced (must meet one of these conditions)

- (1) Continuously work as an aquatic mammal trainer for three years or more and be certified on completion of the required class hours for advanced grade.
- (2) Continuously work as an aquatic mammal trainer after receiving a medium grade certificate.
- (3) Get a college degree in biology, medicine, etc., or above, and continuously work as an aquatic mammal trainer for at least one year.

Technician (must meet one of these conditions)

- (1) Continuously work as an aquatic mammal trainer for four years after achieving advanced grade and be certified on completion of the required class hours for technician grade.
- (2) Continuously work as an aquatic mammal trainer for seven years or more after receiving an advanced grade certificate.

Advanced technician (must meet one of these conditions)

- (1) Continuously work as an aquatic mammal trainer for three years or more and be certified on completion of the required class hours for an advanced technician grade.
- (2) Continuously work as an aquatic mammal trainer for five years after receiving a technician certificate.

1.8.3 Appraisal methods: There will be both a theoretical and a hands-on practical test. The theoretical test is a closed book test. The hands-on practical test entails actual training of animals. The theoretical and hands-on practical tests each have a total score of 100. A score of 60 or more on both tests is a passing grade. In addition, the technician and advanced technician grade certificates require a comprehensive review.

1.8.4 Ratio of tester to testee: For the theoretical test, the ratio of testers to testees should be no more than 1:15, and there should be no fewer than two testers; in the hands-on practical test, the ratio of testers to testees should be no more than 1:5, and there should be no fewer than three testers. For the comprehensive review, there should be no fewer than five persons on the review panel.

1.8.5 Appraisal period: The theoretical test period is 90 minutes; the hands-on practical test period should be no fewer than 30 minutes. The comprehensive review period should be no fewer than 30 minutes.

1.8.6 Appraisal facility and device: The theoretical test can be carried out in a standard classroom; the hands-on practical test should be held in a facility that has more than two species of aquatic mammals.

2. Basic Requirements

2.1 Professional ethics

2.1.1 Basic knowledge of professional ethics

2.1.2 Code of ethics

- (1) Love of animals
- (2) Faithfulness to the job
- (3) Improvement of professional skill
- (4) Team spirit

2.2 Knowledge

2.2.1 Theoretical knowledge of aquatic mammals

- (1) Zoology
- (2) Animal biology
- (3) Animal nutrition
- (4) Animal aquaculture and chemical

2.2.2 Aquatic mammal husbandry management

- (1) Nutrition management
- (2) Animal health care

2.2.3 Aquatic mammal training

- (1) Animal psychology
- (2) Animal behaviour

2.2.4 Safety

- (1) Knowledge of diving
- (2) First aid basics
- (3) Self-protection

2.2.5 Relevant laws and regulations

- (1) Wildlife Protection Law of PRC
- (2) Animal Epidemic Prevention Law of PRC
- (3) Environment Protection Law of PRC
- (4) Labour Law of PRC
- (5) Production Safety Law of PRC
- (6) Zoo Animal Husbandry Management Technology Protocol of PRC

3. Job Description: There are progressive requirements for primary, medium, advanced, technician and advanced technician grade. Each higher grade has the same requirements of all lower grades, with additions.

3.1 Primary

Occupation function	Job Description	Necessary skills	Relevant knowledge
Housing	Feeding	<ol style="list-style-type: none"> 1. Be able to choose, pre-process, distribute and maintain animal feed 2. Be able to feed animals according to specific formulas 3. Be able to process feed waste under certain requirements 	<ol style="list-style-type: none"> 1. Animal feeding habit 2. Be familiar with common feed types, their shapes and quality demands 3. The methods needed to thaw and preserve aquatic products 4. Feeding methods
	Observation	<ol style="list-style-type: none"> 1. Be able to patrol and take care of animals 2. Be able to identify animal individuals 	<ol style="list-style-type: none"> 1. Animal's normal behaviour and activity patterns 2. Features of animal appearance
	Health care	<ol style="list-style-type: none"> 1. Be able to assist with animal restraint during body check and other medical procedures 2. Be able to assist the vets to treat animal injury 3. Be able to do disinfection as prescribed (<i>ability to follow the advice of the vet</i>)⁹⁶ 	Any matters to be attended to during the capture and restraint
	Records	Be able to fill various animal behaviour records	Behaviour record methods
Cleaning and maintenance	Cleaning	<ol style="list-style-type: none"> 1. Be able to clean housing area, feed-making device and various kits 2. Be able to do cleaning work underwater 	<ol style="list-style-type: none"> 1. Common sense of cleanliness 2. Common disinfection method
	Device operation and maintenance	<ol style="list-style-type: none"> 1. Be able to use diving device to dive and work 2. Be able to maintain the cleaning device 	<ol style="list-style-type: none"> 1. Know how to operate the diving device 2. Common sense of operating and giving maintenance for cleaning device
Training and performance	Animal training	<ol style="list-style-type: none"> 1. Be able to finish the preparation for training 2. Be able to order animals to repeat basic behaviours 3. Be able to prevent animal attack during contact 	<ol style="list-style-type: none"> 1. The main content of training preparation 2. The requirement of basic training 3. Knowledge for preventing animal attack
	Organise animal performance	Be able to finish the preparation and mopping up after performance, and be able to prepare and return the props and restore the arena	Basic knowledge of the performing arena and props
Capture and transport	Capture	<ol style="list-style-type: none"> 1. Be able to prepare the tools for capturing 2. Be able to disinfect transfer tools as required 3. Be able to accomplish the assistant work for capturing animals in housing area as required 	<ol style="list-style-type: none"> 1. How to use capture tools and the capture methods 2. The disinfection methods for transferring devices
	Transport	Be able to finish the assistant work for animal transport and transferring	The common sense for animal transport and transferring

3.2 Medium

Occupation function	Job Description	Necessary skills	Relevant knowledge
Housing	Feeding	<ol style="list-style-type: none"> 1. Be able to add medicine into feed and mark accordingly to the prescription 2. Be able to feed nutrition supplement and medicine feed 3. Be able to give advice according to animal ingestion situation on modifying the feed 	<ol style="list-style-type: none"> 1. The common medicine inserting and marking method 2. Animal natural history 3. The relationship between animal appetite and health
	Observation	Be able to observe normal and abnormal behaviours during different physiological periods, sickness, quarantine, and vaccine periods	<ol style="list-style-type: none"> 1. The relationship between animal behaviour and health 2. Animal respiration 3. Different demands of different animals on water condition
	Health care	<ol style="list-style-type: none"> 1. Be able to give health care when animal is in oestrus, mating and pregnant 2. Be able to separate animals and give health care as prescribed 3. Be able to assist the vets to finish health check and take sample 	<ol style="list-style-type: none"> 1. Health care common sense for animals which are in oestrus ,mating and pregnant 2. Health care common sense for sick animals 3. Common sense for animal rescue
	Records	Be able to keep animal behaviour management relevant record	Common sense for animal behaviour records management
Cleaning and maintenance	Cleaning	Be able to organise and carry out cleaning work	Demands with regards to cleaning work
	Device operation and maintenance	Be able to do regular maintenance for diving device	Common sense of operation and giving maintenance for diving devices
Training and performance	Animal training	<ol style="list-style-type: none"> 1. Be able to carry out basic animal behaviour and standard behaviour training 2. Be able to build trust to newly acquired animals 3. Be able to give demonstrations to primary trainers 	<ol style="list-style-type: none"> 1. Common sense of animals' wild habitat 2. Understand conditioned reflex principle and operate accordingly 3. Be able to communicate with animals 4. Training methods
	Organise animal performance	Be able to finish appointed role play performance	<ol style="list-style-type: none"> 1. Common sense for performance 2. Demands for swimming stroke
Capture and transport	Capture	<ol style="list-style-type: none"> 1. Be able to carry out animal capture 2. Be able to do restraint and health care after capture 	Animal restraint
	Transport	Be able to monitor the animals and give necessary care during the transport	Record keeping during the transferring and transport

3.3 Advanced

Occupation function	Job Description	Necessary skills	Relevant knowledge
Housing	Feeding	<ol style="list-style-type: none"> 1. Be able to adjust feed types, quantity and feeding time, make feed formula according to animals' health, training and performance demands 2. Be able to give advice on water condition adjustment according to animals' different demands in different seasons 3. Be able to reflect on animal husbandry 	<ol style="list-style-type: none"> 1. Be familiar with principles of formulating feed 2. Be familiar with common animal medicine types
	Observation	Be able to analyse, identify animal behaviour and give suggestion to deal with abnormal behaviours	Principles of animal behaviour
	Health care	<ol style="list-style-type: none"> 1. Be able to give health care as instructed by a veterinarian during animal labour and nursery 2. Be able to give postoperative and post-partum health care as instructed by a veterinarian 3. Be able to give vaccination and health care for animals in quarantine 4. Be able to undertake weighing, body length measuring and body temperature measuring 	<ol style="list-style-type: none"> 1. Common sense for caring for animals in labour, nursery and quarantine 2. Internationally approved aquatic mammal measuring methods 3. The methods for taking blood, urine, faeces, respiration and digestive juice samples
	Records	<ol style="list-style-type: none"> 1. Be able to complete animal capture, transport record 2. Be able to build animal behaviour management records 3. Be able to design various record types 	<ol style="list-style-type: none"> 1. Be familiar with animal capture, transport record 2. Be familiar with animal behaviour record
Cleaning and maintenance	Cleaning	Be able to set up cleaning plan	Be familiar with how to make cleaning plan
	Device operation and maintenance	<ol style="list-style-type: none"> 1. Be able to manage the operation and maintenance for the devices and facilities 2. Be able to choose proper diving device 	Be familiar with device management common sense
Training and performance	Animal training	<ol style="list-style-type: none"> 1. Be able to train the newly acquired animals and train the animals to do highly difficult and novel behaviours 2. Be able to guarantee individual animal and animal group performance, and fulfil the training, for a show 3. Be able to adjust and control animal social relationship 4. Be able to analyse the performance training 5. Be able to make training plan and write relevant report 6. Be able to do hands-on demonstration to primary and medium grade trainers 	<ol style="list-style-type: none"> 1. Principles of animal training 2. How to guarantee the quality of animal performance
	Organise animal performance	<ol style="list-style-type: none"> 1. Be able to organise animal performance 2. Be able to work with other trainers and quickly respond to unexpected situations 3. Be able to analyse the effect of performance 	Performance effect analysis common sense
Capture and transport	Capture	<ol style="list-style-type: none"> 1. Be able to give suggestions for making specific tool to use in capture and transport 2. Be able to organise animal loading and control work 	<ol style="list-style-type: none"> 1. Be able to capture and transport animals 2. Be able to load animals 3. Response to common problems during capture
	Transport	Be able to organise and coordinate transport and transporting work	Know how to transport animals in a standard way, and how to prevent dangers within the work

3.4 Technician

Occupation function	Job Description	Necessary skills	Relevant knowledge
Housing	Feeding	<ol style="list-style-type: none"> 1. Be able to make annual feed consumption plan 2. Be able to make animal husbandry plan 3. Be able to deal with problems occurring in housing 	<ol style="list-style-type: none"> 1. Animal nutrition 2. Quality standard and nutrition of common feed 3. Function and effect of common animal medicine and nutrition supplement
	Health care	<ol style="list-style-type: none"> 1. Be able to set animal health care standard 2. Be able to rescue wild animal 	<ol style="list-style-type: none"> 1. Animal health care 2. Animal rescue
Training and performance	Animal training	<ol style="list-style-type: none"> 1. Be able to design individual animal and group show 2. Be able to plan adjustment of animals due to their social relationship 3. Be able to make training plan of both newly acquired and long-term animals 	<ol style="list-style-type: none"> 1. Animal social behaviour 2. Animal neurophysiology
	Organise animal performance	Be able to choreograph animal performance	Common sense for choreography
Capture and transport	Capture	Be able to make animal capture plan	Know how to plan a capture
	Transport	<ol style="list-style-type: none"> 1. Be able to organise animal transport 2. Be able to deal with the technical problems occurring in transport 	Principles of dealing with unexpected situations occurring in the transporting
Training guidance and management	Hands-on guidance	Be able to guide the primary, medium and advanced grade trainers in training , housing and performance	Principles of training and husbandry
	Theoretical workshop	<ol style="list-style-type: none"> 1. Be able to make workshop plan 2. Be able to give lecture to lower grade trainers in hands-on practice and theoretical knowledge 	Teaching methods
	Management	<ol style="list-style-type: none"> 1. Be able to build animal husbandry team 2. Be able to make safety protocol in daily operation 	Management of trainers' technicalities

3.5 Advanced Technician

Occupation function	Job Description	Necessary skills	Relevant knowledge
Housing	Feeding	<ol style="list-style-type: none"> 1. Be able to evaluate housing condition and housing plan 2. Be able to summarise animal husbandry experience in systematic way 3. Be able to do relevant scientific research 	<ol style="list-style-type: none"> 1. Evaluation methods 2. Research design and fund application
	Health care	Be able to summarise animal health care experience	Animal anatomy
Training and performance	Animal training	<ol style="list-style-type: none"> 1. Be able to theoretically summarise the experience in animal training and management 2. Be able to evaluate animal training and management effect 3. Be able to decide the necessary facilities and equipment on animal housing and training facilities and devices 	<ol style="list-style-type: none"> 1. Animal social group management and the relationship evaluation 2. Animal training and animal management evaluation 3. Novel ideas in performing choreography
	Organise animal performance	Be able to evaluate animal performance plan and the outcome	Stage performance knowledge
Capture and transport	Capture	Be able to evaluate the capture plan	Be able to design the capture plan
	Transport	Be able to evaluate animal transport plan	Be able to design animal transport plan
Training guidance and management	Hands-on guidance	Be able to guide trainers in animal housing and performance	Teaching methods on training and husbandry
	Theoretical workshop	<ol style="list-style-type: none"> 1. Be able to teach hands-on practice, theoretical knowledge and work protocol 2. Be able to write workshop text book 3. Be able to write animal conservation education text book 	Textbook editing knowledge
	Management	<ol style="list-style-type: none"> 1. Be able to give solution to highly difficult technological or operational problems and organise technological innovation activities 2. Be able to publish professional paper in national magazine 3. Be able to evaluate animal housing, training, performance, and animal import and export work 4. Be able to communicate professionally in foreign language 	<ol style="list-style-type: none"> 1. Professional management knowledge on animal training 2. Animal housing, training and performance evaluation 3. Foreign language knowledge in professional field

1. 4. Proportion table

4.1 Theoretical knowledge

Items		Primary (%)	Medium (%)	Advanced (%)	Technician (%)	Advanced Technician (%)
Basic requirement	Work ethic and rules	5	5	5	5	5
	Basic knowledge	20	20	15	10	10
Relevant knowledge	Feeding	25	20	25	30	30
	Cleaning and maintenance	15	15	10	–	–
	Training and performance	30	35	40	35	30
	Capture and transport	5	5	5	10	5
	Training guidance and management	–	–	–	10	20
Total		100	100	100	100	100

4.2 Hands-on practice

Items		Primary (%)	Medium (%)	Advanced (%)	Technician (%)	Advanced Technician (%)
Necessary Skills	Housing	30	25	20	15	10
	Cleaning and maintenance	10	10	10	–	–
	Training and performance	55	55	50	40	30
	Capture and transport	5	10	20	20	25
	Training guidance and management	–	–	–	25	35
Total		100	100	100	100	100

APPENDIX THIRTY

Water quality for aquatic mammals in aquaria

1. Range

This standardises the water quality for holding aquatic mammals in aquaria. This standard is for holding aquatic mammals and other aquatic animals.

2. Reference

GB-3097-1997 seawater quality standards
 GB 3838 surface water environment standards
 GB/T 5750.6-2006 drinking water test standards Chapter 6 sensory properties and physical index
 GB/T 5750.11-2006 drinking water test standards Chapter 11 disinfection solution index
 GB/T 5750.12-2006 drinking water test standards Chapter 12 microbe index
 GB/T 12763.4-2007 ocean investigation regulation Chapter 4 Chemical elements investigation for seawater
 GB 17378.4-2007 Ocean monitoring regulation Chapter 4 Seawater analyse
 SC/T 6074 Terminology of aquarium

SL 94 Potentiometric

SN/T 1933.1 Examine methods for enterococcus in food and water Chapter 1 Plate count method and most probable number method

SN/T 1933.2 Examine methods for enterococcus in food and water Chapter 2 Film filtering

3. Definition and terms

The terms in SC/T 6074 apply in this regulation too.

4. Water quality requirement

4.1 Raw water

4.1.1 Using natural seawater as housing water, the quality of seawater should be equal to or better than the demands in the Class II of GB 3097-1997.

4.1.2 Using fresh water as housing water, the quality of fresh water should be equal to or better than the demands in Class III GB 3838

4.2 The routine inspection items and threshold

The routine inspection and threshold for housing aquatic mammals in aquariums should meet the requirement in Table 1.

Table 1. The routine inspection items and threshold

Elements	Requirement
Floating material	No oil, foam and other floating materials on water surface
Colour, foul taste	No strange colour or foul taste
Visible items	None
NTU	< 0.25
Salinity (except fresh water)	15-36
pH	7.2-8.5
NH ₃ /NH ₄ ⁺ mg/L	< 1.2
Total coliforms, MPN/100mL or CFU/100mL	< 1000
Escherichia coli, MPN/100mL or CFU/100mL	< 100
Total chlorine mg/L	0.3-1.0
Free chlorine mg/L	0.1-0.4
O ³ mg/L	< 0.01
ClO ₂ mg/L	0.02-0.1
The sum of bacterium could be the average sum of two measurements in 48 hours. Choose index according to the type of the disinfection solution.	

4.3 Non-routine inspection items and threshold

Items	Threshold
Total sum of bacteria, CFU/mL	≤100
Enterococcus faeculis CFU/100mL	≤100
NO ₂ mg/L	≤1.2
Cadmium mg/L	According to table 1 GB3097-1997 Class II
Lead mg/L	According to table 1 GB3097-1997 Class II
Hydragyrum mg/L	According to table 1 GB3097-1997 Class II
Hydragyrum mg/L	≤0.2
Ferrum mg/L	≤0.5
Manganese mg/L	≤0.3
Copper mg/L	According to table 1 GB3097-1997 Class II
Zinc mg/L	According to table 1 GB3097-1997 Class II
ORP, mV	≤750 (using natural seawater) ≤550 (using artificial salty water)
Volatile phenols mg/L	≤0.005

4.4 Water temperature: See Table 2

Table 2. The requirements on water temperature for aquatic mammals in aquaria

Housing species	Housing water temperature, °C
Cetaceans (Beluga whales, killer whales)	0-18
Other cetaceans	18-25
Pinnipeds	0-24
Sirenians	20-32
Polar bear	0-18

5. Inspection methods: See Table 3

Table 3. Water quality analysis methods

No.	Items	Analysis methods	thresholds µg/L	Reference
1	Floating material	Visual observation	–	
2	Colour, smell, taste	A. Colorimetry B. Organoleptic methods	–	GB 17378.4-2007 GB 17378.4-2007
3	Total sum of bacteria	A. Plate count method B. Fluorescence microscope direct counting method		GB 17378.4-2007 GB 17378.4-2007
4	Total sum of coliform	A. Multiple tube fermentation method B. Film filtering method C. Enzyme substrate method		GB/T 5750.12-2006 GB/T 5750.12-2006 GB/T 5750.12-2006
5	<i>E.coli</i>	A. Multiple tube fermentation method B. Film filtering method C. Enzyme substrate method		GB/T 5750.12-2006 GB/T 5750.12-2006 GB/T 5750.12-2006
6	<i>Enterococcus faecalis</i>	A. Plate count method B. MPN C. Film filtering method		SN/T 1933.1 SN/T 1933.1 SN/T 1933.2
7	Turbidity	A. Turbidity count method B. Visible observation C. Spectrophotography		GB 17378.4-2007 GB 17378.4-2007 GB 17378.4-2007
8	pH	A. pH count method B. pH colorimetry		GB 17378.4-2007 GB 17378.4-2007
9	Salinity	Salinity count method		GB 17378.4-2007
10	Water temperature	A. Surface water temperature B. Reversing thermometer		GB 17378.4-2007 GB 17378.4-2007
11	Oxidation-reduction potential	Potential determination		SL.94
12	COC	Alkaline Potassium Permanganate		GB 17378.4-2007
13	Volatile phenols	methylthionine chloride spectrophotography	1.1	GB 17378.4-2007
14	ClO ₂	A. DPD Ferrous ammonium sulphate titration B. Iodimetry C. Cresol red spectrophotography D. Filed testing method	25 0.01 20 10	GB/T 5750.11-2006 GB/T 5750.11-2006 GB/T 5750.11-2006 GB/T 5750.11-2006
15	Total chlorine	DPD spectrophotography TMB colorimetry	10 5	GB/T 5750.11-2006 GB/T 5750.11-2006

No.	Items	Analysis methods	thresholds $\mu\text{g/L}$	Reference
16	Free chlorine	A. DPD spectrophotography B. TMB colorimetry	0.1 5	GB/T 5750.11-2006 GB/T 5750.11-2006
17	O^3	A. Iodimetry B. Indigo blue spectrophotography C. Indigo blue filed testing	0.01 10	GB/T 5750.11-2006 GB/T 5750.11-2006 GB/T 5750.11-2006
18	Ammonia nitrogen	A. Indophenol blue spectrophotography B. Sodium hypobromite hydrocarbonylation		GB 17378.4-2007 GB 17378.4-2007
19	Nitrite	A. NAA two amine B. Heavy nitrogen azo		GB 17378.4-2007 GB/T 12763.4-2007
20	Cadmium	A. Nonflame atomic absorption spectrophotography B. ASV C. Flame atomic absorption spectrophotography	0.01 0.09 0.3	GB 17378.4-2007 GB 17378.4-2007 GB 17378.4-2007
21	Lead	A. Nonflame atomic absorption spectrophotography B. ASV C. Flame atomic absorption spectrophotography	0.03 0.3 1.8	GB 17378.4-2007 GB 17378.4-2007 GB 17378.4-2007
22	Mercury	A. HPLC-AFS B. Cold atomic absorption spectrophotography	7.0×10^{-3} 1.0×10^{-3} 2.7×10^{-3}	GB 17378.4-2007 GB 17378.4-2007 GB 17378.4-2007
23	Aluminium	A. Chromazurine S spectrophotography B. SAF-Chloro sixteen alkyl pyridine spectrophotography C. Nonflame atomic absorption spectrophotography D. ICP-AES E. ICP-MS	8 20 10 40 0.6	GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006
24	Ferro	A. Atomic absorption spectrophotography B. Naphthhisodiazine spectrophotography C. ICP-AES D. ICP-MS	300 50 4.5 0.9	GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006
25	Mn	A. Atomic absorption spectrophotography B. APS spectrophotography C. formaldehyde oxime spectrophotography D. potassium periodate spectrophotography E. ICP-AES F. ICP-MS	100 50 20 50 0.5 0.06	GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006 GB/T 5750.6-2006
26	Cu	A. Nonflame atomic absorption spectrophotography B. ASV C. flame atomic absorption spectrophotography	0.2 06 1.1	GB 17378.4-2007 GB 17378.4-2007 GB 17378.4-2007
27	Zn	A. flame atomic absorption spectrophotography B. ASV	3.1 1.2	GB 17378.4-2007 GB 17378.4-2007

