

Recommendations Against Dolphinarium

In India 2013



EXECUTIVE SUMMARY

In the last two years a spate of proposals have been put forth by government departments and private promoters to set up Dolphinarium in India that showcase performances by live dolphins and other cetacean species as a way to promote tourism (annexed). “Dolphinarium” (such facilities have been known by different names including but not limited to dolphinarium, oceanarium, dolphin park, theme park etc, hereinafter collectively referred to as dolphinarium) are captive facilities that display and also use dolphins and other cetacean species in performances, for commercial entertainment.

The only known case of dolphins kept in captivity for use in live performances in India was at the ‘Dolphin City’ facility in Chennai, Tamil Nadu in the late 1990s. Bottlenose dolphin performances used to occur thrice a day at this facility. Within six months of their arrival from Bulgaria, all four dolphins died. Consequently the Central Zoo Authority of India (CZA) refused them the mandatory recognition needed to continue operations. Since then no dolphin shows have existed in India for over a decade.

These new proposals therefore are an alarming trend, especially as there is an increasing body of worldwide scientific research that highlights the negative impact of such captive facilities on the welfare of dolphins (family Delphinidae under order Cetaceans) and indeed all cetacean species. Today, there is a significant global movement against such facilities, due to the growing exposure of the cruelty meted out to dolphins and other cetacean species in the commercially exploitative captive industry.

This document is to serve as a guide for government agencies and other relevant authorities by providing a brief overview of significant global research studies on the welfare of captive cetacean populations with special emphasis on bottlenose dolphins (*Tursiops* sp.), that are held in Dolphinarium worldwide. The information presented here, provides a strong case against the keeping of these marine mammals in captivity and can provide government authorities with relevant data to refuse permission to those organisations, government bodies and individuals who propose to set up such captive facilities in India.

The objectives of this document are to present in brief, the current known proposals for Dolphinarium in India; followed by an overview of the existing national policies and legalities related to the capture, import and display of cetacean species.

It also uses the results of neuroscience and behavioral biology studies conducted over the past two decades, to highlight the impact of captivity on cetacean species in terms of their intelligence, natural behavior in the wild and habitat requirements further illustrated by detailed descriptions of bottlenose dolphins and beluga whales, that are commonly held in captivity.

Additionally it provides an overview of the global multi- billion-dollar captive cetacean industry primarily fuelled by trade in wild caught specimens. The report also contains analysis of research studies conducted by experts in the field; which have assessed the impact of captivity on cetacean behavior, mortality, health and reproduction among other aspects, potential dangers faced by humans.

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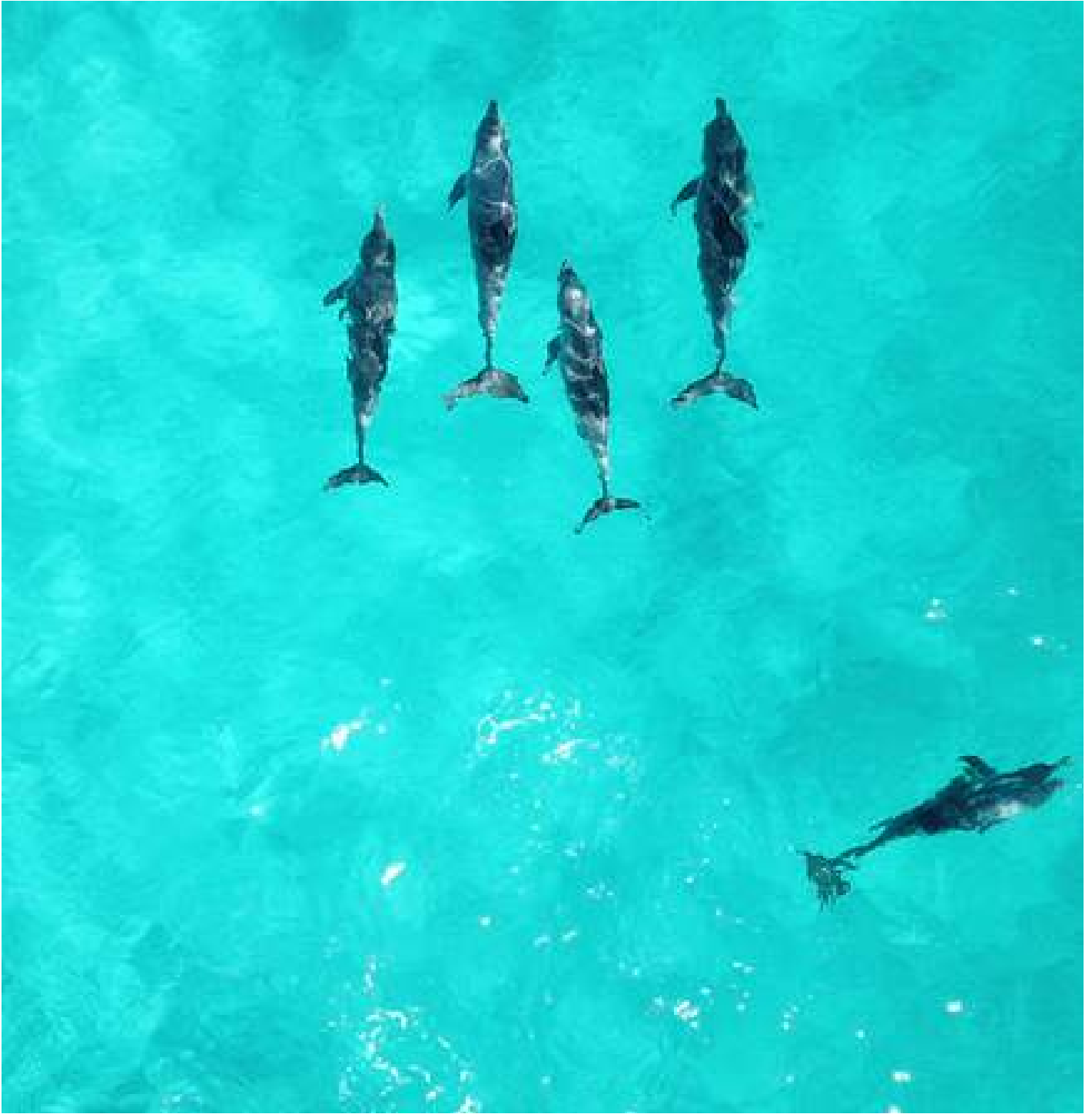
We thank Nuggehalli Jayasimha, India Director of Humane Society International (HSI) for sharing his views and key insights and also make a special mention of Naomi A. Rose, PhD, from HSUS for her vast research which has provided much of the key arguments against keeping Dolphins in captivity used in this report.

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ABOUT FIAPO

FIAPO (Federation of Indian Animal Protection Organisations) is India's leading animal protection body. As a collective voice for the animal protection community in India, FIAPO unites all animal protection organisations nationwide to exchange ideas, build expertise and take action to strengthen the animal rights movement in the country. FIAPO works with over 160 member organisations, 200 supporter organisations and over 1000 activists in more than 70 cities across India. They are the largest Federation in the country and one of the (two) largest movement-building organisations in the world.



Proposed Dolphinarium In India

1.1) State-Specific Profile Of Dolphinarium Proposals

A spate of news reports announcing proposals for Dolphinarium in India have emerged during 2011/2012. Brief profiles based on recent media reports (annexed) on these proposals, put forth currently by Kerala, Maharashtra and New Delhi are presented as follows:

a) Kerala

No. Of Projects - 2

a.1) Proposed Project Name – Kochi Oceanarium

The proposed Oceanarium is envisaged to be a state of the art Oceanarium set in 36.5 acres of possible reclaimed land and is earmarked for this project at Puthu Vypeen, Kochi. The consultant, M/s Mahindra Consulting Engineers Ltd. has completed the feasibility study and submitted the Detailed Feasibility Report. A Special Purpose Company has been registered for development of the project viz. Kerala Oceanic & Marine Park Ltd. The project is proposed to be implemented on Public Private Partnership (PPP) mode. The Oceanarium for its sustained operation would require a strong R&D and technical support in the area of marine biology. It proposes to enable this with the assistance from Ministry of Earth Sciences, GOI. This facility would be established as a separate entity and the cost for this is estimated at Rs.130 Crores. The services of R&D centre will be made available to the Oceanarium on cost plus basis. The proposed development components for the Oceanarium complex would include the following, aquarium, touch tanks, thematic pavilions, shark tank, lagoon, and a polar pavilion. The Main tank containing Aqua Terrarium, Under water vision, barrier Reef, Deep Sea Tunnel will have a capacity of 8000 cubic meters. The shark tank will have a capacity of 1230 cubic meters.

This project is reportedly being executed through the State Fisheries Resource Management Society (FIRMA). Mangroves, which reportedly densely cover the region, are vulnerable to such intensive infrastructural development projects according to environmental experts. Despite the fact that the Union Ministry of Environment and Forests has made it categorically clear that land reclamation, building bunds, disturbing the natural course of sea water, destruction of mangroves and construction/developmental activities are prohibited in areas coming under the Zone One of the Coastal Regulation Zone, recent reports suggest the possibility that the state government may have given in-principle approval to the establishment of this project. Any such approval must be reversed to ensure protection of both animals and natural resources.



a.2) Proposed Project Name – Dolphin Park

This proposal is slated to be Asia's largest dolphinarium. It is proposed to be a feature of the entertainment zone that is a part of the overall Marine Drive Phase II development initiative allegedly under the Greater Cochin Development Authority (GCDA). The GCDA chaired by Mr. N. Venugopal is currently considering a proposal submitted by a company called Initor Projects, reportedly based in British Virgin Islands and the Middle East, which claims to have expertise in setting up dolphinariums globally.

The proposal mentions that Initor Projects is able to source wild-caught dolphins, rental dolphins or even captive bred dolphins or dolphins being held in captivity elsewhere. Experts believe that it is difficult to establish the authenticity of a captive bred dolphin given the commercial nature of the industry, and deem that most dolphins kept in captivity are considered to be more often than not, sourced through wild capture. The project is estimated to be executed through a public-private partnership model at a cost of more than 20 crores with each dolphin costing an additional 1,55,000 – 2,95,000 USD each. The developers propose to hold dolphin shows or performances thrice a day, with international staff and possibility of additional seal performance shows. News reports released in October 2012 (annexed) also report that a team from Dubai comprising of alleged experts from the UK and Russia who were involved in setting up Dolphin parks in the Middle East will also be assessing the site. The proposal further states that interaction programmes will be conducted between the captive dolphins that are marine mammals as well as carnivorous predators and the general public.

b) Maharashtra

No. Of Projects - 3

b.1) Proposed Project Name – Sea World, Sindhudurg

The Maharashtra government is reportedly planning to set up a new ocean theme park and Dolphinarium to be built on the Malvan coastline in Sindhudurg. It includes plans for a Dolphin stadium, theme restaurants, water sport areas, golf course, Antarctica attraction and an underwater studio. The 500-600 acre-sized theme park, is expected to cost about Rs 510 crore and was presented to the cabinet by tourism minister Chhagan Bhujbal last year. The facility allegedly intends to display corals, dolphins, seals, penguins and a host of other marine creatures. The Maharashtra state government hopes the project will generate tourism revenue and increase employment opportunities for the region. It is believed that a detailed project report (DPR) is being prepared by Dr. Sarang Kulkarni (Science and Technology Centre, Pune).

b.2) Proposed Project Name – Water World At Mahalaxmi Race Course, Mumbai (Dolphin Park With Underground Aquarium)

This project proposal allegedly intends to promote Dolphin-assisted “therapy” for humans as well as display Dolphins for performances and interaction programmes to promote tourism. Such “therapy” is entirely lacking justification by health care authorities; nor can the well-being of dolphins be assured; The Animal Welfare Board of India has not approved any such “use” of animals under any circumstances for dubious human “benefit.” The Mayor of Mumbai reportedly first put this suggestion forth in 2009 and the project is currently under the Commissioner of Fisheries, Mumbai and the status is unknown.



b.3) Proposed Project Name – Expansion Of Taraporewala Aquarium, Mumbai On Location Or Worli Dairy

This proposal is allegedly focused on the renovation of the famous Taraporewala Aquarium in Mumbai, by building a tunnel leading to the sea with whales and Dolphins, on the lines of Singapore and Malaysia. Other media reports suggest that the Taraporewala Aquarium will be added to by way of a 5-star hotel and fish massage facility. Additionally, Worli Dairy is also being considered as a possible site for the Oceanarium.

c) New Delhi

No. Of Projects – 1

Proposed Project Name – Blue Planet Aquarium Or Water World, Grand Venice Hotel, Greater Noida

An aquarium and Dolphinarium is being proposed as a part of a Venice-themed tourist resort named 'Grand Venice.' This venture would join Bhasin Infotech & Infrastructure Pvt. Ltd (Conceived, Developed and Promoted) and Sheraton Hotels & Resorts and a Singapore-based company, Andover Leisure Pvt. Ltd. The aquarium would cover an area of 1-lakh square feet and the major exhibits would include seawater tanks for large marine life like sharks and lionfish with acrylic tunnels for the tourists to walk through. The shark enclosure would have transparent bottomed boats for looking down into the water from the surface. Sharks, Penguins, Walrus, Octopus and Dolphins would reportedly be on display and may also be used in performance.

1.2) Current Policy & Legal Framework To Regulate Import Of Wild Animals With Emphasis On Cetaceans For Commercial Performance And Captive Display in India

a) Wildlife (Protection) Act, 1972

The entire order Cetacea (all species of Dolphins, whales, and porpoises) is listed in Schedule I of the Indian Wildlife (Protection) Act, 1972 (the Act), under item number 4-A in Part I (as Cetacean Spp.). Cetaceans are also listed in item number 3-C of Part I of Schedule II. Specific cetacean species are also listed in Schedule I and Part II of Schedule II. No hunting (including capture) of these species is allowed as per Section 9 of the Act. Under Section 40(2-A) of the Act, no person is allowed to acquire, keep in his control, custody, or possession, any cetacean species unless he has a certificate of ownership for such animal issued by the Chief Wildlife Warden under Section 42 of the Act

b) Foreign trade (Development and Regulation) Act 1992

As per section 8 (1) no export or import shall be made except in accordance with the provisions of this Act, the rules and orders made there under. Chapter III of this Act deals with the Classification of Export & Import Items (1st April 2009 – 31st March 2010), and Live animals; Animal Products are mentioned under Schedule I & Section I of the Import Policy. This section states that the import (Exim code – 01061200), of Whales, Dolphins and porpoises (mammals of the order cetacea); manatees and dugongs (mammals of the order Sirenia) is restricted and subject to the import licensing note No. 6 as per the Policy Conditions of the chapter which states that the Import of Wild Animals (including their parts and products) as defined in the Wild Life (Protection) Act, 1972 is prohibited (It is pertinent to note here that many cetacean species currently held in dolphinarium globally are possibly sourced from wild captures).



c) Foreign Trade Policy (2009-2014)

The Foreign Trade Policy is brought out under the provisions of the Foreign Trade (Development & Regulation) Act 1992 and it regulates the import and export of all goods including wildlife. The policy contains the conditions (which include compliance with CITES - Any wild animal species intended for import, must be evaluated against the guidelines set by CITES (Convention of International Trade of Endangered species of Wild fauna and flora). Import of animals and their parts and products for zoological parks and circuses or for research purpose may be only permitted subject to the provisions of CITES and on recommendations of the Chief Wildlife Warden of the States and Union Territories under license from the Director General of Foreign Trade (DGFT). Import of wild animals as pets in the personal baggage of a passenger is also subject to the provisions of CITES in accordance with the Ministry of Commerce's Public Notice No. 27ITC (PN). All imports and exports of wild animals and plants are permitted only through the Customs points at Mumbai, Kolkata, Delhi, Chennai, Cochin, Amritsar and Tuticorin), governing import and export of permissible species of wildlife and wildlife products.

The policy is decided in consultation with the Management Authority for CITES in India as far as matter relating to wild fauna and flora are concerned and is enforced through the Customs Act, 1962. In India, the CITES authority is represented by the Director of Wildlife Preservation. If permission is granted under the CITES guidelines, the application has to be submitted to the Customs Department after compliance with all the rules pertaining to the species intended for import, as mentioned in the Wildlife (Protection) Act, 1972, Foreign trade (Development and Regulation) Act 1992, Foreign Trade Policy (2009- 2014) is established.

d) Customs Act, 1962

Section 3(3) of the Foreign Trade (Development and Regulation) Act 1992 provides that all items (including wild Fauna & Flora) covered in the Import & Export policy will be deemed to be covered under Section 11 of the Customs Act, 1962. As a consequence, all cases of violation of the Import-Export Policy in general and CITES in particular, constitute an offence under the Customs Act and are dealt with by the Customs officials. Two essential conditions governing the import and export of Wildlife and the derivatives are - Compliance with the provisions of CITES and Inspection of the consignments by the Regional Deputy Directors of Wildlife Preservation at the Customs points. In case of items covered under CITES, an endorsement is made based on the relevant CITES export permit. Export or import of wild animals and their parts and products is allowed for the purpose of scientific research and exchange of animals between Zoos and is subject to licensing by the Director General of Foreign Trade (DGFT), Government of India.



e) Performance Certificate, Animal Welfare Board of India (AWBI)

In exercise of the power conferred by Section 38 of the Prevention of Cruelty to Animals Act, 1960 Central government has framed the Performing Animals (Registration) Rules, 2001 with amendments from time to time. All animals that are used at or for the purpose of entertainment have to be registered with the Animal Welfare Board of India (AWBI).

The AWBI certificate has to be pre facto and cannot be post facto; hence the permission must be sought before the training and performance. All animals that are registered must be trained subject to conditions of registration laid down under the rules.

If the said animal species is intended for zoo facility, the Central Zoo Authority must provide the authorization. If it is intended for use as a commercial performing animal, then the State Government receives the application for the said species in compliance with the rules as laid out under the Performing Animals Act (Cetaceans currently not in the two schedules specified in the Act) with a copy of the application sent to the Animal Welfare Board of India (AWBI).

It is vital to note that the AWBI refuses to issue any performance certificates to cetaceans and has taken a decision not to issue performance certificates to cetaceans in future.

Any attempt to import these animals for the purpose of performance would be in violation of the Prevention of Cruelty to Animals Act 1960 and the rules framed under it.

f) Prevention of Cruelty to Animals Act, 1960 (reference to Capture & Transport Rules)

In exercise of the powers conferred by clause (i) of subsection (2) of Section 38 of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960), the Central Government has made the Prevention of Cruelty (Capture of Animals) Rules, 1979.

In exercise of the powers conferred by clause (h) of sub-section (2) of Section 38 of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960); the Central Government has made the Transport of Animals, Rules, 1978.

Capture and transport are incontestably stressful and dangerous for cetaceans and is not recommended. 1Physiological indications of stress associated with capture and captivity include elevated adrenocortical hormones and 2impaired cell functions. Additionally, it was found that 3mortality rates of captured Bottlenose dolphins increase by six-fold immediately after capture and do not drop down to “normal” levels for up to 35-45 days.



Figure 4 a - dolphins subjected to stressful transport procedures while being removed from their natural marine habitat

1.3) Dolphinarium & Eco Tourism – The Contradiction

Many Dolphinarium promote captive dolphin facilities by calling them “eco tourism” attractions. Eco-tourism by definition attempts to celebrate the natural world by providing ways in which people can enter fragile ecological environments causing zero disturbance to nature, and to teach the wonders of nature and the responsibility to protect it.

Dolphinarium thereby completely contradict this principle of eco-tourism.

Removing a wild animal from its natural habitat, forcing it to live in a small concrete tank filled with chlorinated water and then using food deprivation as a means to make it learn unnatural tricks to entertain a human audience teaches nothing about environmental or animal appreciation or protection. Instead, it teaches that it is “right” to capture, contain, control, and forcibly modify natural behavior of wild animals.

Resources like water and electricity are used in large quantities to facilitate Dolphinarium, which in turn has a detrimental environmental impact.

1.4) Recommendations against captivity

All Non-governmental organisations representing animal protection and welfare strongly oppose proposals to build Dolphinarium, and request you to take appropriate actions to ensure that such facilities are not established in India.

No peer-reviewed studies support the claim made by captive facilities that exposure to, or interaction with, captive cetaceans increases the public’s knowledge level or concern about dolphins, other marine mammals or the environment. The ⁴most in-depth survey conducted by the public display industry and published as a white paper was critiqued unfavorably by a peer-reviewed evaluation of its methods and results.

All captive cetacean attractions mislead the public about marine wildlife and their natural habitat. Not only is the public misguided about the natural behaviour and habitat of cetaceans, they are also led to believe that the tricks they see are how cetaceans truly behave in the wild. Captivity also encourages the public to view wild marine mammals as pets and thus conditions them to believe that these animals only have value in the context of their relationship to humans. The public does not know how to recognize the evidence of fear, deprivation and emotional stress on the dolphins and mistakenly believes that they are ‘happy’ in captivity, a concept promoted by captive facilities to ensure commercial profit.

The remarkable sensitivity and intelligence of dolphins, which makes it possible for them to learn human language and follow human instructions; are the very qualities which make them vulnerable to the physiological and psychological impact of being separated from their wild social family groups, forced to live in concrete and unnatural enclosures or tanks as well as being forced to learn tricks through food deprivation and eventually performing repetitively on a daily monotonous cycle.

Thus, dolphins in captivity gradually become 'caricatures' or human modified versions of their wild counterparts, eventually experiencing a complete atrophy of their natural instincts and behaviours. For example,⁵ Marine mammals such as whales and dolphins are known to use sound through a process known as echolocation as a primary means for underwater communication and sensing in their wild natural habitat. They emit sounds in order to communicate about the presence of danger, food, a conspecific or other animal, and also about their own position, identity, and reproductive or territorial status. Subsequently,⁶ It has been found, that anthropogenic noise in captive conditions may affect developmental, reproductive, or immune functions and cause more generalized stress in these animals. Thus, continuous exposure to loud music and other human created sounds in captivity can have a significantly detrimental impact on cetacean health and well-being.

Such facilities may also promote trade and illegal capture of dolphins from the wild and lead to India becoming another market for this abhorrent practice. This is contrary to conservation principles, and the next chapter provides insights into Cetacean intelligence and natural behavior making it amply clear that captive facilities like Dolphinariums are unable to provide an adequate species specific habitat for dolphins and other cetacean species and invariably expose the captive animals to poor welfare conditions.

India must take an absolute and progressive stand against the keeping of any cetaceans in captivity with special focus on dolphins and lead by example in perpetuating principles of conservation, wildlife protection and welfare and eco conscious tourism rather than latching onto the now globally declining trend in using animals as commercial attractions for profit.



Understanding Cetacea In The Wild

2.1) Species Description

The order Cetacea contains about 90 species, all ocean dwelling except for 4 species of freshwater dolphins. The order contains two suborders, Mysticeti (baleen whales) and Odontoceti (toothed whales, which includes dolphins and porpoises). The species range in size from Commerson's dolphin, smaller than a human, to the Blue Whale, the largest animal ever known to have lived. Cetaceans are mammals, that is, members of the class Mammalia. Their closest living relatives are the even-toed ungulates, such as the hippopotamus and deer. The order Cetacea is fully adapted to aquatic life. The body of a cetacean is fusiform (spindle-shaped). The forelimbs have been modified into flippers. The tiny hind limbs are vestigial; they do not attach to the backbone and are hidden within the body. The tail has horizontal flukes. Cetaceans are nearly hairless, and are insulated from the cooler water they inhabit by a thick layer of blubber. Cetaceans breathe air. They surface periodically to exhale carbon dioxide and inhale a fresh supply of oxygen.

Cetacean eyes are set on the sides rather than the front of the head. This means only cetaceans with pointed 'beaks' (such as dolphins) have good binocular vision forward and downward. Tear glands secrete greasy tears, which protect the eyes from the salt in the water. The lens is almost spherical, which is most efficient at focusing the minimal light that reaches deep water. Cetaceans have highly developed hearing. They can detect sounds from dozens of miles away and discern from which direction the sound comes. Odontoceti (toothed whales, which includes Dolphins and porpoises) are generally capable of echolocation. From this, Odontoceti can discern the size, shape, surface characteristics, distance and movement of an object. With this ability, cetaceans can search for, chase and catch fast-swimming prey in total darkness, discern the nature of other non-prey objects, and, it is currently hypothesized, communicate with members of their social group.

⁸The cetaceans most likely to be seen at marine parks are various species of whales, such as Beluga whales and dolphins such as bottlenose dolphins.

2.2) Species Behaviour, Intelligence & Habitat

a) Introduction

Many cetacean species such as dolphins, whales such as beluga whales, orcas and others display a diverse range of behaviours and cognitive intelligence in their complex natural wild habitat. These behaviours are severely modified when these animals are kept in captivity. Removing them from their natural habitat and forcing them to live in unnatural, inadequate spaces such as concrete tanks, subjects them to an artificial life where they experience gradual atrophy of their natural behaviours and often display aggression to other animals and to human visitors. To understand better the impact of captivity on dolphins and other cetaceans, it is important to first recognize the salient aspects of their wild behaviour, natural intelligence and aptitude and their habitat. For the purpose of this document, we have provided detailed information on the impact of captivity on dolphins, in particular bottlenose dolphins, as this is the species most commonly held in captive facilities worldwide, it by no means reduces the similar importance of understanding the impact of captivity on other equally vulnerable cetacean species, such as the beluga whale. The insights provided in this document, are indicative of the suffering experienced by all cetaceans and other marine mammals that are housed in artificial captive conditions.



b) Physical Behaviour

Cetaceans exhibit a range of behaviours that don't have an equivalent amongst land mammals. Various behaviours such as breaching, porpoising, lobtailing, and others are heavily documented in scientific literature on cetaceans. A breach or a lunge is a leap out of the water also known as cresting. Whales are more likely to breach when they are in groups, suggesting social reasons, such as an assertion of dominance, courting or warning of danger. Lobtailing is the act of a whale or dolphin lifting its flukes out of the water and then bringing them down onto the surface of the water hard and fast in order to make a loud slap. Cetaceans engage in a variety of locomotor play, including aerial behaviors, erratic swimming, stranding, and surfing. Aerial behaviors consist of leaps, breaches, flips, pinwheels, and slapping the surface of the water with various body parts such as the chin, pectoral fin, or tail flukes.

c) Intelligence

9a”One of the primary foundations for the moral and ethical arguments against keeping cetaceans in captivity is that they are intelligent. Ironically it is their intelligence that has made these animals desirable for public display—their ability to understand human commands and learn complex behaviors or tricks has been exploited to provide humans with entertainment. Likewise their intelligence increases people’s rapport with and interest in these animals. But exactly how intelligent are cetaceans? Most studies demonstrating cetacean intelligence have been conducted on captive animals, albeit primarily in dedicated research facilities or nonprofit public display facilities. Yet as these captive animals increasingly provide information to their captors about their sentience and intelligence, the ethical and moral arguments opposing cetacean captivity become increasingly convincing.”

d) Habitat

²⁰Critical habitat refers to those parts of a cetacean’s range, either a whole species or a particular population of that species, that are essential for day-to-day survival, as well as for maintaining a healthy population growth rate. Areas that are regularly used for feeding (including hunting), breeding (all aspects of courtship) and raising calves, as well as, sometimes, migrating, are part of critical habitat, especially if these areas are regularly used. Unlike land-based critical habitat, however, marine critical habitat boundaries may be less fixed, especially in terms of hunting and feeding areas, which are dependent on upwelling and other ever changing oceanographic conditions. Baleen whales, for example, are known to feed in and around upwellings, which vary depending on local and large-scale oceanographic conditions to some extent during a season and from year to year. Dolphins in particular have large home ranges, often more than 100 kilometers, thus captivity severely compromises their space requirements, reducing them to living in an artificial tank which cannot adequately replace their natural habitat requirements.



2.3.a) Special Focus – Bottlenose dolphins (Tursiops Sp.)

CLASS: Mammalia

ORDER: Cetacea

SUBORDER: Odontoceti

FAMILY: Delphinidae

GENUS: Tursiops

SPECIES: truncatus

²¹Bottlenose dolphins, the genus Tursiops, are the most common and well-known members of the family Delphinidae, the family of oceanic dolphin. ²²Bottlenose dolphins live in groups typically of 10–30 members, called pods, but group size varies from single individuals up to more than 1,000. ²³The common bottlenose dolphin (Tursiops sp.) is found in most tropical to temperate oceans; its color is grey, with the shade of grey varying among populations; it can be bluish-grey, brownish-grey, or even nearly black, and is often darker on the back from the rostrum to behind the dorsal fin. ²⁴The dolphin's search for food is aided by the use of sonar known as echolocation: they locate objects by producing sounds and listening for the echos. ²⁵Researchers have documented echolocation details, such as signal strength, spectral qualities, and discrimination, extensively. Bottlenose dolphins (Tursiops sp.) are capable of immediately recognizing a variety of complexly shaped objects both within the senses of vision or echolocation and, also, across these two senses. The immediacy of recognition indicated that shape information registers directly in the dolphin's perception of objects through either vision or echolocation, and that these percepts are readily shared or integrated across the senses. Bottlenose dolphins are also able to extract shape information, suggesting they are able to form an "echoic image" or sound picture of their targets. ²⁶

^{27a}Bottlenose dolphins range in lengths from 6.0 to 12.5 ft (1.8 to 3.8 m) with males slightly larger than females. Adults can weigh from 300-1400 lbs (136-635 kg). This is a long-lived dolphin species with a lifespan of 40-45 years for males and more than 50 years for females in the wild, captive dolphins generally do not live as long according to some research studies. ^{27b}Bottlenose dolphins are found in temperate and tropical waters around the world. There are coastal populations that migrate into bays, estuaries and river mouths as well as offshore populations that inhabit pelagic waters along the continental shelf. ²⁸Based on a number of studies of near shore populations, Bottlenose dolphins seem to live in relatively open societies. Mother and calf bonds and some other associations may be strong, but individuals may be seen from day-to-day with a variety of different associates. Group size is often less than 20 near shore; offshore groups of several hundred have been seen.

^{9b}**Dolphin brains possess three characteristics, which underlie sophisticated intelligence in all mammals, including humans.** These are 1) large size – both in absolute terms and relative to body size, 2) an expanded and complex neocortex, and 3) a well-developed limbic and paralimbic system for processing emotions, social relationships and perceptions, and other high-level capacities related to awareness of self and other.



Dolphin Brain Size -

10 Dolphin brains are among the largest and most complex in the animal kingdom. Some Dolphin species, including the bottlenose Dolphin, possess brains four and five times larger than expected for their body size, placing them second to modern humans and considerably above the other mammals, including the great apes. This same trait is found in modern humans, relative brain size is also found in humans, who possess brains about seven times the expected size.

Dolphin Neocortical Expansion and Complexity -

The neocortex is the evolutionarily newest part of the brain in mammals and is correlated with higher-order cognitive (thinking, problem-solving) functions. In general terms, the larger and more complex the neocortex the greater the intelligence. Several peer-reviewed studies of the dolphin brain reveal they possess a highly expanded neocortex with a high-degree of organizational complexity. These findings show that dolphin and whale brains have evolved to process and integrate complex thought processes, just as humans have.

Dolphin Paralimbic and Limbic Structures

¹²Limbic and paralimbic cortical structures are related to processing of emotions and social awareness in mammals. The cingulate and insular cortices (both part of these systems) are extremely well developed and the expansion of these areas in cetaceans is consistent with high-level cognitive functions such as attention, judgment and social awareness. Moreover, recent studies show that the ¹³anterior cingulate and insular cortices in larger cetaceans contains a type of projection neuron, known as a spindle cell or Von Economo neuron. ¹⁴Von Economo neurons are highly specialised projection neurons considered to be involved in neural networks subserving aspects of social cognition and have thus far been found in humans and ¹⁵great apes and ¹⁶elephants. Spindle cells are thought to play a role in adaptive intelligent behaviour and the presence of these neurons in cetaceans is consistent with the complex cognitive abilities found in this group.

Self-Awareness

Perhaps the most compelling evidence for a high level of intelligence in cetaceans is the recent demonstration that cetaceans are self-aware. ¹⁷These studies involve cetaceans recognizing their image in a mirror. Researchers marked Bottlenose dolphins with zinc oxide cream or marker pens in locations the dolphins could see only with a reflection, and the dolphins immediately swam to inspect themselves in a mirror placed in their pool. This showed that the dolphins were able to recognize that the images they saw in the mirror were actually of themselves and not simply another dolphin. The dolphins used the mirrors as tools to view themselves, positioning themselves so that they could use the mirror to view the parts of their body that had been marked. These are all indicators of self-awareness. ¹⁸In humans the ability to recognize one's own image in a mirror does not appear until the age of two. Therefore, Bottlenose dolphins have a level of understanding comparable to that of a two-year-old child, although the linguistic skills of cetaceans hint at intelligence far more developed. Locking two or three young children in a small room ²⁴ hours a day—even one with a window and a dog for a companion during the day—would be unacceptable. Yet confining dolphins in an equivalent space for their lifetime— with a human caretaker to interact with during business hours—is standard practice for Dolphinaria and aquaria.”

¹⁹Louis Herman, who taught Bottlenose dolphins a simple sign language and a computer-generated sound language, conducted one of the most successful and illuminating cetacean linguistic studies. This study determined that, using these artificial symbolic languages, dolphins could understand simple sentences and novel combinations of words, but most importantly that cetaceans comprehended sentence structure (syntax)—an advanced linguistic concept. Interestingly, while we may have been able to teach dolphins relatively sophisticated artificial languages, we have been unable to decode their many vocalizations, which may very well be a language. This begs the question of which species is “smarter” — dolphins, who can learn and understand what people want of them, or humans, who have yet to learn or understand what dolphins might be telling us. Scientists have also shown that cetaceans are able to grasp abstract concepts.”

²⁹Bottlenose dolphins have been used since 1949 in shows in Dolphinaria that feature dolphins doing tricks to entertain the audience. Using a method known as ³⁰‘operant conditioning’, which involves using food deprivation as a reinforcer, they are trained to perform acrobatics, locate hidden objects and play with balls. This method is an undeniable evidence of the poor welfare conditions that dolphins are exposed to in captivity and negative impact therein on their physical and mental health.



Figure 4 b Bottlenose dolphins

2.3.b) Profile – Beluga Whale (*Delphinapterus leucas*)

The Beluga or white whale (*Delphinapterus leucas*) is an Arctic and sub-Arctic cetacean. It is one of two members of the family Monodontidae, along with the narwhal, and the only member of the genus *Delphinapterus*. This marine mammal is also known as the sea canary due to its high-pitched twitter and range of sounds it emits. The majority of belugas live in the arctic and the seas and coasts around North America, Russia and Greenland; their worldwide population is thought to number around 150,000 individuals. They are migratory and the majority of the groups spend the winter around the arctic ice cap. In terms of species conservation, the beluga was placed on the International Union for Conservation of Nature’s Red List in 2008 as being “near threatened”; and the subpopulation from the Cook Inlet in Alaska is considered to be Critically Endangered and is under the protection of the United States’ Endangered Species Act. Of seven Canadian beluga populations, the two inhabiting eastern Hudson Bay and Ungava Bay are listed as endangered.

Yet, Belugas are unfortunately one of the cetaceans most commonly kept in captivity in aquaria and wildlife parks in North America, Europe and Asia as they are popular with the public due to their colour and expressivity. They are social animals, with large home ranges and display expressive and cooperative behaviour with members of their family groups, and even while hunting or travelling. They are known to display curiosity towards humans and other animals, and form strong emotional bonds with their young. The beluga is considered an excellent sentinel species (indicator of environment health and changes – dolphins play a similar role) because it is long-lived, at the top of the food web, bears large amounts of fat and blubber and is relatively well-studied for a cetacean. Thus, their importance in the ecology and functioning of the marine ecosystem is well established and their subsequent capture and use in performance and display in the poor welfare conditions in captivity is unacceptable and potentially harmful for their marine environment and wild population in the long term, as they are also vulnerable to other threats such as hunting and pollution.

As of 2006, as many as 58 belugas were being held in captive facilities in Canada and United States, and approximately 42 deaths in captivity had been reported up to that time. Most belugas found in aquaria are caught in the wild, as captivebreeding programs have had little success. For example, despite best efforts, as of 2010, only two male whales had been successfully used as stud animals in the Association of Zoos and Aquariums (AZA) beluga population. Despite being held in captivity, very little is known about the biology and



Figure 4 d Beluga whales

natural behaviour of Belugas, thereby, clearly dispelling the notion that holding wild cetaceans in captivity provides an educational benefit. Similarly, the difficulties in captive breeding and high mortality rates in captive facilities, contradict the popular claims made by captive facilities that captivity enhances species conservation.

2.4) Conclusion

This chapter only provides a brief insight into the complex physiology, intelligence, social groups, habitat, behavior, and emotional development of cetacean species. Although there is a vast and increasing body of research literature that provides in-depth information on each of these aspects, we are still learning the extraordinary capabilities and evolutionary marvels that characterize this unique and charismatic species.

However, we now know enough about Cetaceans and their needs to accept that living a life in a 'swimming pool' performing the same tricks day after day, living often in isolation or mismatched groups, is a poor substitute for the complex, diversenatural life of these extraordinary animals.

³¹Dolphinaria and aquaria cannot even begin to simulate the natural habitats of these species. The water in their tanks is often chemically treated and filtered to prevent the animals from swimming in their own waste. Smooth concrete walls usually surround these sound-sensitive creatures and inhibit the natural use of their acoustic abilities. We cannot provide what nature can, and in addition to altering the natural behavior of these animals and exposing them to poor welfare conditions and stressful encounters with humans on a daily basis, Dolphinaria provide misinformation about the dolphins' welfare, protection or conservation requirements.

It is extremely important that Indian authorities use the available body of scientific research to formulate a stringent ban on the keeping of dolphins and indeed all Cetacean species in captivity for either display or commercial performance purpose. We must be focused on protecting natural habitats and conserving these species, rather than compromising their welfare.



Impact Of Captivity & Commercial Performance On Cetacean Species Globally

The arguments presented here are collated from a range of global research studies that conclusively state that all cetacean species are unsuited to captivity with special emphasis on dolphins, as they are the species most commonly held in captive facilities worldwide. The dolphins alleged 'smile' has enabled the commercial captive industry to mislead the public into thinking that keeping them and other cetaceans in captivity is educational or fun, and that the animals enjoy living in captive environments, interacting with humans and performing unnatural tricks. In reality, they are deprived of a chance to display their natural behavior and are forced to alter their instincts, and learn tricks by way of food deprivation and fear, in every Dolphinarium in the world. From the methods of capture, to the failure of captive facilities to meet any standard of acceptable welfare conditions for the captive animals, we can safely assume that any facility proposed in India would be subject to similar concerns, no matter how they present themselves to the authorities.

3.1) What is a Dolphinarium?

A Dolphinarium is a captive facility for dolphins and often other cetacean species such as orcas or beluga whales, where they are used in display or as performing animals. The animals are usually kept in a concrete pool or tank, though occasionally they may be kept in pens in the open sea, either for research, display or for public performances.

Some Dolphinaria consist of one pool where dolphins and other cetaceans perform for the public, others are part of larger parks, such as marine mammal theme parks, that may keep other animals and have other attractions as well. While cetaceans have been held in captivity since the 1860s, the first commercial Dolphinarium was opened only in 1938. Many varied designs exist, but an often found basic Dolphinarium design for public performances consists of stands for the public around a semi-circular pool, sometimes with glass walls which allow underwater viewing, and a platform in the middle from which the trainers direct and present the show.



Figure 1 - Dolphins kept in a small dirty pool in a Dolphinarium in Turkey

Their popularity increased rapidly until the 1960s. Since the 1970s, increasing concern for animal welfare led to stricter regulation, which in several countries ultimately resulted in the closure of all Dolphinaria in the past decades. Dolphinaria are gradually being phased out in most western countries, due to a strong and active global anti-captivity movement. However there has begun an unfortunate boom in captive facilities being set up in Middle East, Asian and South Asian countries.

3.2) Species Interaction Programmes (Swim with the dolphins Interaction Programmes and Petting Pools)

Many Dolphinariums across the world offer interactive programmes that allow visitors to pet, feed and swim with dolphins. Interacting with a large intelligent predator, who is already stressed in its captive environment, increases risk of injury and transference of disease to humans while significantly adding more strain to an already stressed animal. Experts state that observation studies have shown that ³²in contradiction to the expectation of the tourists, their findings showed that dolphins continually try and avoid humans during interactive programmes. Adding this fact to the findings that the dolphins dive deeper in presence of swimmers, they concluded that the dolphins avoid the swimmers. ³³Avoidance, for example, is considered to be the most important stress related behavior during interactions with dolphins and humans. These results contradict the claims of the captivity industry, that commonly state that the dolphins 'enjoy' performing or are 'happy' to be in proximity to humans.

³⁴Instances of cruelty and negative impact on dolphin behaviors have been observed during studies on interactive programmes such as swim -with-the-dolphins (SWTD) programmes and 'petting pools'. Such programmes have no educational value and are instead highly exploitative. Such activities can even prove to be dangerous for dolphins; for example, experts state that ³⁵In certain uncontrolled circumstances of such programmes, dolphins have been observed to be routinely behaving in a submissive manner to humans. ³⁶This is considered as a very disturbing dynamic, by experts, who believe it can seriously affect the dominance hierarchy within the dolphins' social group and increase risk of injury to the submissive dolphin. It also indicates a general and persistent level of stress to which the submissive dolphin is being subjected, which could in turn affect his or her long-term health

³⁷Captive interactive programs have been considered by experts to considerably distort the public's understanding of the marine environment. Observations have shown that ³⁸educational messages may take second place to entertainment in whale and dolphin performances, where the 'jumping', 'splashing' and up-close encounters with the animals may diminish educational benefit. Furthermore, promotion of physical interaction with captive marine mammals may also encourage visitors to carry out such activities with their wild counterparts, thus impacting negatively on wild populations.

³⁹Observational studies have revealed that dolphins have delicate skin and are at risk of harm from humans' nails and jewellery. For example, ⁴⁰experts have observed that not all facilities require participants to remove all makeup and suntan lotion before entering dolphins' enclosures for interactive programmes. ⁴¹This can lead to contamination of the water and also irritate the dolphins' skin and eyes". ⁴²Furthermore, dolphins have been known to attack humans during swim-with interactions, especially captive males who may often be sexually frustrated due to inadequate or incompatible social groupings.

⁴³Injuries to humans incurred from dolphins during swim-with programmes, have been witnessed. These injuries include broken bones, internal injuries and wounds requiring hospitalization. ⁴⁴In a survey of people who work with marine mammals, 50% of the staff has reported injuries caused by marine mammals. Additionally, experts state that ⁴⁵Bottlenose dolphins are one of very few mammalian species known to direct lethal aggression that is unrelated to predation towards mammals of other species. This is a significant example of the negative impact of captivity on both dolphins and the humans that interact with them through such enforced interactive programmes. There have hardly been any instances of similar nature reported between humans and dolphins in the wild.

Another programme offered are 'Petting Pools', where visitors are allowed to pet, feed and physically interact with the animals from the periphery of the pool. ⁴⁶Expert studies assessing such programmes have shown that dolphins in petting pools can be exposed to humans 12 hours a day, every day, with the public often splashing water or slapping the sides of the tank to get the dolphins' attention. This exacerbates the noise and disturbance to which the dolphins are routinely subjected to, in such activities, and is considered to be detrimental to their health and welfare. ⁴⁷Experts have also made observations of dolphins in petting pools being fed popcorn, bread, french fries, sandwiches, and the contents of drink containers. ⁴⁸This has led to the ill health of dolphins, with many being observed as being obese, which is indicative that these activities were not properly supervised and caused competition between the captive dolphins, leading to some being over fed. ⁴⁹An even more disturbing observation, is that of human visitors placing objects such as glasses, paper, stones, coins, bottle tops, metal souvenirs, and even a baby's pacifier into the mouths of dolphins or offering them wristwatches and even cigarettes. Experts' state, that if such objects are swallowed, they can cause intestinal injuries, poisoning, and even death. These are significant concerns that impact the welfare of dolphins and indeed all cetacean species kept in captive environments, where they are vulnerable and subject to human management.



Figure 2 - Overcrowded petting pool with the animal having no option to getaway. Photo courtesy WSPA

3.3) Typical Performance Routines Of Captive Cetaceans In Dolphinarium

⁵⁰In marine park shows, animals are conditioned to perform tricks, or behaviours, which marine parks insist are extensions of natural behaviour. While many species are indeed naturally athletic, the term "extension" is stretched to the fullest breadth of the imagination. Orcas do not "naturally" catapult humans into the air, or tolerate being ridden, climbed upon, or walked on. Dolphins do not "naturally" allow trainers to "water ski" on their backs, straddling two dolphins, in what is referred to as a Roman ride. Tail - walking is not a behaviour observed in wild populations of Tursiops, nor is "breaching" seen among beluga whales. Performances using props present potential risks of ingesting foreign objects, as do demonstrations of echolocation that use eye cups. These and other activities are unnatural and taught to the captive animals using starvation as a motivational tool.

3.4) Examples of the negative impact of Captivity On Marine Mammals

⁵¹aThe following examples provide evidence of the negative impact of captivity on marine mammals. The first example illustrates the impact of capture on wild populations, by documenting the case of the capture of eight dolphins in the Dominican Republic waters by a captive facility and the ensuing untimely death of four of the captured dolphins. Such incidents highlight the link between wild captures and the captivity industry. The second example, illustrates a case in Mexico, where dolphins held in a shallow sea pen were exposed to a hurricane and some of them died as they were unable to escape their enclosure, it also highlights the stress and trauma experienced by captive dolphins during transport. Such incidents are unfortunately all too common in the captivity industry and clearly indicate that dolphins and all other cetaceans are unsuited to a life in captivity.

⁵¹b **Bayahibe, Dominican Republic**

No surveys or other research had been conducted on the status of Bottlenose dolphins inhabiting Dominican Republic waters prior to the capture of eight individuals near Bayahibe (off the southeast coast of the country) in August 2002. The captors told locals, however, that they were merely going out to conduct research on the dolphins—by attaching tags. The captures caused a furor locally, as community groups objected to “their” dolphins being taken, and to the lack of consideration of the impact the takes would have on the economically important local dolphin-watching industry. The capture also was severely criticized by the Dominican Republic Academy of Sciences. The dolphins were taken to Manatí Park, a captive dolphin facility that operates dolphin shows and a Swim with dolphins program. This facility had already courted controversy and coverage on European television over the state of the facilities and an attack on a child by one of the Dolphins in the park. Although there are no known records of dolphin mortalities at Manatí Park, local workers at the facility informed a WSPA representative that one day in 2000, four dolphins suddenly died, to be replaced the very next day by five new, but undocumented, animals

⁵² **La Paz, Mexico**

The history of the La Paz dolphins is a dismal one. After their December 2000 capture, they were transported to the dolphin Learning Center (DLC), a badly constructed sea pen enclosure owned by an entrepreneurial local doctor, in front of a beach resort hotel. Dolphin advocates warned Mexican authorities and the DLC facility owner that the sea pen’s location (near a sewage outfall and relatively heavy vessel traffic) and shallowness were substandard and could create serious problems for the dolphins. A video released of the transport of the animals, much of which was in wooden crates, showed footage of one of the animals being repeatedly dropped while being carried in a stretcher across a beach. One of the dolphins died within a few weeks of being brought into the facility. In response to the capture, and the fact that the capturing facility did not possess the appropriate permits for a live capture of cetaceans, the Mexican Environmental Enforcement Agency ordered the DLC Dolphinarium shut down. However, the Mexican courts ruled against this closure in June 2001, and so the dolphins remained in captivity. In September 2003, La Paz was hit by a hurricane, and although the human population prepared against the onslaught of the storm, nothing was done to similarly protect, or evacuate, the La Paz dolphins. Due to contamination of the dolphins’ pen—from the sewage outfall, just as dolphin advocates had predicted—the large amount of storm-tossed debris, and the stress associated with the event, three of the seven remaining dolphins died within days of the hurricane’s passing. Another dolphin died in November.



3.5)⁵³ Common Stressors In Dolphinarium & Their Impact On:

a) Cetacean Behaviour

Captive facilities are unable to replace the vast, complex and varied oceanic habitat that is essential for the well being of a social, intelligent and far ranging predator, such as a dolphin. The small-constricted space provided in captive tanks, provide inadequate living space, which leads to the development of stereotypical behaviours, aggression and gradual atrophy of natural instincts and behaviours such as foraging and travelling. The smooth walls of the tank inhibit the display of echolocation, which is an essential aspect of the dolphin's ability to orient themselves in their natural habitat. All these behaviours are severely compromised in captivity and they are exposed to unnatural sounds, forced proximity to humans and also forced to modify their many of their natural behaviours and learn instead, tricks and performance routines for the entertainment of the public.

This artificial existence has a very detrimental impact on the dolphin's well - being, both in terms of physical and mental health.

For example, dolphins are not allowed to exercise that part of their behavioral repertoire that is related to hunting and foraging. This leads to the development of stereotyped behaviors, severe aggression toward conspecifics and humans, and other behavioral problems, that frequently arise in predators denied their natural foraging behavior. Furthermore, performing animals are trained to demonstrate a series of conditioned behaviors. Some of these behaviors may be part of their natural behaviors, but many are merely based on natural behaviors that have been performed out of context and exaggerated and altered almost beyond recognition. The most common training method, called operant conditioning, uses food as positive reinforcement. For many animals this means that satisfaction of hunger is dependent on performing tricks; for others, hunger is deliberately induced so the reinforcer will be effective. This is not food deprivation per se, for a complete food portion is ultimately provided each day, but the use of food as a reinforcer reduces some animals to little more than beggars. Their lives obsessively revolve around the food presented during shows and training sessions. Patrons of any captive marine mammal show can easily observe the animals' attention fixed on the buckets of food. For these animals, natural feeding and foraging rhythms and cycles, as well as independence of any kind, are lost.

Natural behaviors and interactions, such as those associated with mating, maternal care, weaning, and dominance, are altered significantly in captivity. In most cases, these behaviors are strictly controlled by the needs of the facility and the availability of space. The needs of the animals are secondary. For instance, weaning is timed to suit the needs of the facility, as opposed to the needs of the pup, cub, or calf, because the offspring may be disruptive to the social group or because space is limited. Dominance interactions can be aberrant and abnormally violent, as the animals must adjust their behaviors in response to the small living space and the artificial age and sex composition of the captive social group. Wild-caught captive marine mammals gradually experience the atrophy of many of their natural behaviors. Many are caught too young to have learned how to socialize properly and form relationships. For cetaceans socialization and learned behavior and skills are undoubtedly crucial to normal and natural development.

b) Birth Rates and Mortality rates (Comparison to Wild Populations)

Bottlenose dolphins

Some studies indicate that captive Bottlenose dolphins live as long as and have the same mortality rates as their counterparts in the wild. Other studies, however, continue to indicate a higher year-to-year mortality rate for animals in captivity than for those in the wild (Table 1). The failure of captive dolphins to exhibit a significantly higher survival rate in spite of 70 years of maintaining this species in captivity disputes the public display industry's oft-stated contention that captivity enhances survival by keeping animals safe from predators, parasites, and pollution and by providing animals with regular feeding and ever-improving veterinary care. The reproductive history of Bottlenose dolphins shows a similar pattern. Although calves are now born routinely in captivity, captive-born calf mortality rates fail to show a clear improvement over the wild. As predation—a significant source of calf mortality in the wild—is not a risk factor in captivity and veterinary supervision is intensive when a calf is born, this failure to demonstrate higher calf survivorship is disturbing. Causes of death for captiveborn calves include lack of maternal skill, lack of proper fetal development, and abnormal aggression from other animals in artificial social environments and confined spaces.

Species	Mortality Rate in Captivity				Mortality Rate in the Wild
	Study 1	Study 2	Study 3	Study 4	
Bottlenose Dolphin	7.0%	7.4%	5.6%	5.7%	3.9%
Killer Whales	7.0%		6.2%	6.2%	2.3%

Figure 3 - Table

c) Physical & Emotional Welfare

Confinement exacerbates stressful situations for marine mammals in many ways. Captive animals are forced to live in artificial social groupings determined by humans, in confined areas, and the ensuing social pressures and stress they experience can escalate when they have no avenue for escape. In Dolphins, for example, adding new members to a captive group—such as young animals reaching maturity—or placing incompatible animals into groups can upset the group's social dynamics and dominance hierarchies, as can isolating individual animals or separating them from their associates. These circumstances can lead to increased aggression, illness, poor success in calf rearing, and even death. The effects of socially inflicted stress in captivity were illustrated in a 2002 study, which described how seemingly innocuous changes in dolphin groupings and associations could actually cause extreme stress, leading to chronic illness and death.

3.6) Conclusion

These research studies and cases only prove that captivity has repeatedly failed to deliver any sort of acceptable welfare and protection for Cetacean species. Promoting similar facilities in India will only create situations where such instances of poor welfare, stress and captive animal deaths may well become the norm. No matter how large or expensive the project and captive facility claims to be, it cannot reproduce successfully the natural environs essential for the well-being and propagation of marine mammals. Such facilities only undermine conservation and welfare protection efforts and add more threats to the eventual survival of these species in the wild.



Sourcing From The Wild

4.1) Live Captures

⁵⁴Most cetacean capture methods are extremely traumatizing such as drive captures. This hunt involves a fleet of small boats that herd dolphin pods into shallow water by producing loud noises when the crews bang on hulls, or clang metal pipes together underwater. Some of the animals are set aside for sale to captive display facilities, while the remainder are killed with long knives or spear-like tools. Aside from humane considerations, removal of animals from wild populations can have a substantial negative impact on the animals left behind.

Research on Bottlenose dolphins shows that certain individuals play a crucial role in holding dolphin communities together. If these individuals are removed, the dolphin group might lose cohesion and disperse. This could have serious survival implications for the remaining animals, as having a well-organized group is crucial when dolphins forage for food or have to defend themselves against competitors and predators.

Many members of the general public believe captures of wild cetaceans are a thing of the past, encouraged in this mistaken belief by the display industry. This is however not the case.



Figure 4 e- Images of live drive captures of dolphins for meat and trade for captive industry



4.2) Conservation Fallacy

⁵⁵Public display facilities have begun to increasingly promote themselves as conservation or educational centers. Sometimes in some cases, even changing their names to reinforce this image. Through skillful and targeted marketing and public relations, they miss no opportunity to emphasize their role as modern 'arks', barriers against the extinction of endangered species in the wild. In reality, most public captive display facilities do no more than produce multiple generations of a limited group of species and do not maintain true conservation programs at all. In fact, only 1 of the 50 members of the Alliance of Marine Mammal Parks and Aquariums (AMMPA)—the main industry association that represents all captive facilities, that house, display or use in performance, dolphins, other cetaceans, marine mammals such as seals, walrus and others, fish species—routinely provides funding or grants to promote the conservation of critically endangered river dolphin species. Public display facilities with the motivation, staff capability, and commitment to engage in or support conservation programs for any animal species have always been few in number. Dolphinarium in fact, promote no understanding of wild dolphins or any other cetacean species, their marine environment or social behaviour. Dolphinarium instead support the trade in wild caught cetaceans (dolphins/whales), in a time, when marine species are already under threat due to pollution, overfishing and other anthropogenic influences.



Captive facilities focus on one aim alone and that is to make a commercial profit. Animal husbandry in captive facilities is rarely motivated by a conservation goal. It is generally done to ensure availability of specific species that suit the commercial purpose of the facility rather than to maintain an ecological balance. Every effort is expended to ensure that species popular with the public are bred, without any attempt to consider or contribute to global conservation efforts directed towards protecting marine biodiversity. The requirements of providing the public with a satisfying recreational experience always supersedes the goals of conservation or education as far as marine mammal captive facilities are concerned. Thus such false claims are highly misleading at best. Hardly, any Dolphinarium globally are involved in substantial conservation programs either in or ex situ, and even if they do contribute, the amount spent on these programs is a mere fraction of the income generated by the facilities. Dolphinarium and aquaria still acquire several species of marine mammals directly from the wild. It is tragic, that while we have vast scientific research available globally attesting to the urgency of protecting the fragile and increasingly damaged marine ecosystems; we are instead continuing to remove fish species for the aquaria trade, damaging corals, polluting our seas and oceans, capturing marine mammals, such as dolphins, whales, seals for commercial entertainment and moving rapidly towards the complete destruction of this fragile marine environment which covers more than 70% of our planet's surface and is crucial to our survival.

It is imperative that India takes the correct and proactive stand against these proposals to set up marine mammal captive facilities and instead mandates a complete prohibition on the keeping of any marine mammal in captivity in India.



Risks To Human Health

5.1) Diseases

⁵⁷Respiratory diseases have been reported in nearly a fifth of marine mammal workers, including diseases such as tuberculosis. Clearly, continuous exposure to marine mammals can involve a health risk to people working with the animals, but it can also threaten the health of the public. Diseases contracted from marine mammals are difficult to treat and diagnose, as physicians who are not aware of the risks—or range—of potential infectious diseases may overlook them. Facilities that allow direct human contact with marine mammals, such as Dolphinariums with petting pools or SWTD programs, are exposing their customers to possible infection and injury. The reverse is also true—such facilities are exposing their animals to possible human diseases or injury as the result of inappropriate behavior by the public.

5.2) Injury And Death

⁵⁸The risks faced by during interactive programmes between humans and dolphins for example are considerable. Research has shown, that people have suffered from broken bones, lacerations and shock caused by aggressive behaviour from the dolphins that are forced to interact with humans during swim-with-the-dolphins programs or in petting pools. Several dolphin biologists have noted that few, if any, dolphin-inflicted human injuries could be truly accidental, yet all the injuries in SWTD accident reports were so labeled. This is disturbing, as the perpetuation of the dolphin being a friendly gentle animal by Dolphinariums in the interest of commercial profit, actually misleads the public from understanding its natural instincts as a large carnivorous predator.

It is probable that a person will eventually be killed in these programs, more likely in one of the many new facilities in the developing world being built and operated by entrepreneurs who know little about dolphins and other cetacean species but anticipate a large profit from this lucrative tourist activity. This has significant implications for the animals as well. Should an animal be involved in a seriously injurious or fatal interaction, he or she would certainly be removed from the attraction and would face an uncertain fate.

The fact is that at any time during a swim session, especially one that is not controlled, dolphins may inflict minor to serious injuries on swimmers for various reasons, some of which are neither obvious nor predictable. Even in controlled swim sessions, the risk is always present and is potentially lethal. There is also a risk that petting pool dolphins will inflict injuries on members of the public. Frequent teasing by visitors and other inappropriate behavior, such as touching sensitive areas of the dolphin's body, like the eyes or blowhole, increase the likelihood of aggression by the dolphins. Members of the public have even been observed holding children and babies over the heads of dolphins at petting pools, oblivious to the fact that Dolphins are also predators and carnivores.

⁵⁹ Bottlenose dolphins have been regularly reported to be attacking and killing members of other cetacean species, and even attacking and killing conspecifics' calves. Till date there has only been one record, in Brazil, of a bottlenose dolphin killing a person. The animal who caused the incident was a solitary male, named Tiao by locals, with a history of approaching human swimmers as well as of inflicting injuries: 29 swimmers had reported injuries, mostly as a result of the humans "harassing" the dolphin by grabbing his fins or trying to jump on his back. Arguably these people were only trying to do the very things that dolphin trainers are regularly observed doing to and with dolphins at Dolphinariums. Eventually, on 8 December 1994, the dolphin rammed a man (who was reported to have been attempting to put objects into the Dolphin's blowhole), rupturing his stomach and causing his death.



Conclusion

The arguments against keeping all marine mammals with special emphasis on Cetacean species in captivity presented in this document are sourced from a range of research studies conducted globally across various Dolphinariums as well as studies done on wild populations and collated in this report. The outcome of every study conclusively brings us repeatedly to the same result, that dolphins or any cetacean species for that matter are unsuited to captivity. They are deprived of a chance to display their natural behavior and are forced to alter their instincts, and learn tricks by way of food deprivation and fear, in every Dolphinarium in the world. From the methods of capture, to the failure of captive facilities to meet any standard of acceptable welfare conditions for the captive animals, we can safely assume that any facility proposed in India would be subject to similar concerns, no matter how they present themselves to the authorities.

However the vast and increasing body of research now available has gradually begun to dispel these myths, revealing the captive industry to be commercially exploitative, focusing on profit at the cost of education and animal welfare or protection. There is a growing global movement against Dolphinariums and many countries have taken the first step in phasing out these unnatural and outdated concepts, by enforcing strict legislation against them. For example, in early 2005, Chile became the first country to ban outright the public display of most marine mammal species (as well as some sea birds), and also their import, export, and capture from the wild. Costa Rica joined it soon after, prohibiting the capture and public display of all cetaceans. In September 2005, the Netherlands Antilles determined that it would allow no more dolphin exhibits in its territories (it already has one and has issued a permit for another).

Cyprus denied a request to set up a dolphin assisted therapy facility in 2006. Some countries have banned the live import or export of cetaceans; these include Cyprus (imports are prohibited), Hungary (imports), Argentina (imports from the Russian Federation), Vietnam (exports) and Malaysia (exports are prohibited, as are imports of marine mammal species already found in Malaysia). Mexico has prohibited the import and export of marine mammals.

Other nations have banned or enacted moratoriums on the live capture of cetaceans in their waters. These include Mexico, New Zealand, Brazil, Peru, Argentina (orca captures are prohibited), the Dominican Republic, Nicaragua, Australia, China (including Hong Kong), Indonesia (live captures of Irrawaddy Dolphins in the Mahakam River are prohibited), Laos (live captures of Mekong Irrawaddy dolphins are prohibited), Malaysia, the Philippines, Singapore, and Thailand.

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.

Furthermore, some countries have implemented strict legislation for the keeping of cetaceans in captivity. Among these are the United Kingdom and Brazil, neither of which holds cetaceans in captivity, and Italy, which bans SWTD attractions and other human-dolphin interactions. All of these developments suggest that a paradigm shift may be underway. The media attention on controversial captures, unnecessary deaths, and inhumane transports is having an impact on the general public's perception of marine mammals in captivity. The impression of happy animals performing for treats is giving way to recognition of behind-the-scenes suffering.

The preceding pages have presented the case against capturing cetaceans and keeping them in captivity. Therefore, while humans can segment the various parts of the captive experience and even draw comparisons between the impact of various aspects on the welfare of cetacean species such as dolphins, it is now **irrefutably clear that the entire captive experience for marine mammals is so contrary to even the most basic elements of compassion and respect that it should be rejected outright and for all time.**

It is unacceptable for marine mammals to be held in captivity for the purpose of public display.

The West has set a tragic precedent with its multi-billion dollar captive marine mammal facilities, which developing countries, hungry to prove their standing in the global hierarchy, are rushing to follow. These mega-corporations hide the deaths, the impossibility of providing adequate welfare, the deliberate exploitation and the unavoidable illness, which besets dolphins and other cetaceans in captivity.

India has a rich and diverse natural heritage with unlimited opportunity to develop tourism, by focusing attention on conserving, protecting and naturally enriching its magnificent coastlines. Natural marine sanctuaries, controlled and responsibly managed wild dolphin-watching activities can be developed with rural coastal communities, providing the wonderful educational, social and financial benefits.

Setting up captive cetacean facilities, in the face of the strong global movement against the captivity, is detrimental to India's global image and undermines the robust animal welfare and protection efforts that are prevalent in the country today.

India must be progressive in its policies and make every effort to be an example of efficient and appropriate legislation in support of cetacean conservation, and the welfare and protection of all marine mammals in its own waters and not act as a new market for wild caught dolphins or any other marine mammal.

Import or Export or Capture of dolphins and any other cetacean species for use in performance or display and establishing of Dolphinarium in India must be completely prohibited.

End Notes

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