The vast majority of Europeans understand and appreciate the exceptional care given to all of the aquatic mammals at EAAM facilities. Dolphins are a popular and charismatic species that play an important role in engaging, educating and inspiring the public at EAAM parks.

**Conservation Status**

More than 95% of the dolphins in EAAM facilities are bottlenose dolphins (*Tursiops truncatus*). The bottlenose dolphin is not an endangered species but instead, according to the IUCN, is a “species of least concern.” The IUCN’s 2008 report states that “[a]lthough there are many threats operating on local populations, the species is widespread and abundant, and none of these threats is believed to be resulting in a major global population decline.” Similarly, bottlenose dolphins are listed on Appendix II of the Convention on International Trade in Endangered Species (CITES). Regardless of their actual conservation status, the European Union treats all cetaceans as endangered species for regulatory purposes.

**Provenance**

The majority (70%) of the dolphins in EAAM parks today were born under human care. The remaining animals are founder stock that may have been acquired as long ago as the 1960’s. No EAAM park has imported a dolphin from the wild since 2003. Further, there is no bottlenose dolphin from the Japanese drive fisheries in any EAAM park. The EAAM strongly condemns the drive fisheries because of their inherent cruelty and issued a statement to this effect in 2007.

EAAM parks are successfully increasing the dolphin population in human care through breeding and cooperative exchanges. However, the importation of dolphins from the wild is not prohibited. CITES permits the import/export of bottlenose dolphins, including wild dolphins, where the exporting government finds that the export will not be detrimental to the survival of the species in the wild. The European Union imposes stricter measures for all cetaceans, however, importation is permitted for non-commercial purposes including research, education and breeding purposes for which conservation benefits will accrue to the species concerned.

**Life Expectancy**

As of 2014, the oldest known dolphin in the wild was 64 years old, living in Sarasota Bay, Florida. However, the median life expectancy for the Sarasota population, measuring from one year of age, is just 17.4 years, while the median for other studied populations is between 8 and 10 years. To date, the longest recorded lifespan for a dolphin in human care is 61 years.

Based on recent studies of dolphins in human care in the United States and the longest estimate of median lifespan for a wild population of bottlenose dolphins, “it is clear that dolphins in human care are expected to live longer than their counterparts in the wild.” Due to improved husbandry and facilities, median life spans of dolphins under human care are increasing. Indeed, the estimated median lifespan of dolphins in human care in the United States today is nearly double than the highest estimate for wild dolphins (34.3 compared to 17.4 years). A similar situation exists in Europe: many dolphins in EAAM parks are alive and well at 40, 45 and even 50 years old. The oldest male in an EAAM park as of 2014 is 54 years old; the oldest female is 52 years old.

**Space**

In zoological settings, the depth dimensions of habitats for bottlenose dolphins reflect those of the bays and estuaries in which they typically are found. Dives of bottlenose dolphins typically last from 20 to 40 seconds. The depth of dives depends on the habitat in which the dolphins are found. Bottlenose dolphins generally are found in bays, in tidal waters, and along open ocean beaches, often at depths of 3 meters or less. While dolphins can dive longer and deeper where motivated by the need to forage or to protect...
themselves from predators, they do not necessarily need to do so when these factors are absent. Moreover, the depth of pools is only one of the many factors that can influence, but not by itself determine, the well-being of dolphins.

Like the European Union and the World Animal Health Organisation, the EAAM supports the use of objective indicators to assess animal well-being, rather than over-reliance on enclosure dimensions which are neither scientifically founded nor determinate of welfare. Because inspectors often seek guidance on enclosures when assessing welfare, however, the EAAM has agreed on recommended dimensions for state-of-the-art facilities for dolphins.

**Water Quality**

While dolphins can and do thrive in low quality waters in the wild, water quality in zoological parks is achieved through modern facilities and biological disinfection, mechanical filtration, and/or treatment of dissolved and particulate organic matter. Whatever systems or methods are used, the EAAM accreditation process places considerable value on ensuring good water quality. Compliance for bottlenose dolphins requires daily monitoring and record keeping to meet required values for pH, oxidizing and disinfecting agents, salinity and microbiological evaluation. Parks also must meet water temperature requirements and, for facilities incorporating water that is open to the ambient sea environment, be prepared to test for potential sources of water borne toxins, other biological agents, and viruses. In addition, parks are subject to local and national governmental oversight, which often includes monitoring of water quality.

**Echolocation**

Echolocation is an amazing sensory ability that dolphins use, as desired, in human care and in the wild. In oceans, dolphins often need to navigate in the absence of light/good visibility. The animals emit high-frequency sounds (referred to as “clicks”) to detect and analyse returning echoes from those sounds, thereby enabling them to determine the size, shape, structure, speed and direction of objects.

There is no scientific evidence to demonstrate that echolocation abilities are impaired in human care. Field studies have shown that bottlenose dolphin echolocation is used only as necessary in the wild, for example, to navigate in the absence of light/good visibility, and that dolphins vary the frequency of their clicks depending on their environment. This evidence suggests that dolphins rely on echolocation less in human care, however, they can and do use it. Indeed, today’s knowledge of dolphins’ echolocation abilities has been obtained largely from studies carried out with dolphins in human care.

**Anthropogenic Noise**

Most human-produced noises have minimal potential impact on dolphins due to the fact that dolphins have hearing ranges quite different from humans. In *Homo sapiens*, the audible range of frequencies tend to be between 15 and 20,000 Hz. In bottlenose dolphins, the hearing frequency ranges between 75 and 150,000 Hz. As such, most human-produced noise, including machinery used in modern zoos, has a very limited or irrelevant impact on dolphins.

**Social Groupings**

Social groupings for dolphins in EAAM parks correspond to the needs of the animals. In the wild, bottlenose dolphins often are found in primary groups that range from just 2 up to 15 individuals. Social structure and socialisation largely depends on the behaviour patterns, history and sizes of individual animals. Trainers in EAAM parks facilitate beneficial socialisation and carefully monitor interactions in the interest of the animals. With attentive husbandry, adaptation of new animals (for example, when an individual is moved to another facility to promote genetic diversity) into existing groups in human care is 100% successful. Unlike some other animals, dolphins kept in social groups rarely exhibit repetitive stereotypical behaviours.

As with most mammals, dolphins maintain natural hierarchies within their social groupings, both in the wild and in human care. Behaviours related to the establishment of positions within these hierarchies (as well
as sexual interactions) may result in “tooth rake” markings on the animals, the same as those seen on wild dolphins. Tooth rake markings are entirely natural, evidencing normal dolphin behaviour.

**Performance**

For dolphins, participating in a performance or interactive educational programme is an exciting part of their day. Studies show that such performances and interactions actually contribute to the dolphins’ physical and mental health and well-being. For example, a recent study found that, following performances, dolphins exhibited higher rates of behavioural diversity, swimming styles and play behaviours, suggesting that such performances are an important part of enrichment programs at zoos.\textsuperscript{xx} Dolphin performances and interactions also establish a powerful connection between humans and animals, creating lasting memories and motivating conservation action.

**Breeding and Rearing**

Breeding, together with high quality animal care and modern facilities, has resulted in a net increase in dolphins in human care in EAAM parks in recent years. In human care, the birth and rearing of a calf is facilitated by experienced personnel, state-of-the-art facilities and modern veterinary medicine. Calves that would not have survived in the wild have the opportunity to thrive in EAAM parks as a result of expert intervention. This increasing population growth has been achieved notwithstanding the relatively small population of bottlenose dolphins in human care in Western Europe (235 animals). All bottlenose dolphins at EAAM parks involved in breeding programs are integrated in the European Studbook (ESB) and Endangered species Programme (EEP).\textsuperscript{xxi}

**Training**

Animals at EAAM parks, including dolphins, are trained with affection, using positive reinforcements such as food rewards, praise, and caresses. Trainers use communication, patience and understanding to build close relationships of trust and respect with each animal. Marine mammal trainers and caretakers were among the pioneers of positive reinforcement techniques in the zoological context, now widely used with other mammals, birds and even fishes. Studies have shown this training technique to be the most motivating way of training any animal.\textsuperscript{xxii}

**Interactive Opportunities**

Personal observation and hands-on, multi-sensory experience is a proven way to increase learning, to change perceptions and to motivate. Interactive programs offer incredible opportunities for humans to enhance their knowledge about and appreciation of dolphins. Appropriate interactive programs are designed and carried out by experienced professionals for the safety and positive experience of both human and animal participants.

Tens of thousands of individual interactions, including "swim-with" experiences, have taken place over a period of more than 10 years in a number of EAAM parks. Any risk of illness from humans to dolphins or vice-versa is extremely low and does not occur under normal circumstances due to modern facilities, water quality systems and professional, pro-active veterinary care and health monitoring for the dolphins. Disease transmission between healthy dolphins and healthy humans who swim with them, if it occurs at all, appears to be no more likely than from interacting with pets at home.\textsuperscript{xxiii} The safety record is exemplary: no participant ever required medical treatment as a result of an interactive experience in an EAAM park.
Appendix II includes species that are not necessarily threatened with extinction but may require strict regulation of trade. The European Union subjects all cetaceans to stricter measures through their inclusion on Annex A of Council Regulation No. 338/97.


ESBs and EEPs are developed and maintained by the European Association of Zoos and Aquariums.