

INTRODUCTION

Many species of marine mammals, especially whales and dolphins have been kept in captivity for purposes such as conservation, research and education. But is this the real goal?

To deal with this issue we focus on **bottlenose dolphins** (*Tursiops truncatus*) and **orcas** (*Orcinus orca*).

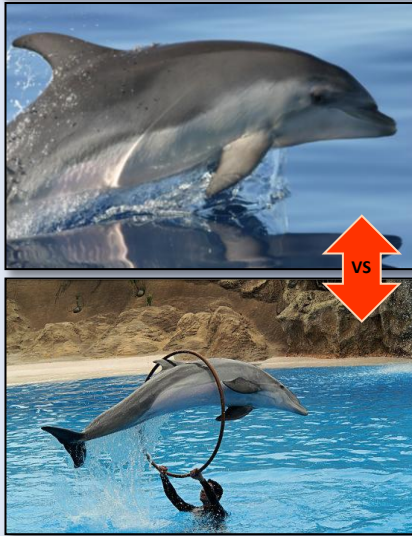


Figure 1. Bottlenose dolphin in the wild vs in captivity.

REASONS FOR REJECTING CAPTIVITY

Are they intelligent beings? Yes^[1]

- They have a **well-developed brain** and **complex communication skills** (between individuals and to navigate).
- They are **conscious beings** and they can feel pain.

Do they well in captivity? NO^[1]

- **Traumatic captures:** strong psychological impacts that could cause aggression events in the future.
- They are **separated and isolated from their group**. They are highly social animals that establish powerful links. If these links are severed, not only would the individuals be destabilized, their group too.
- Eventual **available space** in captivity will **not be enough**. They travel long distances (between 95 and 160 km/day). In captivity they end up swimming in circles which causes them frustration, boredom, and stress that could lead them to injure themselves).

Current situation^{[2][3]}:

European Union → 258 dolphins and 12 orcas.
Spain → 90 dolphins and 6 orcas.
Catalonia → 14 dolphins and 0 orcas.



Figure 2. Orca in the wild vs in captivity.

How long do they live in captivity?

Dolphins live roughly 20 years vs 50 years in the wild^[3].
Orcas live roughly 6,5 years vs 70-90 years in the wild^[3].

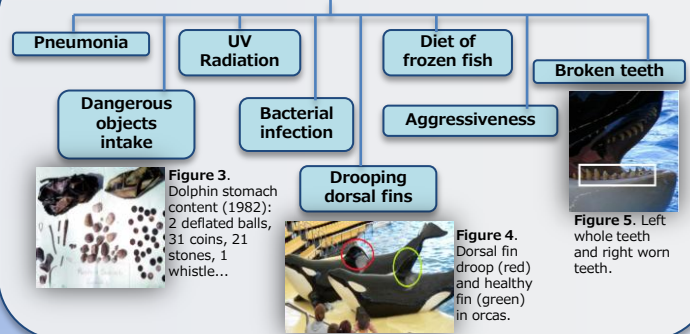
Mortality of dolphins and killer whales in captivity is considerably higher than in the wild, the largest difference being for orcas^[2].

Captive breeding has not had much success. Keeping these shows going on requires continuous captures of wild individuals.

SPECIES	Mortality rate in captivity				Mortality rate in the wild
	Study 1	Study 2	Study 3	Study 4	Study 5 and 6
Bottlenose dolphin	7.0%	7.4%	5.6%	5.7%	3.9%
Orca	7.0%	-	6.2%	6.2%	2.3%

Table 1. Annual mortality rates of bottlenose dolphins and orcas in captivity and in the wild^[2].

What are the impacts of captivity on their health?^[1]



RESOURCES THAT CAPTIVITY SHOULD OFFER ACCORDING TO:

Legislation:
Directive 1999/22/CE (UE)
Regulation 338/97 (UE)
Law 31/2003 (ES)
Legislative decree 2/2008 (CAT)

Captivity aimed at^[2]

Education

Research

Conservation

Frequently, the basic biological and behavioural is not given.

Education messages are in the background (Show time: 4% education and 96% acrobatics^[2]).

Nowadays research in captivity has little value → Misleading information (Dubious to apply in the wild).

We extract much more information studying them directly in their natural environment.

Bottlenose dolphin ("Least Concern") and Orca ("Data Deficient") → **Not threatened (IUCN)**
↓ Reproductive success ↑ Mortality ↓ Genetic diversity → **Unsustainable projects.**

Low participation from dolphinarium in conservation projects.

SOLUTION: IS IT POSSIBLE TO REINTRODUCE THEM?

- **Anomalous genetic mixing** → Uncertain results. It would be necessary ↑ preliminary genetic studies^{[2][3]}.
- **Dolphins and orcas should be trained** in behavioural tasks for their survival and not for acrobatic performances.

CONCLUSION

All facts point out that **the real goal of dolphinarium is not conservation, research or education**. Moreover, dolphins and whales can not cope with the social and physical conditions which place them in captivity, so they die prematurely. It depends on society, the media, the government and the scientific community to consider and evaluate this issue and take a decision; **there are no defensible reasons to continue keeping them in captivity.**

HOW IS CAPTIVITY PERCEIVED BY SOCIETY?

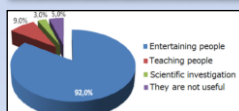


Figure 6. Answers to the question: what is the role of dolphinarium?^[4].

Most people agree to **ban dolphinarium** and believe these facilities do not contribute to understanding how animals live in the wild^[4].

As we see in the graphic (Figure 6), public expressed that dolphinarium have as main function to entertain people.