



## Additional Information on Dolphins for the Members of the Flemish Parliament

April 2024

Dr Koen Margodt (Ethicist, the Jane Goodall Institute Global and Ghent University)

---

Practical Information .....	- 1 -
Breeding: Why a Failed Experiment? .....	- 1 -
Construction Outdoor Pool: Why Better to Avoid? .....	- 3 -
Conservation, Education, Research and Entertainment .....	- 3 -
Majority Public Opinion is against Dolphinariums .....	- 4 -
Sanctuary: Why the Recommended Option? .....	- 4 -
Why the Study for Minister Weyts raises Scientific Eyebrows .....	- 5 -
Why Prohibit Dolphinariums? .....	- 6 -
Why Prohibit Contact between Visitors and Dolphins? .....	- 6 -
Resources .....	- 6 -
Acknowledgements .....	- 7 -

### Practical Information

Video of Dr. Jane Goodall for the Members of Parliament:  
<https://www.youtube.com/watch?v=CRsT2cv7AkY>

You can find my presentations for the Flemish Parliamentary Commission on Animal Welfare and additional information here: <https://www.koenmargodt.com/blog/A-dolphin-plea-in-the-flemish-parliament>

The information provided in this document has been carefully checked with international marine mammal experts – see Acknowledgements

Communication: [koen.margodt@janegoodall.global](mailto:koen.margodt@janegoodall.global).

### Breeding: Why a Failed Experiment?

Since 1987 30 dolphins have been born at Boudewijn Seapark. Five are still alive, 25 are death. **83% have thus died, which I consider a very high mortality rate for a long-lived species and therefore a failed**

**breeding experiment.** Bottlenose dolphins typically live to 25 years and some can live to around 65 years. Fortunately, dolphin breeding has stopped at Boudewijn Seapark in 2015.

Eight of these were stillborn/miscarriage. If we exclude these, 22 dolphins were for some time alive and 17 (68%) passed away, which is still very high.

Mr van den Ham said one shouldn't use data from the site <https://www.cetabase.org/facilities/cetaceans/>. This site is very diligent and is not anti-captivity. Unfortunately, Boudewijn Seapark does not make such data available on their website. I invite him and Boudewijn Seapark to transparently publish all data on living dolphins, births, deaths, place of capture, transfers and reasons for their death online. None of the data from the cetabase website were proven wrong by van den Ham, not even that Ori passed away. Four dolphins were lacking, two claimed to be still alive (where are they?) and two death.

The average age of the dolphins born at Boudewijn Seapark is 6.8 years for 21 dolphins, excluding those who were stillborn/miscarriage and Ziggy, as Mr van den Ham did not mention how long this dolphin lived.

How did Mr van den Ham come to a survival rate of 66% for the dolphin births in Bruges during his presentation?

1. He only includes dolphins born since 1997. He thus excludes the ten dolphins born in Bruges between 1987-1996, all of whom died. Don't these dolphins matter? Why does he start in 1997, is it because the first dolphin who is still alive was born in 1998?
2. He excludes dolphins who were stillborn. This may be fair when comparing with survival rates in the wild, as it can be argued that these may go unnoticed in the wild. Still, when looking at absolute figures by themselves, each of these stillborn youngsters counts
3. His focus is on those dolphins who became older than four years. Remarkably, he doesn't acknowledge in his slide that Ori (2015-2023) passed away last year in Boudewijn Seapark. If we follow this logic, 9 out of 21 dolphins – we do not know at what age the 22<sup>nd</sup> dolphin died - born in Boudewijn Seapark became older than four years. This is a mere 42% survival rate beyond four years.

It is difficult to compare data for captivity and the wild, as indeed in the wild stillbirths may occur unnoticed. However, for the well-studied Sarasota dolphins in Florida, data show a mortality rate of 23% for calves and 8% for juveniles. Although 30% may die within the first four years, 70% survive into adulthood. However, actual survivorship may even be higher as Rose *et al.* have remarked that some dolphins likely migrated outside the study area, even though they were treated as if dead (Rose *et al.*, 2023: 144). Even the 66% survival rate brought forward by van den Ham is still below this and this within the so-called well-protected environment of captivity.

Importantly, we should not focus too much on trying to compare data from the wild and captivity. **The key takeaway is that the numbers of dolphins who were born and died at a young age in Bruges are**

**excessive. Captive facilities should at the very least focus on keeping species that are more suitable from an animal welfare perspective.**

### **Construction Outdoor Pool: Why Better to Avoid?**

The construction of an outdoor pool may be well-intended as an attempt to try to improve the welfare of the dolphins at Boudewijn Seapark and to some it may sound logical. However, I have been informed that the welfare impact may be negative rather than positive.

First, it has been demonstrated that the noise of construction works has a negative welfare impact on dolphins. During construction works around a dolphinarium in Barcelona, salivary cortisol concentrations – cortisol is a stress hormone – increased in all five adult bottlenose dolphins investigated. The male dolphin showed a 300-fold increase of cortisol level. This was linked to the vibrations and noise due to the construction works (Monreal-Pawlowsky *et al.*, 2017).

Second, research indeed indicates that open pools are better for the welfare of dolphins than closed pools, but this research relates to sea pens allowing access to a natural marine environment, including small fish. The dolphins in these sea pens (open to the flow of ocean water through netting) show significantly more active and social behaviour and swam more in linear patterns, whereas in tanks dolphins swim more in circular patterns, display more passive behaviour such as floating and are less engaged in social interaction. Furthermore, the dolphins in open seapens had lower salivary cortisol concentrations than dolphins kept in closed facilities (Ugaz *et al.*, 2009, Ugaz *et al.*, 2013).

### **Conservation, Education, Research and Entertainment**

Conservation: bottlenose dolphins are listed as **Least Concern** in the IUCN Red List. There is no need for a captive breeding program of bottlenose dolphins.<sup>1</sup>

Where dolphins are kept in captivity, education is frequently used as a justification. However, its level of quality and objectivity is highly questionable. Dolphins are very popular in spite of dolphinariums, as the majority of the general public is against keeping dolphinariums (see Majority Public Opinion is against Dolphinariums

The atmosphere at facilities such as Boudewijn Seapark is not that of an educational facility. Instead it is all about amusement and entertainment. Dolphins have to perform tricks for the reward of a dead fish to the noise of music and cheering audiences. In many ways this is effectively just a ‘wet circus’.

Nature is not paradise, but in the wild dolphins do live in more varied environments to which they have adapted over millions of years. Dolphinariums tend to portray themselves in a favourable spotlight, while casting a negative light on nature.

---

<sup>1</sup> See <https://www.iucnredlist.org/species/22563/156932432>.

Consult the FAQ on dolphins online by Boudewijn Seapark<sup>2</sup> or download the PDF that is meant to help children to prepare a presentation (or 'spreekbeurt'). From their sources you will be told that the dolphinarium in Bruges is 'gigantic'. It is mentioned that dolphins of the coastal type live in coastal waters, often with a maximum depth of 3 to 5 metres, whereas the dolphinarium is 6 metres deep. It isn't mentioned that the home range of even coastal dolphins can stretch over hundreds of kilometres and it fails to explain that the dolphins don't spend their entire lives in 3 to 5 metres of water – rather they may spend considerable amounts of time in waters in excess of 300 to 500 metres (Rose *et al.*, 2023).

The FAQ emphasizes that in nature half of the dolphin calves pass away before they become one year old. A study of the Indian River in the USA is mentioned, where 38% of dolphins die before the age of two years and 64% before they become ten years old.

Why does Boudewijn Seapark focus on the Indian River Lagoon, which is known to suffer from high levels of pollution, negative interaction with humans (eg wounds from boat collisions) and skewed demographics due to capture for dolphinariums at the time various studies were done (which resulted in a higher proportion of young animals, whom are more vulnerable than adult dolphins)? Why does Boudewijn Seapark not inform visitors to their website of the more representative Sarasota population with survival rates of 70% into adulthood (Lacy *et al.*, 2021)? Or the dolphin community of Doubtful Sound in New Zealand, which is less disturbed by humans and where 80% of young dolphins make it through the first year (Haase and Schneider, 2001)? And why is Boudewijn Seapark not informing customers about their own breeding attempts and the associated mortality rates?

The research output of Boudewijn Seapark is very limited and not worthy of further attention.

The main 'value' of dolphinariums like Boudewijn Seapark is to entertain the public, but at a cost to the dolphins. Dolphinariums are sedentary circuses with wild animals and should be treated legally on the same page as travelling circuses with wild animals.

### **Majority Public Opinion is against Dolphinariums**

An international survey amongst 858 respondents showed that 54.4% are opposed to captive display of dolphins and whales, while 45.5% support captive display. Quite remarkably, this study showed that "Participants that support cetaceans in captivity were significantly more likely to believe cetacean conservation is not important." (Naylor and Parsons, 2019). This contradicts the dolphinarium argument that dolphin display teaches people about the need to protect cetaceans in the wild.

### **Sanctuary: Why the Recommended Option?**

Sanctuaries allow combining the benefits of a more natural life in a varied and spacious area with that of, for example, veterinary care. Trainers still work with the dolphins, but not dictated by a script with a focus on entertaining audiences.

---

<sup>2</sup> See <https://www.boudewijnseapark.be/ontmoet-de-dieren/feiten-en-fabels/>.

Scientists, such as Dr. Jan Schmidt-Burbach and Dr. Ingrid Visser, who both are consultants to the Aegean Marine Life Sanctuary (AMLS) on Lipsi, Greece, have assured me that this sanctuary is making great progress. The contact with the local community and authorities is excellent. The main building and roads are ready. The bay has been restored through replanting of seagrass. This pristine cove is 300 metres long, 120 metres wide (widest point) and 15 metres deep. AMLS is managed by the reputable Archipelagos Institute of Marine Conservation, an NGO which exists since 1998.<sup>3</sup>

The Boudewijn Seapark is part of the Spanish Aspro Parks, which owns 68 amusement parks. In 2014 one million Euro was invested in Bobo's AquaSplash in Boudewijn Seapark. This group should take up the financial responsibility to give something back to the dolphins, which brought them profits since the 1960s. Boudewijn Seapark and Aspro Parks need to make an ethical shift, giving priority to the welfare of the dolphins, similar as the one made by the National Aquarium of Baltimore in the USA, which is looking to retire their dolphins in a seaside sanctuary based upon ethical considerations.

### **Why the Study for Minister Weyts raises Scientific Eyebrows**

It is remarkable that the welfare assessment study for Minister Weyts gives a welfare score of +80% to the dolphins kept at Boudewijn Seapark. The assessment has been passed on to other marine mammal scientists and is seen as questionable in terms of its approach.

Some of the concerns that have been expressed by Dr. Ingrid Visser are the following:

1. The observations from 21<sup>st</sup> until 26<sup>th</sup> of February 2022 only took place during office hours, which provides "a poor overview of the real time budgets of the animals"
2. The longest observation of a dolphin only lasted for a total of 160 minutes, which is "a woefully inadequate duration to assess the welfare of any dolphin"
3. The welfare assessment consists of only three categories, which doesn't allow for a subtle welfare evaluation
4. The way categories were combined "gives the overall impression that the assessment will tend to be always in the favour of the 'facility', not the welfare of the dolphin." For example, the physical health of dolphin Number 1 was assessed with a score of '1=suboptimal', for each of the categories of skin abnormalities, mouth and discoloration. However, the cumulative total does not result in score '3=poor welfare', but 83.3% or 'good welfare'
5. Various important categories of welfare assessment appear to be overlooked or are not detailed enough, such as medical records indicative of health issues (such as stomach ulcers), the quality of light, how much ventilation is provided and the level of noise (such as that of water pumps or music during shows)
6. Why is the amount of echolocation or vocalisations by the dolphins absent in the study?

---

<sup>3</sup> See <https://archipelago.gr>.

7. 'Resting' behaviour for the dolphins is listed as 'optimal welfare', whereas this is not defined. It could be 'logging' behaviour (extensive lying at the surface), which is an unnatural but common behaviour in dolphinariums to the point of being an abnormal repetitive or stereotypic behaviour

On the topic of breeding: a breeding ban is considered as something that would lead to reduced welfare of the group, but the very same report indicates that the facility is already controlling the breeding of the individuals. Breeding is seen as important for welfare, but nowhere does this report provide information or evaluate the breeding at this facility (see 'Breeding: Why a Failed Experiment?').

The construction of an additional tank, or outdoor enclosure, is evaluated as not having any negative welfare impacts. This ignores scientific studies which show the impact of construction works on cortisol levels, which are linked to stress, see Construction Outdoor Pool: Why Better to Avoid?

### Why Prohibit Dolphinariums?

In nature bottlenose dolphins, whether inshore or off, have home ranges that stretch over hundreds of kilometres. They dive to hundreds of metres deep. While the inshore ecotype may spend time in shallow water, they do not consistently inhabit waters as shallow as the deepest tank. **Mammals that actively move through large home ranges in nature are prone to stereotypical behaviour and high infant mortality in captivity. Polar bears and cetaceans (such as bottlenose dolphins, orcas and belugas) meet this criterion. These mammals are unsuitable for captivity.**

We should not take this lightly. Rose *et al.* note that "bottlenose dolphins commonly suffer from a disease in captivity that appears to be caused by the very nature of captive conditions, where deep dives are not possible and long breath-holds rarely occur." Hemochromatosis, a disease due to accumulation of iron in blood, appears to be linked to limitations of captivity in captive bottlenose dolphins (Rose *et al.*, 2017).

Bottlenose dolphins live in complex social fission-fusion societies. They are extremely smart, use tools, have complex communication and pass on cultural behaviour across generations.

Captive tanks stand in sharp contrast to the large, varied, natural habitats of bottlenose dolphins. Captive tanks are barren, dull spaces for bottlenose dolphins.

### Why Prohibit Contact between Visitors and Dolphins?

The marine mammal scientists that I have consulted unanimously state that there should be no direct contact between visitors and dolphins, due to risk of bi-directional disease transmission, the stress for the dolphins who have their personal space invaded and risk of injuries by dolphins to visitors. See for further information Rose *et al.*, 2023.

## Resources

Anonymous, De Tuimelaar: Materiaal Spreekbeurt of presentatie, <https://www.boudewijnseapark.be/wp-content/uploads/2021/01/spreekbeurt-BoudewijnSeapark-de-tuimelaar.pdf> (published online by Boudewijn Seapark)

Clubb, R. and Mason, G. (2003) Captivity effects on wide-ranging carnivores: Animals that roam over a large territory in the wild do not take kindly to being confined. *Nature*, Volume 425, p. 473-474, [https://www.researchgate.net/publication/9069205\\_Animal\\_Welfare\\_Captivity\\_effects\\_on\\_wide-ranging\\_carnivores](https://www.researchgate.net/publication/9069205_Animal_Welfare_Captivity_effects_on_wide-ranging_carnivores)

Haase, P.A. and Schneider, K. (2001) Birth demographics of bottlenose dolphins, *Tursiops truncatus*, in Doubtful Sound, Fiordland, New Zealand—preliminary findings. *New Zealand Journal of Marine and Freshwater Research*, Volume 35, p. 675-680, <https://doi.org/10.1080/00288330.2001.9517034>

Lacy, R.C., Wells, R.S., Scott, M.D., Allen, J.B., Barleycorn, A.A., Urian, K.W. and Hofmann, S. (2021) Assessing the Viability of the Sarasota Bay Community of Bottlenose Dolphins. *Frontiers in Marine Science*, Volume 8, Article 788086, 20 pp, <https://doi.org/10.3389/fmars.2021.788086>

Monreal-Pawlowsky, T., Carbajal, A., Tallo-Parra, O., Sabés-Alsina, M., Monclús, L., Almunia, J., Fernández-Bellon, H. and Lopez-Bejar, M. (2017) Daily salivary cortisol levels in response to stress factors in captive common bottlenose dolphins (*Tursiops truncatus*): a potential welfare indicator. *Veterinary Record*, Volume 180, Issue 24, p. 593-595, <https://bvajournals.onlinelibrary.wiley.com/doi/10.1136/vr.103854>

Naylor, W. and Parsons, E. C. M. (2019) An International Online Survey on Public Attitudes Towards the Keeping of Whales and Dolphins in Captivity. *Tourism in Marine Environments*, Volume 14, Number 3, p. 133-142, <https://doi.org/10.3727/154427319X15627970573318>

Rose, N. A., Hancock Snusz, G., Brown, D.M. and Parsons, E. C. M. (2017) Improving Captive Marine Mammal Welfare in the United States: Science-Based Recommendations for Improved Regulatory Requirements for Captive Marine Mammal Care. *Journal of International Wildlife Law & Policy*, Volume 20, Number 1, p. 38-72, <http://dx.doi.org/10.1080/13880292.2017.1309858>

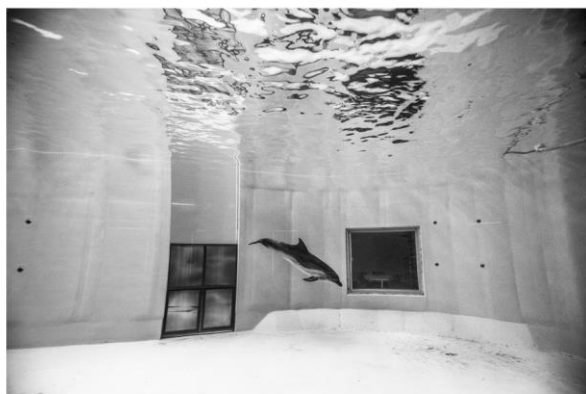
Rose, N.A., Soller, A.S., and Parsons, E.C.M. (2023). *The Case Against Marine Mammals in Captivity*, 6th edition (Washington, DC: Animal Welfare Institute and World Animal Protection), 186 pp, <https://awionline.org/content/case-against-marine-mammals-captivity>

Ugaz, C., Sánchez, A., Galindo Maldonado, F. (2009) Social and individual behavior of a group of bottlenose dolphins (*Tursiops truncatus*) in open and closed facilities. *Veterinaria México*, Number 4, p. 381-387, [https://www.researchgate.net/publication/286949225\\_Social\\_and\\_individual\\_behavior\\_of\\_a\\_group\\_of\\_bottlenose\\_dolphins\\_Tursiops\\_truncatus\\_in\\_open\\_and\\_closed\\_facilities](https://www.researchgate.net/publication/286949225_Social_and_individual_behavior_of_a_group_of_bottlenose_dolphins_Tursiops_truncatus_in_open_and_closed_facilities)

Ugaz, C., Valdez, R.A., Romano, M.C. and Galindo, F. (2013) Behavior and salivary cortisol of captive dolphins (*Tursiops truncatus*) kept in open and closed facilities. *Journal of Veterinary Behavior*, Volume 8, p. 285-290, <http://dx.doi.org/10.1016/j.jveb.2012.10.006>

### Acknowledgements

I am in particular grateful to the advice of the following marine mammal and other experts: Prof Dr Denise L. Herzing, Melody Horrill, Dr. Lori Marino, Prof. Dr. Ada Natoli, Dr Naomi Rose, Dr Jan Schmidt-Burbach, Dr Ingrid Visser and Charles Vinick.



*“Responsible tourism respects all animals. Therefore, there is no place for dolphin shows, wild animal circuses, elephant rides, trophy hunting or any activity which demeans, harms or disrespects them.”*

**Dr. Jane Goodall**

Slide from presentation by Dr. Koen Margodt to the Flemish Parliamentary committee on 6 March 2024.  
Credit picture: Jo-Anne McArthur, Born Free Foundation, We Animals Media.