

BEFORE WE START, INFORMATION FOR THE EDUCATORS:

Do not print this page.

WHO WE ARE?

We are a multidisciplinary team, with members from different backgrounds and nationalities, working together towards the same goal: to create educational material that can translate to our younger audience the difference between captive and cetaceans in the wild. Through an intense and gratifying work this guide, whose distribution will be **free**, was generated.

The team assembled for this Project does not represent any organization, all work was conducted in a voluntary basis and without compensation. All sales or wrong usage of this material is strictly forbidden.

NOTA: THIS VERSION OF THE MATERIAL FREECETACEANS RESULTS FROM A COLABORATION BETWEEN OUR TEAM AND THE NGO SOS DELFINES.

THE IDEA

The number of zoo's keeps increasing despite the increase of available information regarding the negative effects of captivity. Nowadays most citizens aren't aware of the main issues regarding this industry. Since the majority of available information targets older audiences, our main idea was to create complementary material, in this case for the young generation, particularly those of school age, and to make it available in as many languages as possible, in order to reach a larger number of people.

Tenemos que comenzar por educar en las escuelas: los niños no sólo son las futuras generaciones, también pueden cambiar la mentalidad de sus propios padres.

This material may be used by teachers as well as by particular individuals, who, despite their academic background may understand the problematic and choose to contribute by educating in schools.

In countries where captivity is forbidden or non-existent, education the general public is just as important. Citizens of these countries are potential tourists to this industry, and they can be advocates and fight for changes in legislation.

Thanks to the digital world, we have a vision of anyone, anywhere, being able to take this material, use it, spread it. To those who believe a single person's actions won't change a thing, and as a small abstract of the larger ideal of this project, we want to quote an Uruguayan author, Eduardo Galeano:

**SMALL PEOPLES, IN SMALL PLACES,
DOING SMALL THINGS, CAN CHANGE THE WORLD**

THE MATERIAL

This material targets children of 8 and 9 years old. It is composed of 8 files with varied information, and connect or color activities (we recommend that, if printing the material, it should be done on both sides of the sheets, to save paper). This material is divided into two main sections:

I: What do you know about cetaceans? General facts and biology of cetaceans in their natural environment. Species selected are the three main ones found in captivity: bottlenose dolphins, orcas and belugas.

II: Is captivity necessary to study and protect cetacean species? What are the consequences of captivity? Pondering the effects of captivity on these animals and what benefits may the wild populations have.

IMPORTANT: this educational material comes with support media, created by the NGO SOSdelfines: photographs and videos to help and enhance the learning experience.

CETACEANS: why in freedom

Educational supporting material



I. ¿QUÉ SABES DE LOS CETÁCEOS?

TASK 1

Activity 1.1: To what group do cetaceans belong to?

Watch carefully the following drawings. Choose one color to represent all mammals, and draw a circle around the ones that are cetaceans.



Can you finish this sentence with the right words?

Cetaceans are (*marine/terrestrial*) animals that belong, just like us humans, to the group of (*fishes/mammals*).

Fishes breathe oxygen directly from the water through specialized organs called (*lungs/gills*).

On the other hand, cetaceans breathe like us, the rest of the mammals: oxygen from the atmosphere (air) is taken through the (*lungs/gills*). This is one of the reasons its easy to spot them in the oceans surface.

Activity 1.2: Humans have teeth, what about the cetaceans?

Cetaceans are divided into two main groups: odontoceti and mysticeti. These strange names originate from ancient greek and mean:

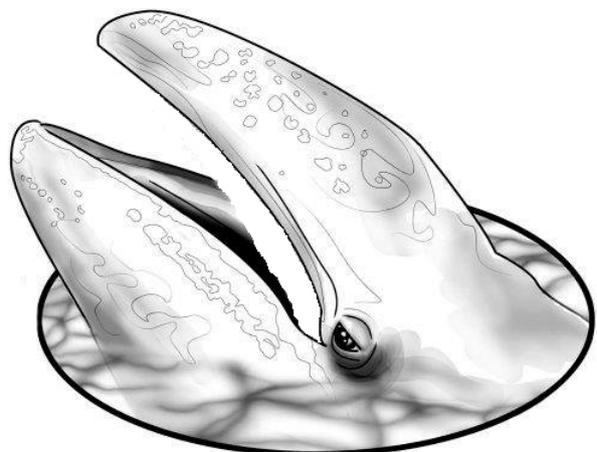
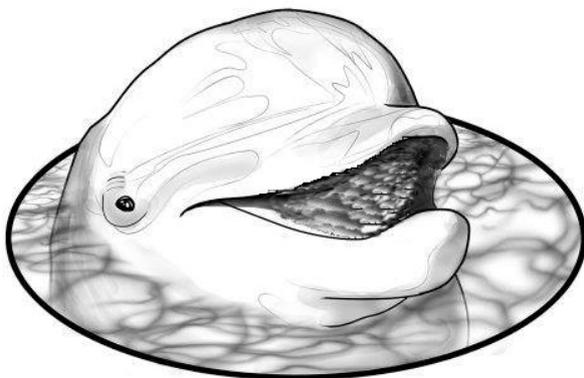
ODONTOCETI= cetacean with _____

They feed in an active manner, on other words, these animals chase their prey in order to feed.

MISTICETI = cetacean with _____

These animals feed passively, due to the structures present in their mouths. These structures are present in large whales and are used to filter sea water, expelling the water out of their mouths and keep small shrimps (krill) and fishes.

Draw the different feeding structures these two groups have in their mouths, and name the ones that represent Odontocetis and Mysticetis.



TASK 2

Activity 2.1: How do the cetaceans breath?

Now
lets focus on
a particular group of
Odontoceti species:

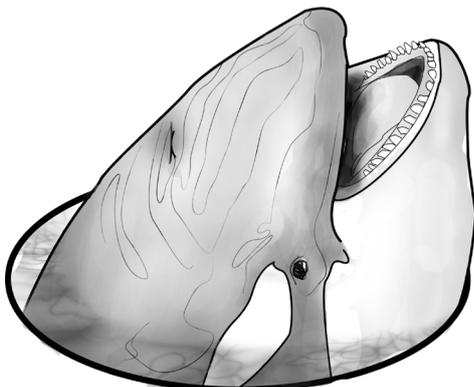
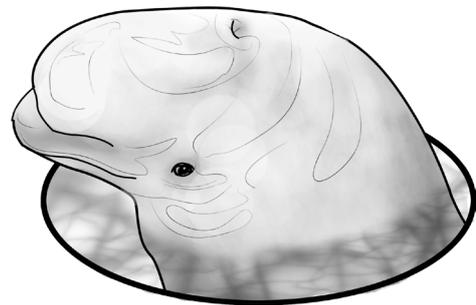
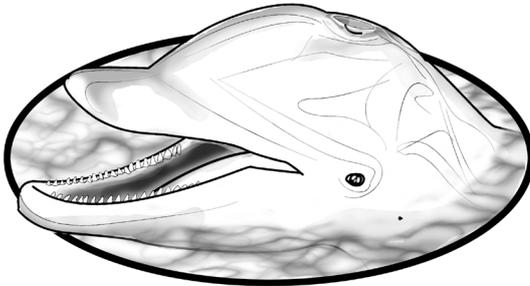
**THE ORCAS, THE
BOTTLENOSE DOLPHINS
AND THE BELUGAS.**
ou will find their main
features:

The head. It is in their head where you can find their noses, or snouts, their teeth, their eyes and some tiny holes on the side of their heads – the ears.

The blowhole. Odontoceti breath through a hole centered at the top of their head, named the blowhole.

When these animals dive, the blowhole closes so the water doesn't get in, when they breach the surface of the water, the blowhole opens, expelling water vapour from their lungs and breathing in the air. The vapour turns to liquid water when in contact with the colder air outside the body and its named the blow.

*Do you know which of these drawings represent an orca?
And the bottlenose dolphin? Which one shows a beluga?*



*Mark in each drawing the snout,
blowhole, teeth, eyes and the ears
of these animals.*

Activity 2.2: How do they swim?

The fins.

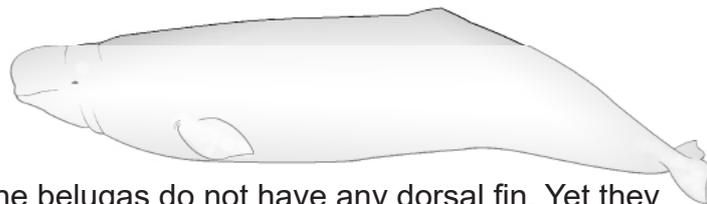
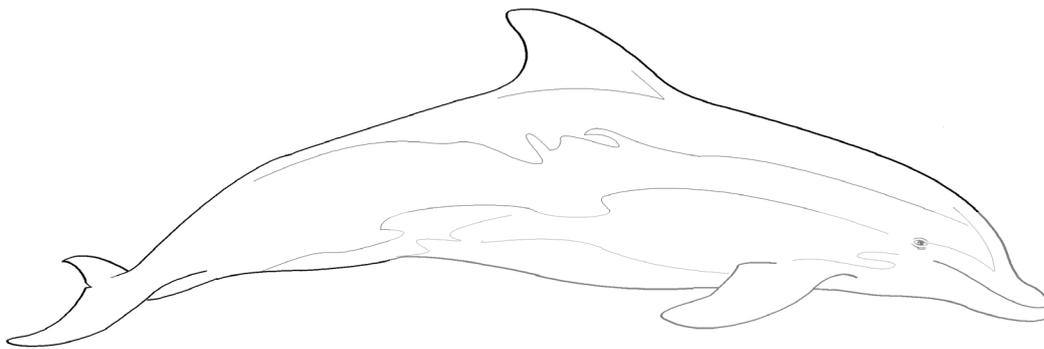
Cetaceans have three type of fins.

You can find the **flukes** at the end of the animal's body, and it is mainly used for swimming, in a vertical motion up and down.

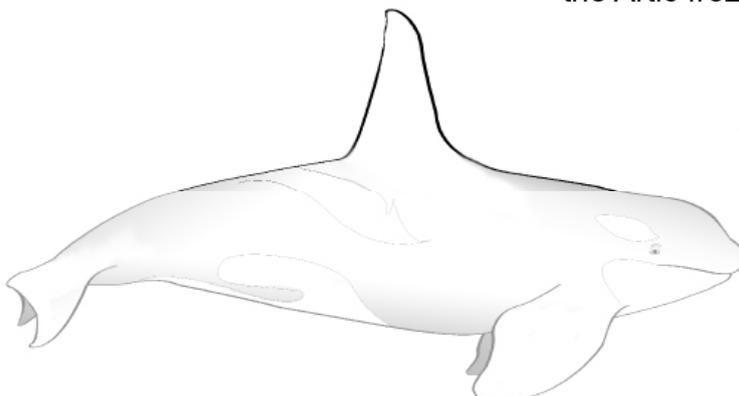
The **dorsal fin** has a different function, it works to balance the swimming, but it is bigger on the faster moving species.

Pectoral fins are located in both sides of the body and are used to steer the movements.

Mark with different colors the different fins: dorsal, flukes and pectoral fins on the different odontoceti drawings.



The belugas do not have any dorsal fin. Yet they possess a rigid and very small rigde that they use to break ice, in order to be able to travel and breathe in the Artic frozen ocean.

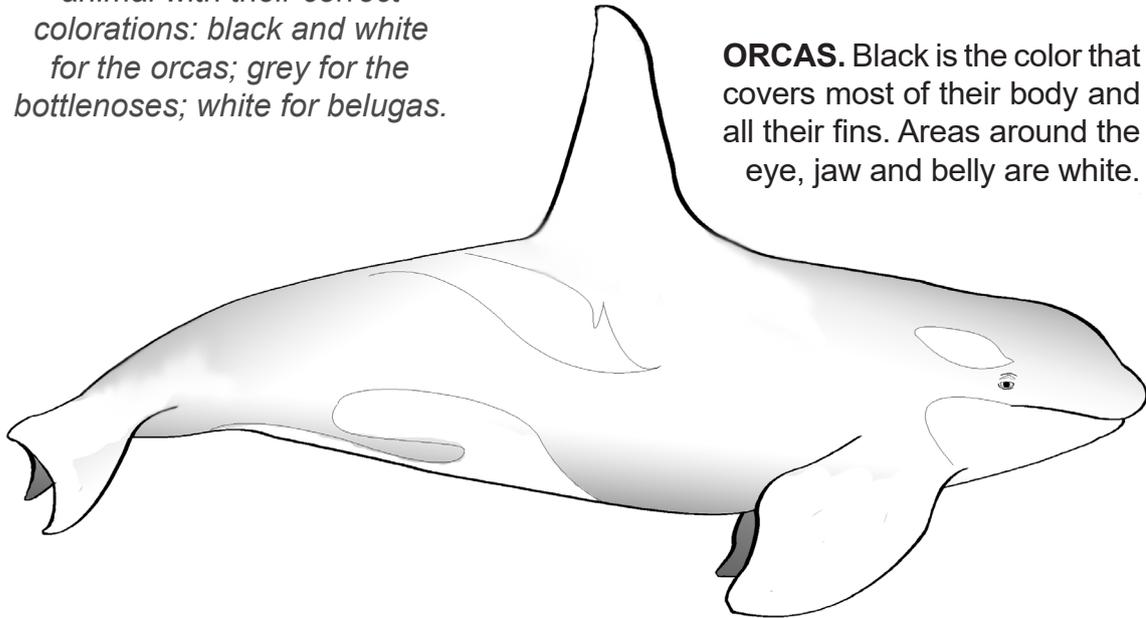


Adult orca males have one very large dorsal fin, that can reach more than 1,5 meters high.

TASK 3

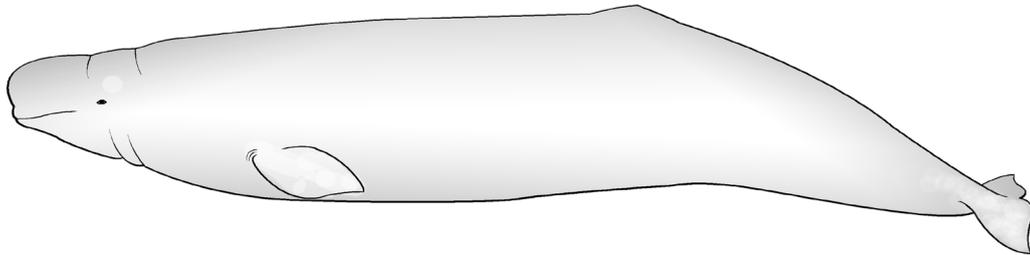
Activity 3.1: Do you know how to identify the different colors from orcas, bottlenoses and belugas?

Paint each animal with their correct colorations: black and white for the orcas; grey for the bottlenoses; white for belugas.

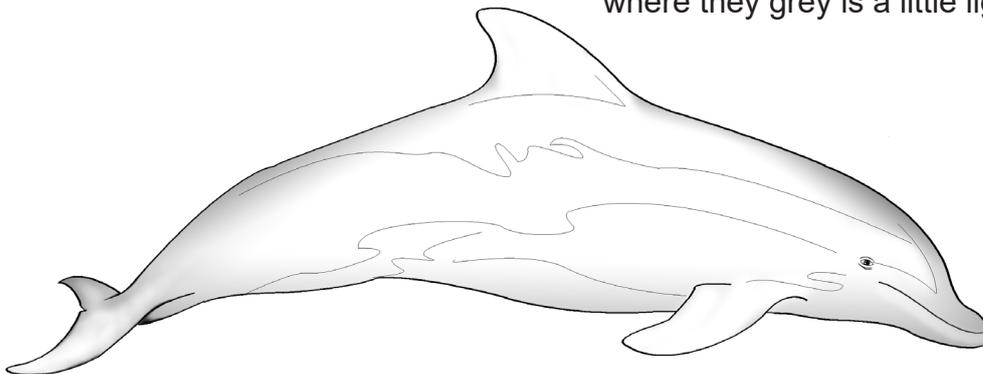


ORCAS. Black is the color that covers most of their body and all their fins. Areas around the eye, jaw and belly are white.

BELUGAS. These animals, like the snow, are totally white.



DELFIN MULAR. The whole body is of a dark grey cover, except in the belly, where they are a little lighter.



Activity 3.2: What do orcas, bottlenose and belugas each eat?

Sometimes these animals travel large distances in order to find their next meal, they are very athletic!

ORCAS. Their choice of food is very diverse, and different orcas families have particular tastes. For example some orcas eat mainly fish, others prefer to specialize in sea lions, or even cetaceans. Some orcas specialized their feeding on turtles and penguins.

DELFIN MULAR. These dolphins normally eat fish, but they can also eat other animals such as squid or invertebrates.

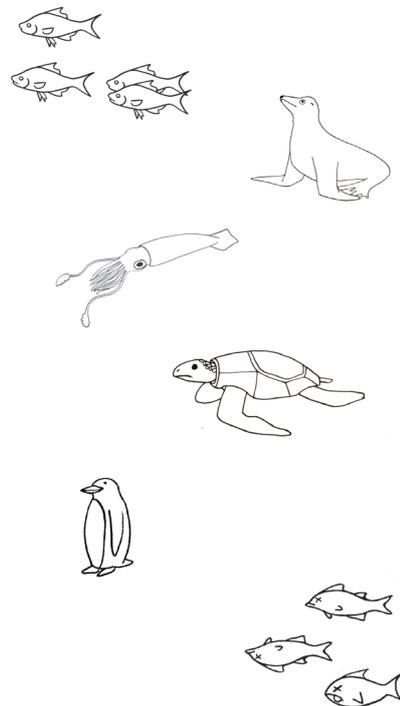
BELUGAS. These white creatures feed on fished such as cod and salmon. They sometimes eat squid, octopus, crab and shrimps.

Use different colors for each of the cetaceans and connect them with they favourite types of food.

ORCA

BOTTLENOSE DOLPHIN

BELUGA



From the different animals cetaceans eat, which one is not a part of their natural wild habitat?

TASK 4

Activity 4.1: Where do cetaceans live?

The natural habitat for these creatures is the open sea.

Dolphins and whales are found in all of our planet's oceans. These occupy an area three times the size of earth's land area. Because of this we can say that a cetacean's home is much larger than ours.

These animals travel great distances everyday!



TASK 5

Activity 5.1: Do they travel alone or in a group?

These animals are highly sociable and form large and united family groups! In many species and tribes the young stay in the same family pod as their mothers, their whole lives.



Research question. *How many individuals can be a part of the following groups?*

Pods of orcas _____

Pods of belugas _____

Pods of bottlenose dolphins _____

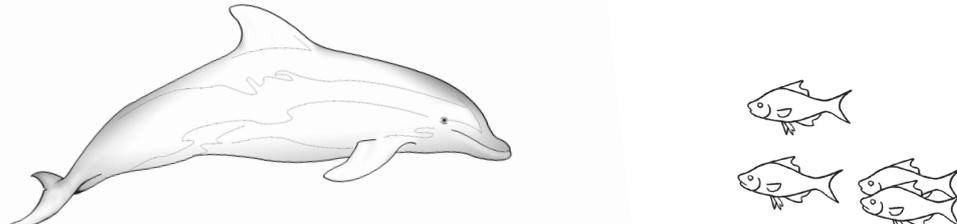
Actividad 5.2: How to they communicate amongst themselves?

These animals communicate through a system called 'echolocation', which not only allows each individual to talk with each other, but is also used for them to see underwater, even in the dark.

They use this system to see and capture prey.

LEARN SOME CURIOSITIES!
Cetaceans do not sleep the same way humans do.
They are always somewhat conscious: when one half of the brain sleeps, the other is awake. They are very playfull creatures as well!

What other animal also uses ecolocation?



Draw a dolphin ecolocating

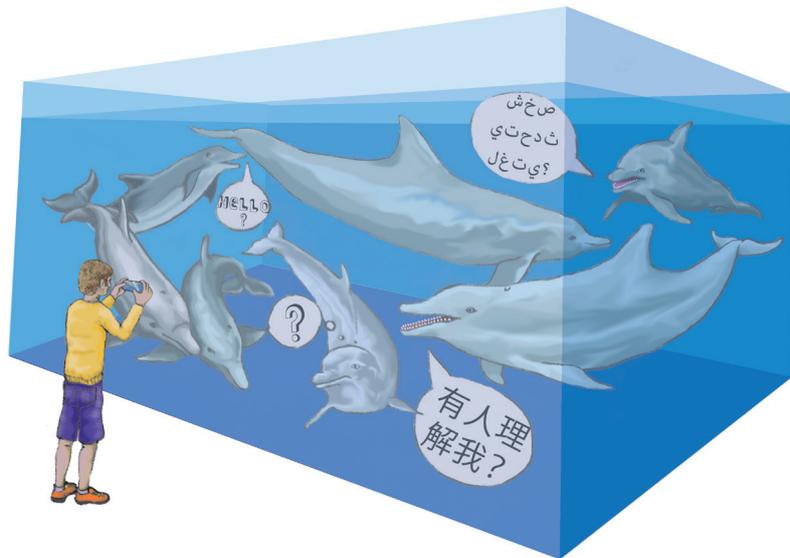
II. IS IT NECESSARY FOR US TO KEEP THESE ANIMALS IN CAPTIVITY IN ORDER TO STUDY AND PROTECT THEM? HOW ARE THEY AFFECTED BY CAPTIVITY?

TASK 7

Activity 7.1: What does this image suggest?

Cetaceans talk using many different sounds, even between animals from the same species.

For example, the language orcas family from the north Atlantic is different than the language spoken by the orcas from for example south Africa. So when they meet, they wont understand each other.



When these animals are kept in captivity, they stay in pools alone, where they cannot socialize with their friends and family, or they are kept with other individuals that most often than not, are from different populations and speak a different language.

Watch a video of a dolphin show and answer the questions:

How do you think the dolphin feels being made to do all these actions?

What does the dolphin always get after doing a trick?

Why do you think the dolphin does what the trainer asks him?

Do you think they would do all these exercises in the wild?

Activity 7.2: What space would the largest dolphinarium in the world take, in the Mediterranean?

As you know must know, some dolphins, orcas and belugas do not live in their natural environment, they have been taken from the sea and separated from their families. They now live in small pools inside zoological parks throughout the world.

Research question: *Investigate the world largest dolphinarium.*

- A) *What space would it take if it were in the Mediterranean?*
- B) *What do you think about this?*



The ocean is very big, occupying 70% of earth's surface. Orcas, dolphins and belugas are agile animals that swim large distances every day.

Now, picture a dolphin pool, like the one in the video. Do you think the dolphin can swim as much in that pool as in the ocean? (In the case of the orcas, they would have to swim 1400 rounds of an average pool a day to match the average swim distance at sea).

How many swims around the pool could you do every day? Would you be able to do this without getting seasick?

Research question: How many kilometres a day can a swim?

An orca? _____

A beluga? _____

A bottlenose dolphin? _____

TASK 8.

Activity 8.1: Imagine you are a dolphin. How would you feel if you had to live your whole life always in your room?

Lets do an exercice: Imagine you and your classmates are the dolphins of a zoo, and this classroom in your pool. Who would like to live here forever and never go outside?

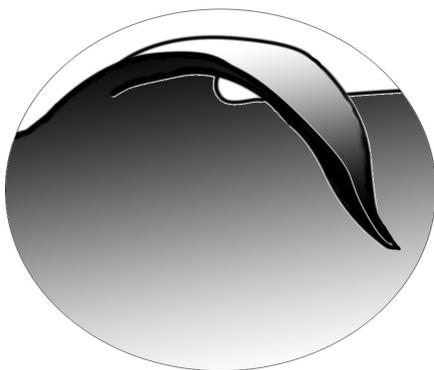
**No one off course!
It happens the same to the animals that live in captivity!**

Besides, in most dolphinariums the animals are made to perform many shows every day in order to get food. In the wild this behaviour doenst exits.

**Maybe it is not fun to live like this.
The pools are not big enough for these animals to swim as much as they want.**

Activity 8.2: How do you think dolphins in dolphinariums feel?

Did you know that male orcas that live in captivity have a bent dorsal fin?



The orcas dorsal fin are like our muscles, if they do not exercise them with sport for example they loose their structure.

There are other factores that can cause the male orcas dorsal fin to bend:

- Incorrect feeding. These animals are eating the wrong food.
- The time orcas spent at the surface, with their dorsal fins in contact with the air, is much more than when they are in the ocean, where they swim and spend more time underwater and at greater depths.

This means that these animals behaviour and habbits in captivity are very different than the ones living in the wild.

Imagine you know live in this classroom. Now imagine that your friends they go to another classroom, and new classmates come but they don't speak your language, they came from a different country.

How would you feel?

- 1.-
- 2.-
- 3.-
- 4.-
- 5.-

How many of these feelings could also apply to the cetaceans in captivity?

- 1.-
- 2.-
- 3.-
- 4.-
- 5.-

Now, after all we learned, where do you think a dolphin is happier? In the sea or in the zoo?

What do you think you can do to help the dolphins to become more happy?

We want you to know more about cetaceans and think about the issues of having animals like orcas, dolphins or belugas in zoos.

IF WE WANT TO SEE THESE ANIMALS HAPPY WE NEED TO SEE THEM IN THEIR NATURAL HABITAT, THE OCEAN! THERE IS WHERE THEY BELONG AND ARE TRULY HAPPY!