

# Research Report

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Environment Commission

Addressing the protection of whales



## MUNISH '11



Please think about the environment and do not print this research report unless absolutely necessary.

<b>Forum</b>	Environment Commission
<b>Issue:</b>	Addressing the protection of whales
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## Introduction

The issue about the protection of the whales isn't at all a new one. Since the 17<sup>th</sup> century the marine mammals are being hunted, but there was a huge lack of protection until the mid-1970s. However the whaling industry and the environmental problems are still developing and so the protection should as well. Due to scientific development new approaches are possible and they get implemented.

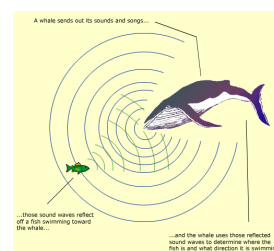
But the science can also get dangerous for the whales when experiments, affecting the marine environment, are being made, e.g. the test of sonar systems of submarines. Existing agreements, laws and regulations have loopholes and it is time to change this.

## Definition of Key Terms

### Whales

Whales are mammals living in the oceans and big rivers of our world. They are adjusted to the living conditions under water, but in some ways they still have the same natures than land mammals, e.g. they can't breathe under water and therefore *need fresh air*. All whales *migrate* in general, some more than others.

For the orientation under water, the whales use a special *sonar system*. They produce a sound with a special frequency and according to when and how this sound comes back or changed in it its frequency the animals are able to reconstruct their surrounding.



There are two groups of whales, the baleen whales and the toothed whales. The major difference between those two is the way of eating. In contrary to the toothed whales, having teeth and for that reason being able to eat e.g. fish, the baleen whales filter the water for small animals



which don't need to be crushed.

## International Convention for the regulation of whaling

The International Convention for the regulation of whaling was ratified on the 2<sup>nd</sup> December 1946. It created the International Whaling Commission (IWC) and set up a *Schedule for the convention*.

This schedule asked for special *whaling seasons*, regulating the whaling on certain months, sanctuaries, e.g. the Indian Ocean where whaling is completely prohibited, and for regular inspections. The population should be classified in categories depending on their recovering state and so the whaling of some categories is limited or overall forbidden.

## Convention on the Conservation of Migratory Species (CMS)

The Convention on the Conservation of Migratory Species (CMS) is part of the *Bonn Convention*, ratified on the 24<sup>th</sup> June 1982. Having this convention dolphins, small whales and manatees are better protected by the UN. The nations recognized the need to protect especially migrating species as they suffer not only like local marine animals under the changing circumstances but have additionally a long way to swim which makes them even more vulnerable. Immediate protection, research, conservation and management should lead to the recovery and maintenance of these populations.

## Revised Management Procedure (RMP)

The Revised Management Procedure (RMP) is a method to compute *sustainable catch limits* for a population, e.g. the whales. The estimated carrying capacity gets compared with the actual number of animals and so catch limits are being suggested. But the RMP also includes other special measures on calculating catch limits. With refining parameters, the method is *self-monitoring* and therefore able to react to changing circumstances, e.g. the climate change. Because the RMP includes high levels of uncertainty, the method is very conservative, but this doesn't mean it's weak.

## General Overview

There are several threats to the whale population. Understanding them is the first step to tackle them and doing this protects the marine mammals. Different processes is already being made as some problems are very new and very less researched whereas there is much research and action being made on others.

In general vary the threats on the actual impact they have on the population.



Some have as result the immediate *death* of the animals; some others affect the overall *fitness of the population*.

## Direct or accidentally death

### *Commercial whaling*

Commercial whaling is probably the biggest threat to the population. Like the fish stocks, the whales suffer from the overexploitation by the industry caused by the pressure on the population. The whaling industry is not only interested in the meat of the whales, nearly every body part of whales can be used. The oil in their blubber is especially interesting for the industry however their baleen (from baleen whales) is used for corsets, ambergris for perfume and their teeth (from toothed whales) for scrimshaw. Some religions believe that certain parts of whales have the ability to heal sicknesses or bring luck and this creates another market for the whaling industry, especially in East Asia.

Most of the whales are hunted with harpoons, but a very familiar catch method for especially dolphins is the *drive hunting*. The animals are getting encircled and then systematically killed. This technique is very popular in Japan, but it's also used on the Faroe Islands, a part of Denmark.

### *Poaching*

Even though some whale populations are under protection and it is prohibited to catch them, there is still the threat of poaching, the illegal catching of the animals. Endangered species suffer in particular from this threat as they need to recover from the commercial exploitation. Two species suffering very much from poaching are the *Ganges Dolphin* and the *Amazonas River Dolphin*.

### *Aboriginal hunting*

There are native communities who have a great whaling tradition as whales were, and still are, their main food source. So they got the permission to hunt a certain number of whales and so they have food security and can maintain their tradition. Those communities can be found in Alaska, Russia, Bequia (St. Vincent and the Grenadines) and Lamalera (Indonesia).



## Research

Some might argue that research on whales can be also done without killing the animals, but for some studies, e.g. the inner constitution, whales need to be killed. This research has many critics also because it forms a great loophole in most of the agreements and conventions. With the excuse to do scientific research, some whalers are hunting whales, especially endangered whales that are under protection.

## Bycatch



There are many whales getting killed accidentally through nets in the water having the purpose to catch fish. Especially gillnets are hard to detect for whales and so many of them drown, as they need regularly fresh air, being entangled in those nets. But also trawling nets (being pulled through the water) and longlining gear (a long line with several hooks) are deadly traps for whales.

## Ship strikes

The danger to end as road kill does also exist in the water. Ship strikes are a serious threat to the animals, but also to the humans. Big vessels sometimes don't recognize the collision, but small can even capsize. Whales get serious injuries from a strike and this leads in the most cases to the death.



## Fitness of the population

The overall fitness of the population means the *well-being of the animals* and so their reproduction rate. Aspects that harm the fitness do not necessarily include the direct death of a whale it mostly refers to *long-term effects* and threats for the population.

## Noise

Man-made noise is very dangerous to the whales, as they are very sensible to vibrations in the water.

When there are unusual sounds in the water, especially loud ones, the sonar system of the whales gets irritated and there is the possibility for the whales to get deaf, a cruel situation when being so dependent on the hearing. Seismic surveying, sonar used by vessels, explosions and the noise made by ships interfere all with the sonar system and this has bad influences on the health of the whales. They may lose their



orientation and ground on beaches, aren't being able to communicate any longer with each other and so lose the ability to hunt together.

### *Pollution*

Like every marine animals suffer the whale populations from the pollution in the oceans and the air.

They can entangled themselves in the rubbish swimming in the water or eat it. Oil escaping from ship engines pollutes the water and the whales, drinking and living in this water, are seriously affected by this. But not only has the pollution in the water harmed the whale population, also the air pollution can be harmful as it deducts in the water. Here have the whales a bigger disadvantage as they are at the *end of the food chain*. While other fish have a relatively low concentration of toxin, mostly pesticide, in their body, the toxin gets concentrated in the whale bodies.

In the fat of an orca, for example, is a very high concentration of PCB and this toxin is given via the mother's milk to the calves. This harms the production of vitamin A and so the young ones have very less chances to survive.

### *Climate change*

With the beginning of the climate change, the water temperature in the oceans will raise, especially in the Arctic and the Antarctic regions. Primary this does influence the water salinity and the habitats of recovering whale populations. It is already clear that migrating whales changed their route due to the temperature changes.

But the secondary effects of the climate change are much more a threat to the whale population. As the temperature raises, the sea ice will melt and with it the place of reproduction of *krill*. Krill are very small animals and the main food resource for the life in the oceans. Baleen whales filter the krill out of the water. But as soon as the krill can't reproduce, the entire food web in the oceans is harmed and the baleen whales are doomed to death.



### *Overexploitation of prey*

The overexploitation of fish harms the food web of the oceans as much as the extinction of krill, but this time it affects the toothed whales. They dependent on their prey fish and with an overexploitation of these fish, the nutrition and health of the whales are seriously in danger.



## Major Parties Involved

### International Whaling Commission (IWC)

The International Whaling Commission (IWC) was established 1946 by the International Convention on regulating whaling. The overexploitation of the whales since *centuries* led to a serious decline of the populations and so the IWC's major task was to change this. The problem about whale protection back then was that only very *little knowledge* and collected data existed and so the IWC became more and more a researching and data collecting organization.

The RMP, for example, was developed by specialists of the Scientific Council of the IWC. In 1982 a *worldwide moratorium on whaling*, except for Japan, Norway, Peru, Iceland and the UdSSR, was established in order to give the populations time to recover. Since then, Japan tried to convince smaller states to vote at the annual IWC conference for a stop of it and in 2006 this goal was reached. With a vote, the IWC declared that the moratorium would no longer be necessary and that therefore the moratorium be stopped.

### Timeline of Key Events

Date	Event
December 2, 1946	The International Convention for the regulation of whaling was signed and doing this the IWC got established.
1972	An UN resolution asked for complete moratorium on whaling but the IWC decided to <i>not act</i> on it.
1982	The whaling moratorium got implemented. Japan, Norway, Peru, Iceland and the UdSSR objected and so they weren't included.
June 24, 1982	The CMS was ratified.
2006	The IWC decided that the moratorium was no longer necessary
2007/ 2008	The Year of the Dolphin got celebrated.

### Previous Attempts to Resolve the Issue

Like mentioned in the introduction, the protection of the whales is surely not a new topic.

Since the mid-1970s there is a large engagement to protect these marine mammals.



The *Convention on regulating whaling* established by the IWC has as core points the protection and the collection of knowledge to have a basis for further decisions. The world needed to face the fact that it will take some time to get knowledge about whales, especially when the species gets more and more over-exploited and so the convention is against the ignorance of the whaling industry.

1982 a worldwide moratorium on whaling got established as there was *no sound knowledge basis* and without it sustainable catch limits couldn't be developed. The whaling continued but of course in a much smaller scale. There were still nations rejecting the ban, e.g. Iceland and Norway, and others enlarged their research program on whales so incredibly, that commercial whaling under the title of research seemed very likely.

As the IWC developed the RMP, the first adequate method to set catch limits improved the overall situation of the whales. Of course there is a large uncertainty in this method, however with its self-monitoring process the mistakes, caused by the uncertainty, get eliminated very easily.

The CMS focuses on migrating species and the need to especially protect them. All whale populations are migrating, so this convention does theoretically apply to all of them. Two approaches, the research *and* the immediate protection, are included and this is what makes the CMS strong.

In 2007/2008 the year of the dolphin was celebrated and doing this, new projects concerning these small whales got created. The effects of the contamination of the oceans, the conservation, management and biology of the habitats of dolphins were part of the projects and all of them made great progress during the year and afterwards as well.

## Possible Solutions

The possible solutions should tie in with the already existing solutions and carry them on.

An anew implementation of the moratorium would be not necessary. The ban got established because there was no scientific basis concerning whales but luckily this changed with the years. However, falling back in the same habit than before the ban, the over-whaling until the near extinct of these mammals, is also wrong. *Low catch limits* are essential to guarantee the survival of the populations.

The research and data collection on the whales, their habits and their influence on the ecosystems need to be intensified and enlarged. Doing this could solve many remaining questions, e.g. how whales influence the ecosystems or how they can be protected against the man-made noise.





The necessary knowledge to break the ban on whaling does exist, but this basis needs to be expanded in order to create a sustainable whale population.

The low catch limits on whales has the meaning to protect the population and those limits do not only exist to ignore them. Abusing the term of 'research' to fulfil the need of whales of the industry is unacceptable and *illegal*. Laws should be established to stop whalers from illegal whaling in order to maintain the prescribed catch limits.

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