

# I Coloquio Ecologia e Gestão de Recursos Vivos Marinhos

## Marine Mammals as marine natural resource



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## Cetaceans exploitation

- Whaling
- Captivity
- Whale watching



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## Whaling

**Whaling** is the hunting of whales for their usable products such as meat and blubber, which can be turned into a type of oil which became increasingly important in the Industrial Revolution.



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## Commercial Whaling

Industrial whaling emerged with organized fleets of **whaleships** in the 17th century;

Competitive national whaling industries in the 18th and 19th centuries;

**Factory ships** on the 20th century.

By the late 1930s more than 50,000 whales were killed annually (e.g. Japan in 1938 killed 45,010 whales in Antarctic)

VIDEO



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## Aboriginal Subsistence Whaling

Four IWC member countries conduct aboriginal subsistence hunts today:

- Denmark (Greenland)
- Russia (Chukotka),
- St Vincent and the Grenadines (Bequia)
- United States (Alaska and also potentially a resumption of hunts previously undertaken by the Makah Tribe of Washington State)



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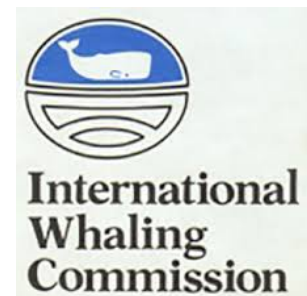
## International Whaling Commission (IWC)

IWC was set up under the International Convention for the Regulation of Whaling, in 1946

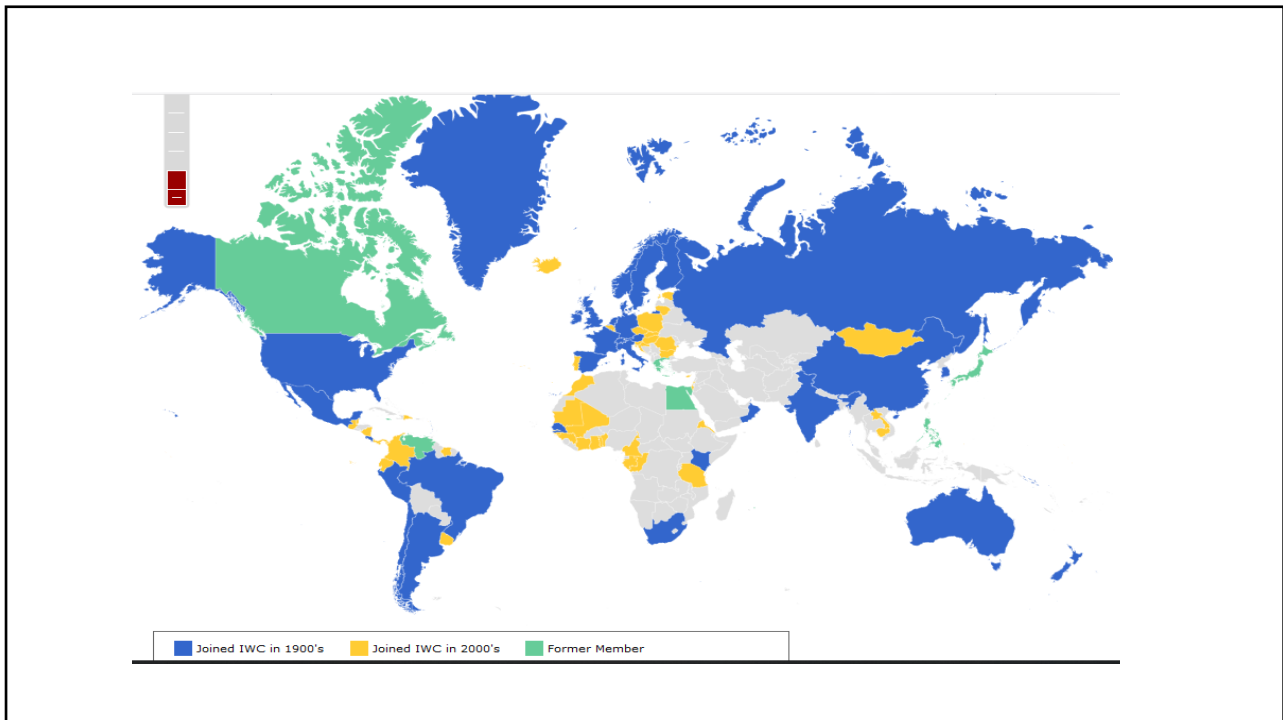
Its purpose is to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.

These measures include catch limits by species and area, designating specified areas as whale sanctuaries, protection of calves and females accompanied by calves, and restrictions on hunting methods.

The Commission comprises 88 members (IWC, July 2019).



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## Limitations of IWC

IWC is a **voluntary** international organization and is not backed up by treaty

1 - Any member countries are free to simply leave the organization and declare themselves not bound by it.

2 - Any member state may opt out of any specific IWC regulation by lodging a **formal objection** to it within 90 days of the regulation coming into force.

3 - IWC has no ability to enforce any of its decisions through penalty imposition.

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## IWC Moratorium

In 1982, the Commission took a decision that catch limits for all commercial whaling would be set to zero.

The Commission also stated that, by 1990 at the latest, the Commission would undertake a comprehensive assessment of the effect of the decision on whale stocks, and consider modifying the way catch limits were set.

This '**moratorium**' on **commercial whaling** came into effect in 1986.

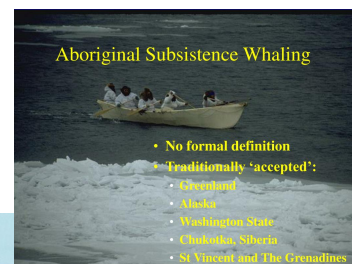
In 1994 the Scientific Committee developed and the Commission adopted a new method for calculating sustainable commercial catch limits, called the Revised Management Procedure (RMP). This has not been implemented and is awaiting agreement from the Commission on the Revised Management Scheme (RMS) which comprises additional non-scientific matters including inspection and observation

**So in 1986, IWC members agreed to a hunting moratorium to allow whale numbers to recover – Norway objected**

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## Loophole on IWC Moratorium

- Scientific whaling
- Aboriginal whaling is allowed to continue on a subsistence basis.



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## Pro-Whaling Countries

- Japan
- Norway
- Iceland
- Others

Japan allows itself to hunt whales under a “scientific” programme which still sees the meat go on sale. The 2018 hunt led to 333 minke whales being killed in the Southern Ocean, including 122 pregnant females.

In 2018 Japan tried one last time to convince the IWC to allow whaling under sustainable quotas, but failed. So it left the body, effective July 2019

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## Scientific permit whaling

### SPECIAL PERMIT CATCHES SINCE 1985

Nation	Area	Type	Fin	Sperm	Sei	Bryde's	Minke	Total
<b>1986</b>								
Iceland	W. Iceland	Coastal	76	0	40	0	0	116
Rep. of Korea	Korea	Coastal	0	0	0	0	69	69
Total			76	0	40	0	69	185
<b>1987 (and 1987/88 Antarctic Season)</b>								
Iceland	W. Iceland	Coastal	80	0	20	0	0	100
Japan	Antarctic	Pelagic	0	0	0	0	273	273
Total			80	0	20	0	273	373
<b>1988 (and 1988/89 Antarctic Season)</b>								
Iceland	W. Iceland	Coastal	68	0	10	0	0	78
Norway	NE Atlantic	Small type	0	0	0	0	29	29
Japan	Antarctic	Pelagic	0	0	0	0	241	241
Total			68	0	10	0	270	348
<b>1989 (and 1989/90 Antarctic Season)</b>								
Iceland	W. Iceland	Coastal	68	0	0	0	0	68
Norway	NE Atlantic	Small type	0	0	0	0	17	17
Japan	Antarctic	Pelagic	0	0	0	0	330	330
Total			68	0	0	0	347	415

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2016 (and 2016/17 Antarctic season)								
Japan	Japan	Coastal	0	0	0	1*	37	38
Japan	NW Pacific	Pelagic	0	0	90	25	0	115
Japan	Antarctic	Pelagic	0	0	0	0	335	335
Total			0	0	90	26	372	488
*1 Bryde's shot by mistake (Infraction)								
2017 (and 2017/18 Antarctic season)								
Japan	Japan	Coastal	0	0	0	0	85	85
Japan	NW Pacific	Pelagic	0	0	134	0	44	178
Japan	Antarctic	Pelagic	0	0	0	0	333	333
Total			0	0	134	0	462	596
Overall Total:			310	56	1,563	734	15,176	17,839

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## Faroe Islands – The Grind

### The Grind – drive hunt

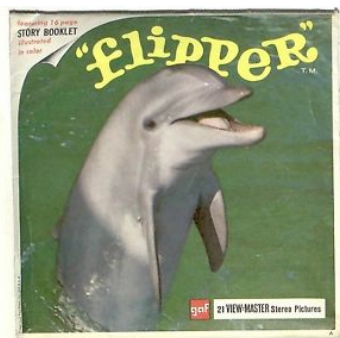
- Records of all pilot whale hunts have been kept since 1584.
  - Considered sustainable, as there are an estimated 778,000 whales in the eastern North Atlantic region. Approximately 100,000 swim close to the Faroe Islands
  - Faroe Islands hunt on average 800 pilot whales annually.
  - Some consider, that the Grinds are the longest continuously practiced and relatively unchanged whaling tradition in the world.
- Other cultures in the Arctic and Europe started whaling long before the Faroese, but have either stopped or changed their techniques quite a bit.



VIDEO

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## Captivity



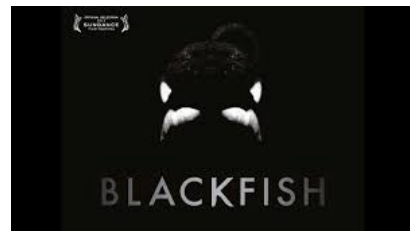
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## Captivity

There are currently at least 2,360 cetaceans in captivity worldwide

- 2,000 dolphins, 227 beluga and 53 killer whales.
- 5,000 cetaceans have died in captivity since the 1950s.

The industry is big business and is driven by the attraction for tourists to see these amazing and iconic animals up close and, in many cases, to swim or interact with them



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## Whale watching

- Started in 1955 by Chuck Chamberland, San Diego, USA
- Mundial boom on the beggining of the 90's
- In 1991      \_\_\_\_\_ →      31 countries
- Present      \_\_\_\_\_ →      + 119 countries
- 3,300 WW companies all over the world
- About 500 communities depend complety from this activity



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## Whale watching at a Global level

- Number of people doing whale watching per year

1991	_____ →	4 Millions
1994	_____ →	5,4 Millions
1998	_____ →	9 Millions
2017	_____ →	13 Millions



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## Whale watching at a Global level

• Direct sale

1991	→	77 Millions \$
1998	→	300 Millions \$
2017	→	2.1 Billions \$

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## Short term effects

- Changes in:
  - acoustic behaviour,
  - group cohesion,
  - horizontal and vertical dive patterns,
  - and the timing of diving and respiration rates



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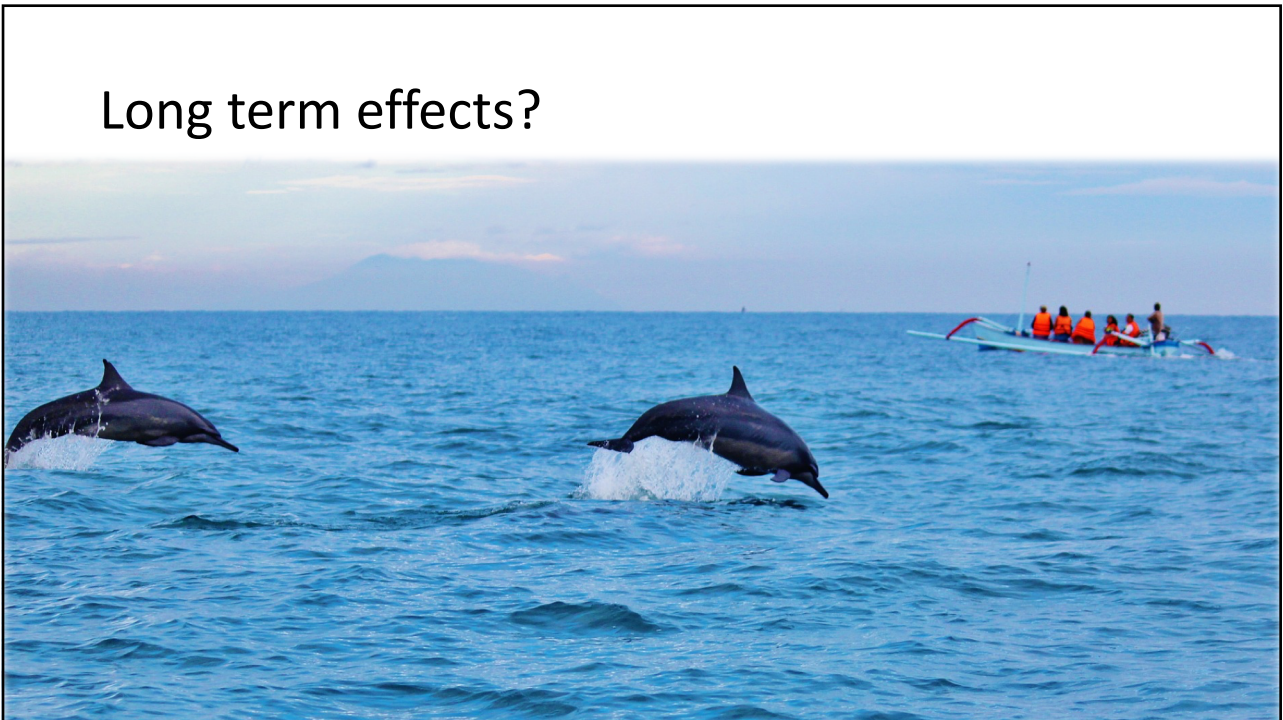
## Short term effects

- Disruption in biologically important activities
  - foraging, resting, nursing and socialising.



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## Long term effects?



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**Thank you for your attention**



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