

# WHALES

## FACTS ABOUT WHALES

- Whales are mammals, meaning that they share several traits with us. They're warm-blooded, give birth to live young and raise them to maturity, have some type of hair or fur, and breathe through their lungs. Their ancestors lived on land, evolving and adapting to life in the ocean through the formation of flippers, blubber (layers of fat) to stay warm, and larger tails.<sup>72</sup>
- There are 48 known species of whales.<sup>73</sup> There are two types of whales: toothed whales and baleen whales, the latter of which strain small fish and plankton from the water for food.<sup>74</sup>
- The blue whale is the largest animal ever to have existed on Earth. The longest confirmed specimen was 30.5 meters in length,<sup>75</sup> and the smallest species – the dwarf sperm whale – measures only around 9 feet long when fully grown.<sup>76</sup>
- Whale populations are in steep decline worldwide. Over the last century, the Fin whale population has dropped from 720,000 to around 20,000. Other species, such as Sei whales, number only in the hundreds today.<sup>77</sup>
- Whales rely on sound for hunting, navigating and communicating. Toothed whales use a fascinating system of echolocation for hunting for food and navigating while baleen whales use a pattern of sounds known as “songs” for communication.<sup>78</sup>
- Whales are migratory animals and often travel thousands of miles to breed in ideal water conditions.<sup>79</sup> This [tracker](#) allows you to explore the movements of whales that travel to the Hawaiian Islands for their annual breeding.



## WHY WE NEED TO PROTECT WHALES

**Role in the Ecosystem:** Whales possess an important role in the marine ecosystem. They recycle important nutrients, such as iron, by feeding at lower depths and re-releasing these nutrients closer to the surface of the water.<sup>80</sup> Additionally, when whale carcasses drop to the seafloor, it provides a food habitat for many species that only exist because of these “whale falls.”<sup>81</sup>

**Ecosystem Services:** Whales substantially contribute to combating climate change. Whales are excellent carbon sequesters. When they die and sink to the bottom of the ocean, the carbon that they have accumulated over their lifetime is trapped inside their bodies.<sup>82</sup> Additionally, the dung of whales provides phytoplankton with nutrients for photosynthesis.<sup>83</sup> Plankton photosynthesis absorbs carbon from the atmosphere, helping to address climate

change. It also creates oxygen.<sup>84</sup> By some estimates, nearly 70% of all the oxygen we breathe stems from the role of whales feeding phytoplankton in the ocean.<sup>85</sup>

**Economic Contributions:** Whale watching generates around \$1.6 billion dollars and helps support 18,000 coastal jobs worldwide.<sup>86</sup>

**Uniqueness:** After discovering brain cells previously found only in humans, researchers now believe whales possess comparable levels of intelligence, including the abilities for social organization, empathy, speech, and, remarkably, the ability to pass their new knowledge to others.<sup>87</sup>



## THREATS TO WHALES

**Water and Noise Pollution:** Waste and debris from oil and chemical spills can have disastrous effects on the health of whales by seeping into their blubber and even the milk of female whales.<sup>88</sup> Noise pollution – large, booming sounds – from boats and sonar devices can drive whales away from their natural habitat and even kill them directly.<sup>89</sup>

**Dam Construction:** For species of whales whose food supply comes from freshwater rivers, dams can severely restrict the available supply and lead to food shortages.<sup>90</sup>

**Bycatch:** Bycatch threatens whales when they become entangled in the gear and nets of commercial fishing, leading to suffocation or prolonged injuries.<sup>91</sup>

**Collisions:** Collisions between whales and boats, both large and small, can directly injure or even kill the animal.<sup>92</sup> Collisions can occur when boats travel at excess speeds or when their routes encroach on a whale's breeding ground.<sup>93</sup>

**Hunting:** Commercial hunting, known as whaling, during the twentieth century is estimated by experts to have wiped out almost three million whales<sup>94</sup> – in terms of animal biomass, perhaps the largest wipeout of any species in the Anthropocene period. While some species of whale are recovering, others remain threatened and even at the brink of extinction. The [Sei](#), [Minke](#), and [Fin](#) whales continue to be hunted at dangerous levels, sometimes under the pretense of scientific research. The time has come to end commercial whaling.

**Climate Change:** Rising sea temperatures disrupt a whale's natural migration and can affect its reproduction capabilities. Moreover, rising ocean temperatures can deplete the phytoplankton population, causing more carbon dioxide to remain in the atmosphere.<sup>95</sup>

## HOW TO HELP WHALES

**Refuse to Eat Whale Meat or Buy Whale Byproducts:** By refusing to consume or purchase anything that comes from a whale, you can discourage legal and illegal whaling by lowering product demand. Avoiding whale meat is also a healthy choice because the whale meat currently on the market contains dangerous levels of pesticides.<sup>96</sup>

**Prevent Ocean Pollution:** Whether you are by the ocean or farther inland, dangerous chemicals and pollutants make their way to the ocean.

- **Helpful actions include:** Supporting water pollution prevention efforts, properly disposing of waste, and reducing or eliminating lawn and garden fertilization. Ocean plastic is also a big problem for whales—ingestion and entanglement are among the problems. Actions such as beach and river cleanups, switching to reusable bags, and reducing plastic consumption overall can help prevent and reduce the risk to whales.
- Help [End Plastic Pollution](#), download our toolkits.
- Test your knowledge about threats to ocean ecosystems with our [Oceans Plastic Pollution Quiz](#).

**Support Sustainable Fishing:** Large-scale commercial fishing can harm whales through bycatch and through depletion of fish in its ecosystem. By purchasing sustainable seafood, you can help prevent further harm to whales.

- Check out our [Species Profiles](#) for up-to-date advocacy actions.

# ADDITIONAL RESOURCES

## ARTICLES/BLOGS/READINGS

### **Oceans Are Getting Louder, Posing Potential Threats to Marine Life** – *New York Times*

<https://www.nytimes.com/2019/01/22/science/oceans-whales-noise-offshore-drilling.html>

The prospect of incessant underwater sonic tests is the latest example cited by environmentalists and others of the growing problem of ocean noise, spawning lawsuits against some industries and governments as well as spurring more research into the potential dangers for marine life.

### **Japan kills endangered whales for ‘science’ and sells the meat. That’s illegal, regulator rules.**

– *Washington Post*

<https://wapo.st/2GJ4jwD>

Japan’s whaling operations have suffered a big setback after the “scientific” hunt for sei whales in the Northern Pacific was effectively declared illegal by an international body that regulates trade in endangered species. The Standing Committee of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) found Tuesday that Japan had broken the rules by commercially selling thousands of tons of meat from endangered sei whales.

### **Should whale welfare be considered in sustainable fishing?** – *Anthropocene Magazine*

<http://bit.ly/2SQ8LRL>

Hundreds of thousands of whales and dolphins are killed each year as bycatch in commercial fishing. Many times that number are injured or crippled in their encounters with fishing equipment. Yet unless their deaths pose a species-level threat, the welfare of bycaught whales is rarely a factor in evaluating a fishery’s sustainability. Given what scientists know about whale suffering, and the public’s deep sympathy for these animals, is it time to overhaul what’s considered sustainable?

## VIDEOS

### **Blue Whales 101** – *National Geographic*

<https://www.youtube.com/watch?v=bgiPTUy2RqI>

This video showcases the largest animal to ever exist, the blue whale, and how the animal has been hunted to endangerment.

### **Two Beautiful Humpback Whales Dance** – *BBC Earth*

<https://www.youtube.com/watch?v=o767PuYbEXg>

Male humpback whales repeat each others songs and add to them so they become ever more complex and beautiful, showing off their memory and sheer volume.

## STORYTELLING

### **TEDx Talk: Deep Dive - What we are Learning from the Language of Whales - James Nestor**

<https://www.youtube.com/watch?v=JM77aTk1Xyl>

With brains six times the size of our own, the planet's greatest mammals force a rethink of our own place on planet Earth.

## OTHERS WORKING ON THIS

### **Save the Whales**

<https://savethewhales.org/>

Save the Whales was founded by a mother and daughter in 1977 in California to raise awareness to the protection of whales and has since expanded into educational programs.

### **Oceana**

<https://oceana.org/>

Oceana is an international organization focused solely on oceans, dedicated to achieving measurable change by conducting specific, science-based policy campaigns with fixed deadlines and articulated goals. Much of their work focuses on protecting and conserving different whale species.

## REPORTS

### **Whales: Their Future is our Future - Whale and Dolphin Conservation**

[https://uk.whales.org/sites/default/files/ecological\\_whale\\_report\\_wdc.pdf](https://uk.whales.org/sites/default/files/ecological_whale_report_wdc.pdf)

This study highlights how no global efforts have yet considered the importance of the oceans as a carbon sink and the significant ecological role whales play in mitigating climate change, nor the devastating impacts posed by their intentional removal from the ecosystem.

### **Southern Resident Killer Whales: 10 Years of Research and Conservation - NOAA Fisheries**

[https://www.nwfsc.noaa.gov/news/features/killer\\_whale\\_report/pdfs/bigreport62514.pdf](https://www.nwfsc.noaa.gov/news/features/killer_whale_report/pdfs/bigreport62514.pdf)

Over the last decade, research has come a long way in our understanding and ability to protect this unique population. Through the work of our scientists and regional partners, the report made significant progress on many of the key questions that were asked a decade ago when the whales were first considered for listing under the U.S. Endangered Species Act (ESA).