

Forum: EVC 2

Issue: Global protection of marine mammals

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Introduction

The issue of the global protection for marine mammals is immensely important in our modern-day society. As we see global warming evolving and becoming a larger issue, we also must recognize the ever-growing importance of our marine ecosystems, and more specifically the role of marine mammals in the marine ecosystem. We must work towards a more sustainable future and strive for the protection of marine mammals on a global scale.

To understand the importance of this issue, one must first understand the importance of biodiversity on earth. Our planet's ecosystems; whether they be jungles, deserts or oceans, may seem permanent, when in reality they are very vulnerable to change and collapse. We can identify 3 types of biodiversity within an ecosystem: ecosystem diversity, species diversity and genetic diversity. The strength of these ecosystems is reliant on these factors and their support to one another. Most relationships within environments are interdependent. For this reason, the issue of the protection of marine mammals cannot be tackled from just one angle. We must find ways to preserve the entire marine ecosystem to ensure that marine mammals have all the necessary components for long lives and the possibility of reproduction, to keep our oceans, or more importantly, our earth, thriving.

Marine mammals can be classified into four different groups: pinnipeds ('flipper footed ' animals such as seals, walruses and sea lions), Cetaceans (species that survive only in water such as dolphins, whale and porpoises), sirenians (warm water species like dugongs and manatees) and marine fissipeds ('split footed' marine mammals such as polar bears and sea otters). ("Marine mammals"). Maintaining all classifications of marine mammals is essential to a working marine ecosystem.

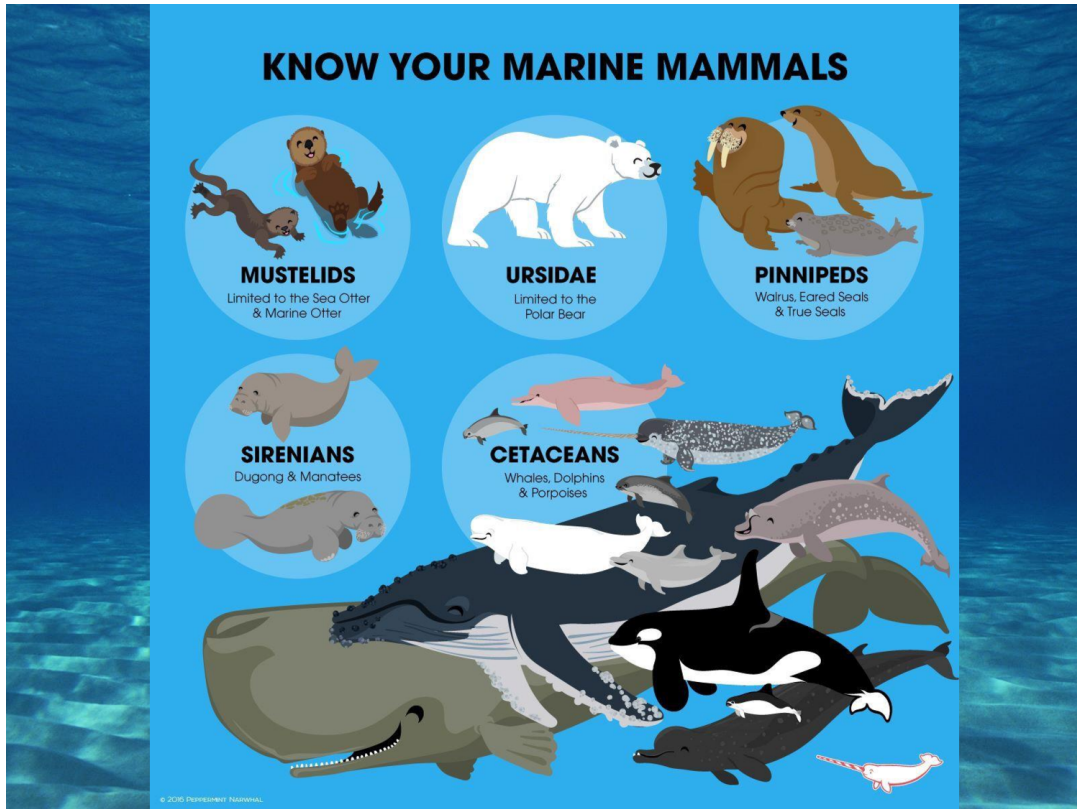


Diagram 1: Classification of marine mammals (mustelids and ursidae are both marine fissipeds)

In this report, we will overview the 3 major issues regarding the protection of marine mammals. The first subtopic discussed will be the issue of bycatch, which will be discussed in subtopic 1- Ensuring responsible boating/fishing practices. Sub-topic 2 will then evaluate the issue of water pollution and marine debris. Sub topic 3 will discuss the monitoring of marine mammals and research done in search of new technologies to combat their extinction.

Our aim in this debate is to maintain marine mammal populations up and, not only ensure their maintenance, but ensure that they thrive in their environments and can keep reproducing and sustaining their environment for many years to come.

Definition of Key Terms

Marine Mammals

Marine mammals are a diverse group of warm-blooded, air-breathing vertebrates which have adapted to life in aquatic environments. (“Encyclopedia Britannica | Britannica”)

Marine Mammal Protection Program

The Marine Mammal Protection Program is a comprehensive initiative designed to safeguard marine mammals and their habitats. It encompasses a range of regulations, policies, and conservation efforts aimed at mitigating human activities that may adversely affect these animals, such as habitat degradation, pollution, and interactions with fisheries. The program often involves research, monitoring, and the establishment of protected areas to promote the well-being and conservation of marine mammal species.¹

Interdependent:

Interdependent refers to a relationship between two or more entities where they rely on each other for support, cooperation, or mutual influence. In ecological terms, interdependence is a fundamental concept highlighting the interconnectedness of various species and their dependence on one another within ecosystems for resources and ecological balance.

Biodiversity:

Biodiversity (biological diversity) refers to the variety of life on Earth, encompassing the diversity of species, ecosystems, and genetic diversity within species. High biodiversity is essential for ecosystem resilience, providing numerous ecological, economic, and cultural benefits. It plays a crucial role in maintaining the health and functionality of ecosystems and contributes to the overall sustainability of the planet.

Bycatch:

Bycatch refers to the unintentional capture of non-target species, such as marine mammals, sea turtles, or other fish species, during fishing activities. It occurs when fishing gear, such as nets or hooks, is deployed to catch a specific target species but inadvertently captures other species, often resulting in injury or mortality.

Sonar:

Sonar, short for sound navigation and ranging, is a technology that uses sound waves to navigate, communicate, and detect objects underwater. In the context of marine life, the use of sonar by human activities, such as naval exercises or exploration, has been associated with potential harm to marine mammals, disrupting their communication, navigation, and behavior.

Wild fisheries:

¹ (“Encyclopedia Britannica | Britannica”)

Wild fisheries refer to the harvesting of fish and other aquatic organisms from their natural habitats, such as oceans, seas, lakes, or rivers. This contrasts with aquaculture, where aquatic organisms are bred and raised in controlled environments. Sustainable management of wild fisheries is crucial to maintain healthy fish populations and ecosystems. (“Encyclopedia Britannica | Britannica”)

Aquaculture:

Aquaculture is the cultivation and farming of aquatic organisms, including fish, shellfish, and plants, under controlled conditions. It is a method of food production that can supplement or replace traditional wild fisheries. Sustainable aquaculture practices aim to minimize environmental impacts and ensure the health of the cultivated species. (“Encyclopedia Britannica | Britannica”)

Cryptic Mortality:

Cryptic mortality refers to deaths of individuals within a population that are unobserved by the government and/or corporations. These deaths may occur without obvious external signs, making them challenging to detect without thorough investigation or monitoring. (“Encyclopedia Britannica | Britannica”)

Stock Assessments:

Stock assessments involve the scientific evaluation of the abundance, distribution, and health of a specific population or "stock" of fish or marine organisms. These assessments are essential for sustainable fisheries management, helping determine catch limits and conservation measures to prevent overfishing and maintain healthy populations. (“Encyclopedia Britannica | Britannica”)

Whaling:

Whaling is the practice of hunting and harvesting whales for their meat, blubber, bones, and other products. Historically a major industry, modern whaling has faced international scrutiny due to conservation concerns, leading to moratoriums on commercial whaling in many regions. (“Encyclopedia Britannica | Britannica”)

Oil rigs:

Oil rigs are large structures located offshore or in bodies of water that extract and process oil and natural gas from beneath the seabed. While crucial for energy production, the presence of oil rigs poses environmental risks, including the potential for oil spills that can harm marine ecosystems. (“Encyclopedia Britannica | Britannica”)

Echolocation:

Echolocation is a biological sonar system used by some animals, including certain species of marine mammals like dolphins and whales. It involves emitting sound waves and interpreting the returning echoes to navigate, locate prey, and communicate. Echolocation is a vital sensory adaptation for marine mammals in their underwater environments. (“Encyclopedia Britannica | Britannica”)

Ghost gear:

Ghost gear is any fishing nets, hooks or material otherwise used for fishing which gets cut loose and is lost at sea, drifting freely. This gear can be incredibly detrimental to marine environments and endangers all marine life. (“Encyclopedia Britannica | Britannica”)

Background Information

Marine mammals are a diverse group of mammals which have grown special adaptations which allow them to thrive in more extreme environments under the sea, with changes in depth, pressure and temperature. They are warm blooded creatures which breathe air through their lungs, and not through gills as other fishes may do. Marine mammals including whales, dolphins and seals play an essential role in maintaining healthy ecosystems. Still, these essential creatures have been hunted for decades, whether it be for consumption or for their fur/blubber. Many species are nearing extinction, which also means a point of no return.

All Marine Mammals are protected under the Marine Mammal Protection Act (MMPA) which was enacted in October of 1972. This legislation hoped to conserve marine ecosystems. Under this act it was prohibited to take import possess transport or sell any marine mammals and/or products made from them. This was the first environmental law which took into account entire ecosystems and species. This act is used for all species of marine mammals. Some marine mammals are also protected under the Endangered Species Act (ESA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

MMPA has a joint jurisdiction for marine mammals with the National Oceanic and Atmospheric Administration (NOAA).

While these organizations and protection acts seem promising, they are often too loose on its implementation. For example, the Marine Mammal Protection act relies mostly on self regulation, which means each country can pick and choose which reforms they deem to be important or even, most beneficial to their own culture and economy. While this may promote country sovereignty, it is deeply flawed in its approach to a more sustainable future.

Sub-topic 1: Ensuring responsible boating and fishing practices

Fishing, what once was a recreational act and even, sometimes a celebration, has come closer to an assault on marine animals. In fact, the fishing technologies we see today were originally developed for war. Commercial fishing requires giant ships which use radar, sonar and helicopters to monitor the fish and guide ships to schools of fish. These great technologies have allowed humans to expand their fishing barriers into deeper and farther fishing sites, which also means a much higher percentage of fish are up for catch.

While these new technologies might appear to be an ‘advantage’ at first, they are really only damaging our ecosystem in the long run, causing a depletion of natural biodiversity in marine ecosystems and killing marine mammals directly and indirectly.

Bycatch

Commercial fishing often requires large net use, for more efficient fishing in large groups. These large nets make way for a phenomenon called bycatch, where animals are entangled or captured by fishing gear not meant for their capture. Many times, only around 5% of what is caught in large commercial fishing nets contains what was meant for catch, the other 95% of capture is sent back into the ocean, dead² (TED-Ed). Bycatch is the largest factor towards marine mammal death and injury around the world (“Marine Mammal Bycatch”). This statement is based on statistical evidence taken from observed fisheries, but there is the major issue of unobserved fisheries, which mean a large percentage of deaths by bycatch go undetected. These undetected deaths are referred to as ‘cryptic mortality’.

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Animals may also be caught up in 'ghost nets' or nets and lines which have torn loose and drift freely into the sea. An estimated 640,000 tons of ghost nets drift into the sea every year, accounting for 10% of the oceans plastic ("Sharks in the bycatch").



Hammerhead shark stuck in bycatch

Mammal fishing in culture

Despite its banning in 1986, commercial whaling has not stopped. Countries such as Japan, Norway and Iceland have still been partaking in the act of whaling, and have hunted nearly 40,000 whales since 1986. Whales are used for consumption and for their blubber, which can be exploited to make oil. Some whale species, such as orcas and belugas, were captured to be sold for captivity in aquariums and zoos (Mishler). Whaling was made illegal by the International Whaling Commission in 1968, but Norway, Iceland and Japan rejected the ban and withdrew from the commission to continue their inhumane practices. Whale populations have found significant decreases in population in latent years due to whaling practices. Sperm whales have declined to just $\frac{1}{3}$ of their original population, while 90% of blue whales were decimated by 2015. (Mishler)

Marine mammal fishing can also be attributed to tradition and culture. For centuries, shark fins have been sought after for the making of Asian delicacy shark fin soup and for traditional chinese medicine using shark fins. Shark finning kills around 100 million sharks per year, just for their fins. Once the sharks are captured and rid of their fins, they are thrown back into the ocean to die. Whiel shark finning is illegal in many countries such as the United States

and Australia, there are many loopholes, and even countries which have ‘banned’ these actions take imports of shark fins from countries who have not banned this immoral practice (“Shark Finning and Shark Fin Facts”).

Sub-topic 2: Combating water pollution and marine debris

It is important to recognize that, in order to protect marine mammals, we must also protect their environment, ensuring healthy living for all mammals under and above water. The major cause of death for marine mammals, such as polar bears, is the effect of climate on their habitat. In the case of the polar bear, that would be the melting of the ice caps. Pollution within the ocean is also a big factor in the death of many marine mammals, causing respiratory problems and can be a means of confusion for the mammals, leading them to ingest plastics and debris which can damage their internal organs. While water pollution can be attributed to all factors which contribute to global warming, there are some, more specific factors which can be directly attributed to water pollution and therefore threat to all marine mammals.

Fish Farming

Seafood is, as mentioned earlier, essential to our global economy and gastronomy. For this reason, the industry faces major challenges when it comes to unsustainable exploitation of wild fisheries. Studies show that around 33% of wild fisheries are overfished, and 60% are fished to their maximum capacity. Most of the seafood we eat does not even come from the wild- it's artificially grown through the means of aquatic farming called aquaculture. Most aquaculture involves floating cages within open water bodies where fish are farmed. Unfortunately, in this process of fish farming in cages, fishes endure stressful and overcrowded conditions which lead to significant waste product which pollutes the areas near. Moreover, the antibiotics used in fish farming can also lead to environmental contamination. Other fish farming techniques, such as coastal ponds, contribute to pollution and disease spread.

Oil spills

One of the main causes of water pollution lies in the issue of frequent oil spills. Oil spills are caused by malfunctions and construction failures in oil rigs. Often, these malfunctions can be caused by poor engineering or unforeseen extreme weather at sea. Oil spills can occur

anywhere in the world when it is being transported from one place to another by boat.

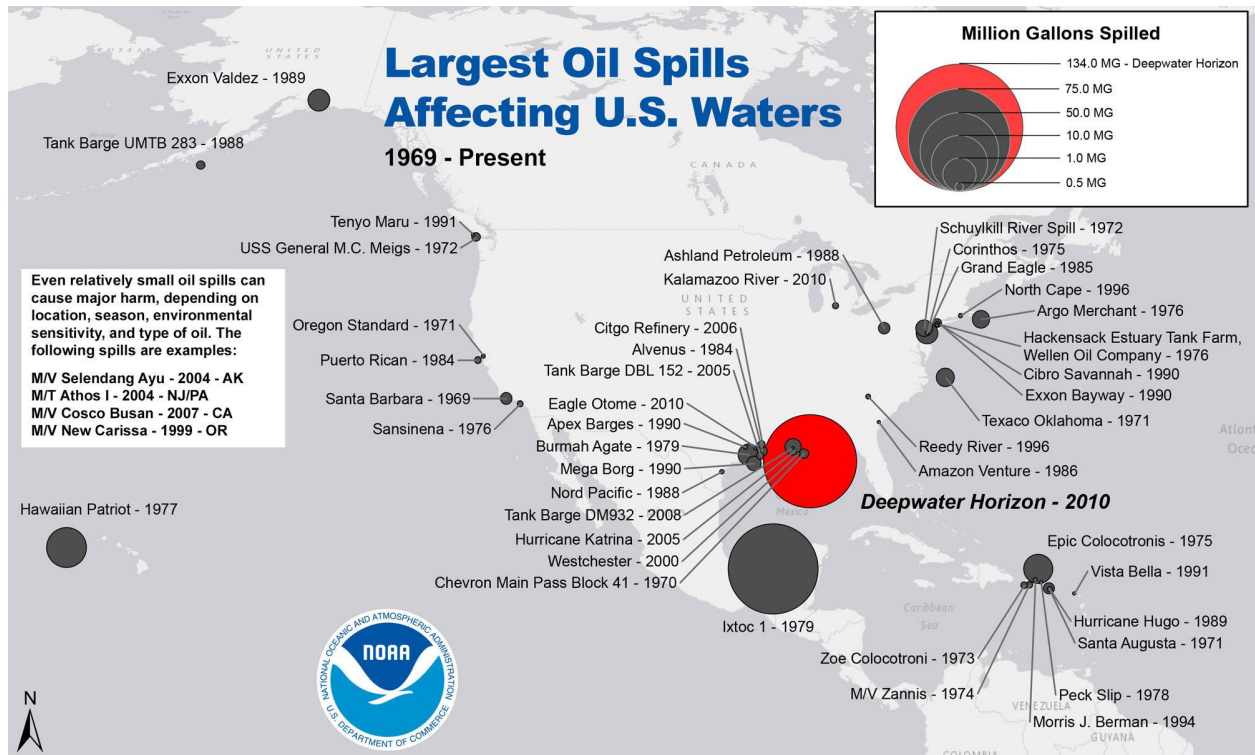


Diagram of the largest oil spills affecting U.S. waters since 1969-2017 (“Oil spills”)

Oil spills can affect environments in two different ways, and usually both. The first impact of an oil spill is called fouling or oiling. This is when an organism is physically harmed by the oil. In terms of marine mammals, often oil can coat sea otters fur and strip it of its insulating qualities, which can put the otter at risk of hypothermia. Oil spills are also filled with toxic compounds which can cause severe health problems to an organism which encounters it, causing heat damage, stunted growth, weakened immune system and even death.

Even on the surface, oil is incredibly detrimental to all marine biodiversity, as thin caps of oil on a water's surface can prevent sufficient amounts of sunlight from penetrating the water's surface, which reduces the level of oxygen within the water.

Marine Debris

Marine Debris is a major issue which can greatly impact all marine wildlife. Marine debris can range anywhere from loose pieces of plastic which end up in water disposals to abandoned and derelict vessels. Simple marine debris, such as trash that ends up in the ocean, is a

choking hazard for smaller mammals and a potential threat to the internal organs of the animals, with sharp edges which can puncture their insides. Not only that, but when ingested, these debris can give animals false sensation of being full which can lead them to starve themselves involuntarily. Larger marine debris, like abandoned vessels, can crush and damage coral reefs and the ocean floor which is essential to a thriving marine ecosystem. Some marine debris may even pick up other species which attach themselves to debris and take them to areas which they are not native to, which can greatly disturb the ecosystem that surrounds them (“Why is Marine Debris a Problem? | OR&R's Marine Debris Program”).

Sub-topic 3: Monitoring mammals and collection of research towards new technologies

War practices

Historically, use of underwater bombs, submarines and sonar has had an observable effect on marine mammals, with the Japanese Sea lion going extinct in 1970 due to overhunting and a disturbed habitat caused by submarine warfare in WWII (Hall and Huber). Recently there have been new trends in warfare affecting marine mammals, as dolphins and porpoises wash up on the shores of the Black Sea, reportedly due to Russian naval activity following the war in Ukraine. A Romanian association of environmental specialists called Mare Nostrum claims it has registered the highest number of stranded cetaceans since 2010 (Kroeger). The main cause of these newfound stranded marine mammals is argued to be from acoustic trauma caused by the use of sonar by Russian submarines. Many marine mammals navigate by echolocation, and when their acoustic system is disrupted, they lose all sense of navigation and communication within their species. It is hard to concretely blame the cause of the stranded dolphins given an accurate measure of inner ear damage in cetaceans can only be made within 24 hours of death, and most dolphins and porpoises only wash ashore much later. However, the disproportionate number of porpoises and dolphins ashore suggests there were other, larger factors at play than simple stranding, and the war is the most logical answer given that the Black Sea was also a focal point at the start of the Russia-Ukraine war.

Zoos and marine capture

The capture and confinement of marine mammals, in particular wild cetaceans like whales and dolphins, for display in aquariums and marine parks raise major concerns about

their welfare and the ethical concerns for such practices. Dolphins and whales for example, who are accustomed to traveling long distances of 40-100 miles/ day, reaching almost 30 miles per hour, find major limits in captivity. Even in the largest facilities, they are supplied with less than 0.00001% of their habitat. A disturbing study on male orcas in captivity revealed that they spend nearly 70% of their time in captivity in a virtually motionless state. The toll on the health of captive marine mammals is profound, resulting in extreme stress, neurotic behaviors, and abnormal levels of aggression. Shockingly, the vulnerability of bottlenose dolphins is underscored by a sixfold increase in mortality rates immediately after capture from the wild and their transfer between facilities. While annual mortality rates for captive orcas have seen some improvement over the years, they still fall short of the well-being observed in their wild counterparts. The surge in the number of ocean theme parks in China from 39 in 2015 to 76 in early 2019 raises concerns about the escalating demand for such entertainment. In addition, the utilization of dolphin sea pen enclosures in Asia and the Caribbean poses environmental risks, as they are highly susceptible to hurricanes and tsunamis, causing damage to delicate ecosystems, including coral reefs and mangroves. The imperative for reconsidering and reforming the capture and display of marine mammals becomes increasingly apparent as awareness grows regarding the impact on these intelligent and sentient beings (“Thousands of captive whales, dolphins and other marine mammals still suffering in 2019”).

Major Countries and Organizations Involved

NOAA (National Oceanic and Atmospheric Administration)

The NOAA is a regulatory agency based in Washington D.C. which belongs to the United States Department of Commerce, which is a department of the U.S. federal government. As an agency they forecast weather, monitor oceanic and atmospheric conditions, conduct deep sea exploration and manage fishing and protection of marine mammals and endangered species within the U.S. The NOAA complies with the Marine Mammal Protection Program and works to implement it across the US.

Greenpeace

Greenpeace, a global organization which supports and organizes campaigns and protests towards a more sustainable future, is actively involved in the issue of marine mammals. They are building sanctuaries and strive to establish sanctuaries in 30% of the world's oceans by 2030. These sanctuaries allow marine mammals to safely recover from injury and to replenish populations of marine life as they have a safe space for reproduction without the threat of human technologies. This move towards the building of more marine reserves has also brought more attention to the issue of marine conservation. (“Oceans”)

United States

The Marine Mammal Protection Act (MMPA), enacted in 1972, stands as a cornerstone of U.S. marine mammal conservation efforts. The MMPA prohibits the harassment, hunting, capturing, or killing of marine mammals within U.S. waters and by U.S. citizens elsewhere. Additionally, the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service play pivotal roles in implementing and enforcing the provisions of the MMPA. These agencies work collaboratively to develop regulations, conduct research, and manage marine mammal populations to ensure their long-term well-being. The U.S. takes a science-based approach, employing strategies such as stock assessments and the establishment of protected areas to mitigate potential threats to marine mammals. The country's commitment extends to international collaboration, as evidenced by its participation in global agreements and conventions aimed at safeguarding marine mammal species across international waters. Through a combination of legislative measures, research initiatives, and international cooperation, the United States demonstrates a proactive stance in the conservation and protection of marine mammals. Still, the US has over 400 zoos with marine mammals in captivity, which can present some hypocrisies in their legislation.

México

México holds around 60% of marine mammal species worldwide, but they face big marine mammals conservation challenges. México has declared the Mexican Caribbean has been declared a Reserve of the Biosphere of the Mexican Caribbean (“Marine Mammals Representative Species | Dolphin Discovery”). México has also called for a ban on captivity of marine mammals, as in 2017, México City Congress passed a law prohibiting commercial

exploitation of dolphins and whales. This plan is only applicable in México City, but it is still a big step towards mammal conservation within Mexico. (Dodds)

United Kingdom

The UK Parliament is actively involved in the issue of protecting marine mammals within the UK and abroad. The UK was cited to be one of the most nature-depleted countries in the world and is working towards a more sustainable future to grow their own biodiversity and to help the future of all countries worldwide (Deaville).

Pacific Coast Nations

Ecuador, Costa Rica, Colombia and Panama are actively involved in making a massive wildlife protection corridor off of their coasts (“Countries step up efforts to protect marine wildlife”).



Tweet from Colombian Politician Ivan Duque on the protection corridor in Pacific Coast nations

Global Ghost Gear Initiative (GGGI)

US, Canada, Belgium, the Netherlands, South Korea, Spain, Sweden, Norway, and the UK are countries involved in the GGGI, an initiative which moves towards the removal of ghost

gear from the oceans (Giskes). This initiative is a huge step toward the protection of marine mammals and all marine life. By removing the risk of marine debris and especially gear which is usually sharp and/or more likely to be harmful to marine wildlife, states are moving towards a safer ocean for all.

Timeline of Events

Date	Description of event
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mid-1700's	Sea cows go extinct, only 27 years after being named and identified, due to Russian and Aluet hunters over hunting sea otter population, which sparked major population growth in their main predator, the sea urchin which ate the kelp that sea cows feed on.
1918	Migratory Bird Treaty Act- only legislation protecting wildlife in the U.S. til the 1960's ("Marine Mammal Protection Act: Timeline and Impact").
1986	The International Whaling Commission issues a moratorium on whale hunting. Marked the 'end' of whaling. (Iceland, Japan and Norway still partake
1966, 1969	Creation of Endangered Species Preservation Act (1966) and Endangered Species Conservation Act (1969), both precursors to the expansion of wildlife protection in the United States ("Marine Mammal Protection Act: Timeline and Impact").
1970	Japanese sea lions excessively hunted and affected by submarine warfare in WWII, go extinct (Hall and Huber).



Japanese sea lion in captivity

1971	Following an outrage of angered Americans facing the reality of dolphin hunting for tuna and seal hunting for fur, over 40 different Marine Mammal bills were introduced into congress
1972	Creation of Marine Mammal Protection Act (MMPA)
1981	MMPA amended to allow for take of marine mammals ‘incidentally’ or unintentionally. Given to commercial fishers which can have ‘unintentional’ effects on marine mammals. For this permit, fishers are required to follow certain protocols to reduce incidents.
1984	MMPA amended again to regulate tuna fishing, particularly dolphins. U.S. only allowed imports from fisheries which use certain technologies.
1988	Fishers with incidental fishing permits must take a fishing observer onboard.
1994	MMPA authorized ‘take’ of marine mammals for certain purposes such as scientific research and public display. Also called for marine stock assessments.
2008	NOAA concludes the extinction of Caribbean monk seals. Spanish explorers

	arrived in the Caribbean and began avid hunting of monk seals for fur, hides, meat and oil. They also experienced disturbed habitats due to fishing and coastal development. (Hall and Huber)
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Relevant UN Treaties and Events

- Environmental Management, 28 May 1984 (**A/39/25**)
- Protection of the oceans and all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources : revised draft proposal / submitted by the Chairman, UN, 22 Aug. 1990 (**A/CONF.151/PC/WG.II/L.1/Rev.1**)
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region ; Protocol concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region, New York : UN, 1983 (**UNEP(092)/M35**)
- Addressing marine pollution : concept paper / prepared by the Secretariat, UN, 5 May 2017, (**A_CONF.230_4-EN**)
- Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, New York, 19 June 2023, (**C.N.203.2023.**)

Previous Attempts to solve the Issue

MMPA

The MMPA has attempted a reform which allows for the maintenance of captured marine mammals in display facilities in return for a promise to work towards conservation efforts and educational material. The management and conservation efforts under the Marine Mammal Protection Act (MMPA) involve a multifaceted approach. This includes regulating the take of marine mammals through permits and authorizations, investigating and prosecuting violations, and collaborating with other nations to ensure international fishing practices align with MMPA standards. The evaluation of marine mammal status is carried out to determine whether species should be designated as depleted, leading to the development of conservation plans.

Scientifically-informed stock assessment reports are generated, providing essential information on species' geographic range, population structure, abundance, and threats. The MMPA also addresses the management of incidental marine mammal interactions with commercial fisheries through authorization, reporting, and the development of take reduction plans. Collaboration with Alaska Native organizations is emphasized to conserve marine mammal populations in Alaska. Additionally, a national network is coordinated to respond to marine mammal strandings, and efforts are made to investigate and respond to unusual mortality events. This comprehensive strategy reflects a commitment to the protection and sustainable management of marine mammal populations. (NOAA Fisheries)

Oil spills

Floating booms are used to contain the spreading of an oil slick on the surface of the water. Companies will also use skimming techniques to separate the oil from the water and compartmentalize them into tanks. Another method to remove the oil from the water is using sorbents which absorb the oil from the water.

Disentanglement

Another way to combat the issue of marine debris and plastic pollution is to find and save animals which have been caught in marine trash. Specially trained teams annually rescue California sea lions entangled in plastic netting, packing straps, and other debris around their necks and faces. Some marine mammals are found with plastic trash, such as bags and balloons, in their stomachs, highlighting the pervasive impact of pollution on wildlife. These rescued animals receive top-tier care at the Center's advanced veterinary facilities. The Whale Entanglement Response and Prevention program, in collaboration with the Cascadia Research Collective, focuses on responding to large whales in distress, often due to entanglements in fishing gear. Through vessel surveys, the Center and its partners inform risk assessments for whale entanglement off the California coast, leading to decreased entanglement risks in the Dungeness crab fishery and enhanced protections against ship strikes. This integrated approach reflects the Center's commitment to mitigating the human-induced threats faced by marine mammals and promoting their well-being.

Alternatives to zoos

Many animal protection programs are suggesting 'natural' alternatives to zoos which people can indulge in. Encouraging individuals to visit sanctuaries, these companies emphasize the importance of choosing establishments that provide lifelong care for rescued animals while cautioning against deceptive venues posing as sanctuaries. Wildlife rescue or rehabilitation centers become focal points, recommended for visits or volunteer opportunities, with a strong emphasis on verifying the legitimacy of such facilities. Companies suggest individuals leverage their large, natural properties for wildlife release, fostering partnerships with rehabilitation centers to support animals returning to their natural habitats. Proposing volunteer tourism as a unique way to blend leisure with wildlife advocacy, these companies acknowledge debates around its impact on communities but underscore its potential benefits. The call to travel and observe animals in their natural habitats aligns with ecotourism, endorsed by responsible companies that prioritize reputable, sustainable operators dedicated to wildlife and community welfare. Throughout these endeavors, companies stress the importance of maintaining deep respect for animals, ecosystems, and local communities, ensuring a positive contribution to the overarching cause of wildlife conservation.

Possible Solutions

Sub-topic 1: Ensuring responsible boating and fishing practices

Bycatch

To mitigate the effects of bycatch, delegates must research data observation of fisheries and boats to build trends of marine mammal stocks and effectively assess and mitigate the impacts of bycatch. Another great option would be to create new technologies and nets which

ensure safe capture so that, if bycatch happens, the marine mammals don't die before being released back into the ocean.

Mammal fishing and culture

The issue of mammal fishing in culture should be tread through lightly, but we must also consider that 'culture' should not be compared to a lifetime of sustainability. Global economy can still benefit from a more flourishing natural environment as opposed to gastronomic delicacies. Delegates may suggest limited fishing for cultural purposes Member states should work collaboratively with local communities to develop sustainable fishing practices that minimize harm to marine mammals and their habitats. We should implement robust educational programs to raise awareness about the ecological importance of these species and promote alternative, culturally meaningful activities that do not pose a threat to marine mammal populations. Additionally, advocate for the creation and enforcement of regulations that set clear guidelines on acceptable fishing methods, seasons, and quotas to ensure the long-term viability of marine mammal populations. Member states should consider contact with indigenous and local communities to understand their cultural perspectives and involve them in the development of conservation strategies, fostering a sense of shared responsibility for the protection of these invaluable marine species.

Sub-topic 2: Combating water pollution and marine debris

Fish farming

By leveraging natural ocean systems, restorative ocean farming emphasizes cultivating shellfish and seaweeds, which have minimal maintenance requirements and enhance water quality. These flora and fauna absorb carbon through photosynthesis, aiding in the fight against climate change and reducing local ocean acidification while creating habitats for other marine species. Making this shift towards restorative farming techniques not only strives for environmental conservation, but also provides job opportunities for coastal communities and it promotes shellfish and plant based diets which also means a lower carbon footprint for the global collective.

Oil spills

Many times, oil spills are met with wildlife recovery, cleaning and rehabilitation, however, these animals are often hard to catch, and marine mammals like whales and dolphins are too big to recover. This means that when searching for a possible solution to oil spills, we should focus on its prevention rather than fixing its repercussions. In confronting the critical issue of oil spills and their detrimental impact on marine mammals, a multifaceted strategy is imperative. Immediate response efforts must be bolstered, emphasizing the establishment of rapid response teams equipped with advanced technologies to swiftly contain and mitigate spills. Member states should be urged to enhance and enforce stringent regulations on offshore drilling activities, incorporating advanced monitoring systems to prevent spills before they occur. Collaboration among nations is paramount; encourage the development of regional frameworks to facilitate information-sharing, joint response mechanisms, and the pooling of resources in the event of an oil spill. Financial incentives and penalties should be employed to incentivize companies to adopt and invest in cutting-edge technologies that minimize the ecological impact of spills. Furthermore, advocate for the establishment of international research initiatives to better understand the long-term effects of oil spills on marine mammal populations, facilitating the development of targeted rehabilitation and conservation strategies.

Marine Debris

This issue can be tackled in many different ways, regarding cleanup and prevention. Prevention and cleanup efforts are crucial- encourage the implementation of measures to reduce marine debris, coupled with regional and national cleanup programs, particularly in areas with high marine mammal populations. Prioritize research and innovation, investing in technologies that track and remove debris with minimal harm to marine life. Establish accountability through regular reporting on member states' progress and a review mechanism under our committee. You may also think of promoting a global commitment to capacity building, with developed nations providing financial and technical assistance to their developing counterparts.

Sub-topic 3: Monitoring mammals and collection of research towards new technologies

War Practices

Delegates must think of how the use of sonar can be prevented at war time or how we can protect marine mammals from its effects. One example could be a shut down of all sonar around marine mammals areas in the ocean, and accurate measures of the area it reaches.

Member states must prioritize the avoidance of military activities in ecologically sensitive marine zones and establish strict protocols to prevent the use of naval sonar systems that can disturb or harm marine mammals. Encouraging the development and implementation of "marine mammal safe" technologies and practices within armed forces should be a priority, minimizing the collateral damage inflicted on these vulnerable species during conflicts. Diplomatic efforts should be intensified to establish international agreements that designate marine sanctuaries and migration routes as off-limits during hostilities. Furthermore, the international community should support post-conflict environmental assessments, rehabilitation efforts, and capacity-building programs in regions affected by war to facilitate the recovery of marine mammal populations.

Zoos and marine capture

Delegates might propose alternatives to marine entertainment in parks as a solution to marine mammal captivity, offering different sorts of entertainment which don't require inhumane living conditions for the animals. Delegates should consider remaking animal protection laws within governments to keep mammals in captivity in more humane conditions and delve into the issue of research on marine mammals' mental health and its importance.

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