Research Essay

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Introduction

Shark net is defined as a submerged net that is placed around the beaches so that attacks by sharks on swimmers can be reduced. Gillnets are the majority of shark nets that are used, acting as a wall of the net that hangs in water and then captures the shark by entanglement [[1]](#footnote-1). The length of nets used in Queensland Australia is probably 186m long and they are set at the depth of about 6m, designed to catch sharks that are more than 2m in length. Different resources of information assert that using shark net has proved to be effective in 1900 till 1937, about 13 people were killed while in the next 72 years, the number of deaths was reduced to 8 only [[2]](#footnote-2). Although shark nets have proved to be effective in reducing the death rate, on the same board questions arise in terms of environmental impact because shark nets result in the incidence of bycatch that threatened and endangered species such as dolphins, whales, sea turtles as well as dugongs. Keeping human safety at one side, debate was initiated in the form of *DAF (Qld) v Humane Society International (Australia) Inc* [2019] FCAFC 163, for the use of shark nets in Queensland which asserted that the use of shark nets is ineffective as it violates animal rights and there are several other methods that can be used for preventing the shark attack. This paper argues the effectiveness of shark control programs by determining the consequences of using shark nets. It is argued that shark nest has failed to be a good option to create a balance between the choice of sharks and human life, on the basis of which, several recommendations are proposed on the baseline of fact that, “government should consider giving significance to shark life as well as human life, shark net is threatening other harmless species as well”.

*Discussion*

Sharks nets are one of the most commonly used safety measures in Queensland and Australia that can help to control shark attacks. Several discussion has been conducted, with an aim to analyze if shark nets are effective or not.

*Shark nets and their necessity*

In accordance with the recent information source, it is highlighted that the long 51 beaches, covering the areas of 250 km of the New South Wales coastline, there are a lot of beaches, ruined by the net. The net lines were approved and deployed in 1935, which are used as only a two-year experiment [[3]](#footnote-3). However, by 1937, it was found that there are no cases found in terms of the shark bites and none of the government funding was provided to address the stance or find if there are any gaps. The rationale of net line can be traced from NSWs imminent 150th anniversary which inferred that the state politician was fearful of the shark attacks during the celebration. The nets were removed during the second world war taking into account the aim of facilitating the American fisheries. Later in the time of next three years, between 1943 till 1946 there were no significance of shark bites at the un-netted beaches [[4]](#footnote-4). However, by the end of the war, William McKell announced that the use of net lines was so invaluable, reporting that there were shark faculties recorded. So, despite eradicating the use of shark net, he announced that the shark nets should be used in coordination with the experimental shark repellant because **“if meshing alone were used, I fear it would prove to be of little value. Worse, it would possibly lull the public into a sense of false security, leading to diminished watchfulness and possibly to tragedy [[5]](#footnote-5).”** Ultimately, knowing that there are no shrank bites, and a little treat to the people's lives, the nets were again enacted and they were extended to the Hunter as well as Illawarra adhering to the new plan of action. The beaches of the Queensland are one of the major and important places for swimming but the only threat prevalent is that of Sharks because sharks are assumed to inhabit the coastline, along with rivers, creeks, estuaries and the streams [[6]](#footnote-6).

Taking into consideration this threat, Shark Control Program was introduced also called (SCP), that was in place from 1916 and 1962, which inferred that there were 36 shark attacks in Queensland that resulted in 19 fatalities [[7]](#footnote-7). However, after the implementation of the program, the total number of case of shark attack was found to be only one. It is also found that the SCP relies on the drumlines and nets, several times it is the combination of both so that the shark attacks can be controlled. It tends to lower the risk of shark but on the same board, this program was more like a penetrable barrier between humans and sharks. The SCP aims at the re-education on the effect of prevention methods, without any impact on human safety, which seems to be static in nature because it requires a call on the hotline which is way too far in the present time of steadiness and readiness [[8]](#footnote-8).

*Review from Department of Primary Reports*

As per the recent information, SCP was re-endorsed that in reference to the Department of Primary Report in 2009. In accordance with the DPI’s 2009 review, it is highlighted that there is a contemporary view of the shark’s net. The Environut Minister lan Macdbald highlighted and called the nets as the “Highly successful” approach inferring that the report of the shark bites was found and it resulted in 14 injuries [[9]](#footnote-9). Also, the Minister and Department cordially pointed out that there has been a single fatality that is found with the net in 1951, taking into account that trading was introduced out of nothing and to increase the overall privilege of the people who came to have a remarkable event. The review highlights that being responsible government and responsible state, a massive responsibility is required to be assigned to the stakeholders of the state and country because it is bit ambiguous that a decision that has resulted in a threat to the wildlife was made and issued without any reference to pros and cons [[10]](#footnote-10).

*Scientific Approaches*

However, there are a lot of studies that have been conducted so far with an aim to identify either the shark nets are effective or not, if they are not effective what are the proposed consequences. As per the study that was conducted by Dr Leah Gibbs who belonged to the University of Wollongong, (UOW), and the study was published in the Journal named as “people and nature” [[11]](#footnote-11). The researcher found that the shark nets were not effective for keeping the people safe from sharks. On the same board, it was found that there is a comparatively negative impact on marine life, keeping interests confined to targeted species and the other species as well. According to the Shark Meshing Program annual report, it was found that there are a large number of harmless aquatic animals were caught in the shark nets while the shark nets were only enacted for the sharks. The animal included harmless fish, rays as well as dolphins and turtles [[12]](#footnote-12).

In another study was published by the Guardian magazine, which highlighted the shark mitigation and deterrent measures in Australia particularly the use of mesh nets in the New South Wales and Queensland. The study concluded that it is almost impossible for the lethal shark control measures to ensure public safety because the stance of safety can only be attractive when there are zero chances of danger. [[13]](#footnote-13) In the stance of using shark nets, it is found that still there is a ratio of the population that is affected and the animal species are also affected largely. According to the reporter, it is highlighted that "The committee is concerned with a heightened fear of sharks that has led to responses that may calm the public and appear to provide an effective response but, not verified by scientific evidence”[[14]](#footnote-14).

The aim of referring to the above studies was to get a clear understanding of consequences without keeping an insight into the positive measures because today, “to be or not got be is the stance”.

*Consequences of shark nets*

The evaluation of the two studies highlight that there are a lot of consequences that are the product of using shark nets, which ranges from a threat to the species of animals to that of overall justice to the other populations rather than human beings. One of the major consequences is the reduction in the number of sharks’ overtime because a majority of the sharks are killed by the shark nets, then, it is highlighted that there are a lot of other measures that can help to prevent human beings or swimmers from shark attacks [[15]](#footnote-15). It is also found that the aim of using shark nets was to prevent the shark attack, but the results are more controversial and threatening because along with sharks several other animals are also attacked, taking into account that they are not harmful to the swimmers. Then, it is considered that killing of shark is not justified because aquatic life has also survived in the water. It would not be wrong to say that water is their property and swimmers are making use of their habitat for their pleasure. Although, a swimmer can do this, still, killing animals is not justified because shark nets either leave sharks being killed or they are badly injured that they cannot survive a long time. The consequences of shark nets are also alarming in the context of different state and territories regulations for human welfare [[16]](#footnote-16).

Another major consequence is found in the major inference with the life of the other wildlife and a minor interference in dealing with the fear of sharks. According to marine research, it was found that the sharks net on the New South Wales has just caught a single shark in the time of past two months, but there are hundreds of dolphins, turtles and other marine life that are either trapped and killed. This makes up to 55-100 deaths of the marine life and unfortunately this list comprised of all those animals who are the “vulnerable species”. According to the Humane Society International scientist Jessica Morris, it is found that it is quite unacceptable for them to accept all these death ratios in the animals who are already facing a threat to be endangered. She proposed that the debate of lethal intervention is also useless as there a lot of nonlethal alternatives available which can be used [[17]](#footnote-17).

A negative version of wildlife is also something that needs consideration, taking into account that the illusion that is being created by using shark net have included a false illusion of security in the minds of swimmers. In addition, it is found that there is a continuous instance of violence and hatred that is found in the hearts of people in terms of wildlife and marine life.

There are several other platforms that have analyzed the stance of using shark nets such as **SEA LIFE Trust Australia/ New Zealand,** which argued that the government has to play a central role in the safety of the beach-going public but it is important to note that the deployment of shark notes, as well as drum lines, is just creating a false sense of creativity. There are significant tolls for tens of thousands of the threatened as well as endangered marine life [[18]](#footnote-18).

The approach of Humane **Society International** highlighted that the government can never ever guarantee public safety in the ocean. The programs regarding Australian shark control program are found to be unsustainable[[19]](#footnote-19). However, the **Australian Marine Conservation Society (AMCS)** has agreed with the prior point of views, taking into account that the human shark encounters have proposed considerable consequences for the families, friend and the individuals. In addition, there are trillions of other beings and assessment strategies that can be brought into practice with the deployment the safety beach mechanism with an aim to ensure there is no threat to the shark species as well as the other marine life [[20]](#footnote-20).

*Legal Interference*

In accordance with “**Prevention of Cruelty to Animal Act 1979**”, use of shark net is clearly a violation of the animal rights because there is no place for an action that kills or affect the life of any other species or any of the living organism. In addition, the “**Environmental Protection Authority of Western Australia”** has also resulted in assessing the policy taking into account that the use of shark nets is a clear threat to animal rights. It is because of the limited time frame and lack of critical insight that a negligible risk to the environment is proposed in the form of “permission to use shark nets”. The underlying context of “**Environment Protection and Biodiversity Consecration Act 1999**” is one of the legislation that affirms that shark can be caught by using some commercial and recreational fishes if they are threatened there is a risk of attack by them. It is so because the human intervention nullified of critical thinking resulted in a handful of species considered to be “threatened” under the impact of Environment protection and Biodiversity Conservation Act 1999. Under the principles of the act, it is illegal to injury, trade, keep, move or kill species and sharks who are one of the endangered species.

*DAF (Qld) v Humane Society International (Australia) Inc*

In continuation to all the approaches and the proposal that are issued by the different human welfare or animal welfare authorities, a recent federal court decision was brought on board, entitled, *DAF (Qld) v Humane Society International (Australia) Inc* [2019] FCAFC 163, under which several conflicting arguments and statements are brought into insight. As per the law and the commentary by different reports, it is highlighted that the Great Barrier Reef Shark Control Program will be restarted after the decision of the Federal Court Judge will appear in the reference to the subject of say on a centavos tribunal ruling. It was followed by a victory of Humane Society International in the Administrative Appeals Tribunal which affirmed that there are several sharks who are found alive in the drumline of the Great Barrier Reef. it was asserted that the sharks must be saved by the animal welfare grounds as well as different serious contractors [[21]](#footnote-21). The judge of Federal Court, John Logan issues a stay adhering to the tribunal decision, he also pointed out that he wants the appeal to be heard in the full bench. The court was told about a temporary suspicion of the shark control program that paved the way for the deployment of some officers on the patrols who can inform the members of the public about changes along with the introduction to some smart drumlines that are safe to use [[22]](#footnote-22). The point of conflict is the argument that "Human life must be put ahead of shark’s life” while the Humane Society International Marine campaign asserted that incorporation of the lethal shark control program that cannot cost the lives of the shark [[23]](#footnote-23).

Taking into account the stance of lethal program, AAT highlighted that there is no point of agreeing to the lethal program because it is also not effective. AAT asserted that the lethal Programs of the SCP are not capable of reducing the risk of shark interaction. In addition, different scientific evidence has highlighted that the lethal program is highly plausible as if SCP will become non-lethal tomorrow, then there will be “No Discernible change in the unprovoked shark bites, in particular, fatalities"[[24]](#footnote-24). As a result, the appeal was dismissed because there were a lot of errors found in the AAT’s dimensions such as alleged errors [[25]](#footnote-25). The arguments don’t end here, because there is a strong argument that is proposed in favour of the lethal shark control program. As per this program, it is highlighted that the incorporation of the lethal shark control network proved to be much effective as implemented in the New South Wales and the Queensland as well as Western Australia, introducing appropriate safety measures [[26]](#footnote-26). In addition, it is also important to note that the government has its prominent role in terms of securing the role of both, wildlife as well as human beings. It is evident that the government within Australia have made and taken different approaches as a response to the shark bites such as the use of the lethal program in South Africa and New Zealand. In addition, the committee is also brief that the government in the United States took no action in terms of shark bite incidents [[27]](#footnote-27).

*Stance of prioritizing a balance between marine life and human life*

In order to answer the adequacy of law and measuring the stance of *DAF (Qld) v Humane Society International (Australia) Inc* [2019] FCAFC 163, it is highlighted that it is not at all acceptable and addressable to consider that “Human life is more preferable than animal life”, taking into account that without any friendly efforts to that of wildlife there is no point of living a life in which only human needs are addressed and all the preference is given to human life. Although it is evident that human life is positioned superior to that of the animal life but it never means that the animal life should be brought to the edge of destruction and “alleged” just for the sake of human life. There are different points of views to consider in this aspect as well [[28]](#footnote-28).

One of the prime approaches is the stance of differentiation between **“pleasure” and “necessity**”. Firstly, it is highlighted that the law should be amended because this law is a core of the conflict between something that is serving as life to the others and the pleasure-seeking activities. People go to the beach for swimming and enjoying which is far less important when there is a question of the wildlife which the source of beauty is but also plays a central role in the management of the ecosystem. This aspect affirms that the government should make efforts that can play a central role in defining the lines of life between both, humans as well as wildlife [[29]](#footnote-29).

Another species of this decision highlight that null and void decision is not an option, it also deciphers, “**lack of sense of responsibility**”. Taking into account the stance of *DAF (Qld) v Humane Society International (Australia) Inc* [2019] FCAFC 163, it is highlighted that the government should take this decision not just out of anger and outrage towards the propositions by the wildlife supporters [[30]](#footnote-30). In fact, this decision should be taken in adherence to social and moral receptibility while living in this world. The government should make amendments in a way that this decision can prove positive and effective for both, wildlife as well as humans. This can be in the form of technological use because today world is too far ahead in using technology for the welfare of mankind [[31]](#footnote-31). In accordance with the research that was done by one of the scientists, it is highlighted that one of the effective initiatives can be the use of invisible walls which can separate the realm of swimmers with that of the sharks [[32]](#footnote-32). Then, it is found that there are several other measures such as the use of a drone which can be used to alarm and make the swimmers aware of the approaching threat. It is also found that according to one of the victims of the shark bite, he asserted that there was no siren or alarm that was made to make him aware. In addition, Sonar Clever Buoy is also one of the initiatives that can be used to overcome the issue of shark bites. It is asserted that the Sonar can detect anything that is approaching and transfer the information to someone on the land [[33]](#footnote-33). Electromagnetic fields are also something that can be introduced taking into account that the invisible offshore barrier is created by the electrodes so as to mitigate shark bites [[34]](#footnote-34).

**Personal responsibility** is also something that should be given primary significance because, at the end of the day, every human being is responsible for its life, it is not possible for the government or any of the initiatives to become a watchdog for securing human life. All the recommendations proposed above are just additional initiatives that can help to reduce the number of shark bites along with ensuring the life of the sharks [[35]](#footnote-35).

Conclusion

In a nutshell, it is highlighted that there is a sire need to priories shark life as well as the lives of the other marine animals who are targeted by shark net because shark nets are doing more harm than good to the aquatic life. This false illusion by shark net is a massive threat because it is mitigating the beauty of marine life. The above discussion also asserted that the use of a shark net is a bit misdirected because it is targeting fewer sharks and more other marine population.

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