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BIOL 415

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Assignment 1

Title: The Exploitation and Conservation Challenges Facing Shark Species

Abstract:

Throughout mankind's history, human involvement with the environment has had many negative impacts, leading to degrading ecosystems and extinct species. Recent studies have shown that many large vertebrates including sharks are subjected to exploitation due to advancements in technology, allowing us to reach further destinations in the open sea. With this new exploitation, it is important to keep records to try to imply management and conservation means for these marine species. This study starts this process by analyzing logbook data from the U.S. pelagic longline fleets using a generalized linear model that counts the positive catches. This addresses any missed values from true zeros. Using this data, you can categorize the different species and compare the numbers between the years. The results show a dramatic decrease in different species of sharks in the North Atlantic Ocean. For example, since 1986 Hammerhead sharks are estimated to have declined 89%, white sharks 79%, and tiger sharks 65%. This data proves that overfishing and exploitation are a major threat to coastal and oceanic sharks within the Northwest Atlantic. It shows an alarming decline which could threaten the species to a large-scale extirpation. Marine conservation methods have been looked at but it is critical to have the right placement and must consider the impacts of the whole community. Overall, human involvement needs to be managed to create a sustainable future for marine diversity.