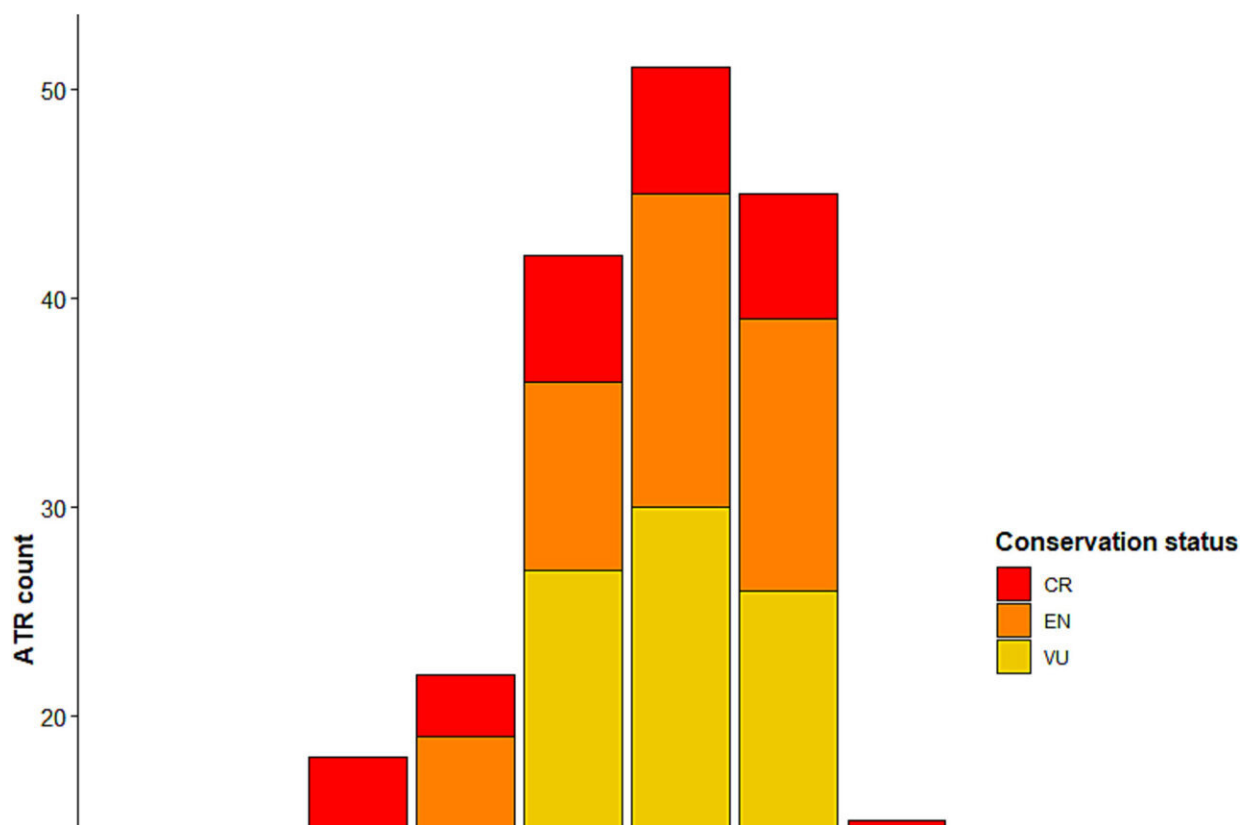


# Trophy fishing, what's the catch? Research finds declines in threatened fish and shark species

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All-tackle record (ATR) counts for species currently listed as Critically Endangered (CR), Endangered (EN), or Vulnerable (VU) on the International Union for Conservation of Nature (IUCN) Red List. Credit: *Aquatic Conservation: Marine and Freshwater Ecosystems* (2023). DOI: 10.1002/aqc.4051

New research mapping long-term international trends in trophy fishing has found declines in records for threatened species, adding to a growing body of evidence that these types of fish and sharks are becoming increasingly scarce.

Species on this list include reef giants like Goliath grouper and humphead Maori wrasse, along with ocean wanderers such as great hammerhead and oceanic whitetip sharks.

## **Angling change**

The study, "Shifts in the size and distribution of marine trophy fishing world records" [published](#) in the journal *Aquatic Conservation: Marine and Freshwater Ecosystems*, tracked [global trends](#) in trophy fishing over the past 80 years, with some of the planet's most [threatened species](#) showing notable decreases in new records.

Trophy anglers around the world were also found to be moving away from targeting only a select few large-bodied [fish species](#) to instead now looking to land a wider range of smaller-bodied species. New records were for increasingly smaller max-sized species of fish, with the average-sized record shifting from 167.7kg in the 1950s to 8.1kg in the 2010s.

The research was the brainchild of Dr. Bryce Stewart, an international expert in marine ecology and fisheries biology at the University of York. He explains that trophy fishing has become popular around the world due to improvements in angling technology, and growing disposable income and global travel.

## **Conservation concerns**

While trophy fishing records can provide valuable insights, the research

highlights the environmental impact of the sport, as specifically targeting the largest fish removes the most important breeders from the ocean. The declining nature of some fish populations appeared to be reflected by recent declines in records for those species considered threatened by the International Union for the Conservation of Nature (IUCN).

Dr. Stewart explained, "The sizable nature of recreational angling makes it difficult to explore trends in global catches. However, trophy fishing [world records](#) provide unique insights into recreational fishing pressure on the largest species and size-classes. I'm very proud of this new research because it offers a deep analysis of temporal trends into the number and size of record-setting fish, and how record catches have changed across the globe over an 80 year period.

"These findings shed new light on the global health of many fish species and can potentially help ensure they have a more sustainable future."

## **Data-led approach**

Trophy fishing is promoted and recorded by the International Game Fish Association (IGFA), which manages an 80-year long database on the largest individuals of a species caught. This record logs all-tackle records (ATRs), with information on the size and location of each record catch.

The new research has discovered that the number of all tackle records, and the number of species awarded an all tackle record, have increased significantly over the past 80 years.

## **Global shifts**

Lead author of the study, James Boon from the University of Nottingham, who did much of the work while at the University of York,

added, "There has been a global shift in trophy fishing, the study evidencing a move away from where it began in Florida to new areas such as across Asia and Australasia.

"Records were unevenly distributed around the world but have spread globally over time. Historically, all tackle records were concentrated around the coastline of the U.S. but in recent decades more were reported in countries such as Japan and New Zealand."

## **New focus**

Specifically, between the years of 1941 and 1989, records were concentrated in North America and particularly Southern Florida. Since the 1990s the all time records have more often been broken in Mexico, Japan and New Zealand. All time records were first reported in New Zealand in the 1960's and increased notably in the 2010's.

The new research found a shift away from simply targeting the largest fish in the sea, to a broader approach from fishermen to focus on many smaller species of fish. This was in line with the IGFA registering more species for records over time. But the data can be interpreted in different ways.

## **Scarcity concerns**

James Boon explained, "Numerous other studies have demonstrated overfishing of many fish species across the world's oceans. This trend, along with the fact that trophy anglers have now explored much of the globe, is likely making it increasingly difficult for anglers to set new records."

"The spread of all time records also suggests a growing pressure on the

largest size-classes in regions with previously little trophy fishing pressure. We encourage greater use of catch-and-release initiatives and mandatory data collection for all near records to better quantify trophy fishing pressure and ensure sustainable practices."

## **Sustainability goals**

On the catch-and-release front there is some good news. In 2011 the IGFA introduced a length based alternative category for trophy fishermen. Without the need to weigh fish, this makes it possible for record sized fish to be released alive, as long as they are carefully handled.

In the U.K., things have been taken a step further. Following discussions with Shark Hub members from University of York and the Angling Trust, The British Record Fish Committee recently agreed that from now on, only length based records will be allowed for large shark species, with measurements having to be undertaken while the fish are still in the water.

Likewise, the Committee will soon introduce length based records for all of the sea species on their main list. Research is being conducted into pioneering new digital measurement technology to assist with this process.

Dr. Stewart, commented, "Catch and release is a much more sustainable way to do trophy fishing, it is obviously better for individual fish but can also have measurable positive outcomes on the wider ecosystems in seas too. I am hopeful that other countries popular with the trophy fishing community will look at the approach being taken in the U.K."

## **Nature connection**

Recreational fishing is today primarily undertaken for leisure, as opposed to income or subsistence. Conservative estimates suggest that marine recreational anglers extract around 900,000 metric tons of fish per year, which accounts for less than 1% of total marine catch.

The marine angling industry creates an estimated annual global revenue of more than \$40 billion and employs an estimated 1 million people. Anglers themselves also benefit from a strong connection with nature and/or their cultural heritage, as well as a sense of enjoyment and relaxation and positive benefits for physical and mental health.

## **Mandatory recording**

Dr. Stewart cautions that trophy fishing does not tell the full story of fish stocks in our seas. He said, "Of course, one obvious issue with using records to infer angler behavior is that it does not track all fishing effort, only effort that resulted in a fish found to be large enough to qualify for a record. And trophy anglers that catch large fish which are still smaller than the current record, often called 'near misses,' will not be recorded. For this reason we recommend mandatory recording of all near records to better [trophy](#) fishing and ensure more sustainable practices."

## **Future recovery**

Recent years have seen a remarkable recovery of bluefin tuna in British waters, with the U.K. government recently approving a recreational catch and release fishery from 2024. These top predators of the ocean are spectacular and enormous fish, with the current all tackle [record](#) standing at an incredible 678 kg (1,496 pounds). With continued careful management, these fish should provide new angling opportunities and socio-economic benefits to the coastal communities where they occur.

**More information:** James S. Boon et al, Shifts in the size and distribution of marine trophy fishing world records, *Aquatic Conservation: Marine and Freshwater Ecosystems* (2023). [DOI: 10.1002/aqc.4051](https://doi.org/10.1002/aqc.4051)

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