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Where have all the tuna gone?

Executive summary



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The fishery for bluefin tuna is one of the most valuable in the Mediterranean. In ancient Rome, tuna fishing and salting were two of the empire's most stable industries. Today, however, virtually all bluefin tuna from the Mediterranean are exported to Japan and the fish stocks themselves are anything but stable. The threats to the bluefin tuna are driven by over fishing, tuna ranching and the high market demand for one of the most valuable species of tuna worldwide. The facts are sobering:

- the bluefin tuna population is now at a fraction of its natural (unexploited) levels, and the pressure on the stock has intensified in recent years;
- the organization managing the regional stocks of bluefin tuna consistently fails to heed the advice and warnings of its own scientific committee, setting quotas well beyond sustainable levels;
- the members of the organization in turn disregard the quotas that are set, with the real catch exceeding the unsustainable legal limit by at least ten thousand tonnes;
- pirate fishing carried out by vessels from countries around the Mediterranean Sea is rampant. Illegalities are widespread in the industry, including overfishing, the catching of undersized fish, and misreporting of catches;
- this illegal, unregulated and unreported fishing is largely fueled by the demand for live tuna to stock tuna ranches around the Mediterranean;
- the development of tuna ranching has been extensively supported by subsidies and investment by the EU and other countries;
- bluefin tuna catches in the East Atlantic and Mediterranean Sea may have been over 40,000 tonnes in 2004 and as high as 45,000 tonnes in 2005. This is 12,000 t above or 37.5 % more than the Total Allowable Catch of 32,000 t.

In short, the commercial extinction of bluefin tuna from the Mediterranean Sea is just around the corner.

Northern bluefin tuna, *Thunnus thynnus*, are one of the most valuable fish in the sea. Weighing up to 700 kilograms and able to swim faster than a racehorse can run, tuna are the king of the ocean. Northern bluefin tuna are in particular demand in Japan and fetch high prices in the markets there. Now their once plentiful kingdom is under siege from an armada of fishing vessels.

The Mediterranean Sea is vital to the survival of northern bluefin tuna. It is one of only two known breeding areas for this fish, and the waters surrounding the Balearic Islands are a vital spawning ground. Every year, the fish come to reproduce in the warm Mediterranean waters. And every year, a fleet of fishing vessels races to catch the tuna at this important and vulnerable stage in their life cycle, encircling whole schools with nets known as "purse-seines".

In 1999, Greenpeace exposed the critical depletion of bluefin tuna in the Mediterranean Sea. ¹ Pirate fishing by vessels flagged to third countries was identified as the main threat to the bluefin tuna population. Scientists were already warning about serious over-exploitation. The population (biomass) of adult bluefin tuna had decreased by 80% over the previous 20 years. Huge numbers of juvenile tuna were caught every season before they reached breeding age. It was clear that drastic measures were needed to allow the bluefin tuna population to recover.

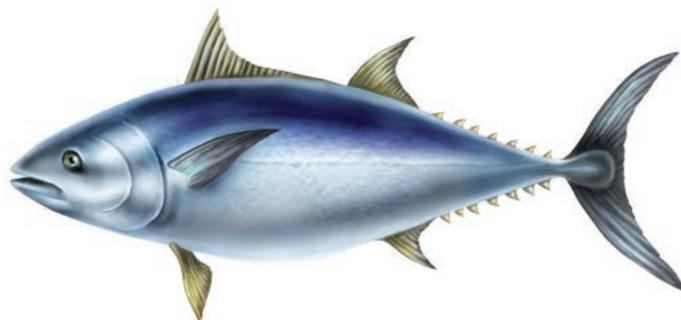
Instead of being allowed to recover, now a new threat faces the tuna, and their situation has deteriorated even further. Today, pirate fishing for tuna is mainly carried out by the fishing fleets of Mediterranean countries themselves, catching far more than their quotas allowed. Tuna ranching, a relatively new industry in the region, is the main driving force behind the current levels of over-exploitation. Tuna are taken from the wild and transferred to cages. These cages are towed to the coast and the fish are kept in ranches, artificially fed to fatten them up, ready to be killed for export.

The development and expansion of tuna ranching in the Mediterranean has worsened the already precarious situation for bluefin tuna. The complexity of the tuna ranching business, poor regulation and trading across several countries before the tuna actually reaches its final destination all add up to an industry capable of covering its illegal tracks, cheating on quotas and systematically destroying a species that is already on the brink of collapse.

The ranchers rely on tuna purse seine fleets to provide live bluefin tuna to stock their farms; as a result, the two industries are closely linked and highly organized. It appears that the tuna industry may now be engaged in widespread illegal activities in the fishing grounds and ranches around the Mediterranean in order to meet the expanding appetite for bluefin tuna in Japan and other countries.

The development of this industry has taken place with the support of the EU and through foreign investment from Japan and Australia. The European Community is allocated almost 60% of the bluefin tuna quota. The Community has greatly contributed to the increase both in the fishing capacity of its purse seine fleets in the Mediterranean and the farming capacity in countries such as Spain. EU subsidies to these industries have been as high as \$34 million since 1997. Throughout this time, scientists have been warning consistently about the over-exploitation of the tuna stock.

¹ Gual, A. 1999. The bluefin tuna in the Eastern Atlantic and Mediterranean: Chronicle of a death foretold. Greenpeace International.



Subsidies and investments have resulted in a tuna ranching and fishing industry that operates well beyond what is environmentally sustainable. More than fifty tuna ranches are now found in ten different countries around the Mediterranean. Their combined capacity is over 50,000 tonnes. Even allowing for the growth of the tuna within the cages, stocking them fully would exceed the entire bluefin tuna quota for the Mediterranean Sea. And that does not take into account those tuna that are caught by other fisheries (which in recent years have caught around 15,000 tonnes per year), or those that die before reaching the farms.

It is highly unlikely that the tuna ranching industry operates a business model that does not aim to operate at full capacity. Clearly, the subsidies to this industry have created a situation where the over-fishing of the stock is required to justify the scale of the investments made. In order to maximize returns on investments, the tuna ranching industry engages fleets of fishing vessels, tug-boats, reefers and aircraft to seek out the remaining tuna and capture them - targeting them in large part in the very areas where they congregate to breed.

The industry is arguably in the process of destroying the bluefin tuna stock for the short-term profits they can achieve. What was once a shared resource of the Mediterranean region has effectively been privatised for the benefit of a small number of companies and their investors. These companies, by operating outside the limits of sustainability, are stealing the future from the hundreds of fishermen who seek to make a legitimate living from the bluefin tuna of the Mediterranean Sea.

The dire situation now facing the bluefin tuna should and could have been avoided. Because tuna are a truly international species, migrating between seas and oceans, a special fisheries management organization was set up to manage the tuna of the Atlantic Ocean and Mediterranean Sea. The International Commission for the Conservation of Atlantic Tunas, ICCAT, is responsible for the management of tuna and tuna-like species. The fate of the northern bluefin tuna is therefore the responsibility of those countries which are parties to ICCAT.



The last "scientific assessment" of northern bluefin tuna by ICCAT was carried out in 2002. But, as in previous years, the scientists had so little data and so many doubts over its accuracy that they could not make a precise appraisal. The scientific committee referred to "large quantities of undersized fish caught but not reported" and "increasing under-reporting in the last few years, especially since 1998". In their advice, the scientists made it very clear that current catch levels were not sustainable in the long term.

But despite the warnings from its own scientific committee, ICCAT failed to take the action necessary to save the northern bluefin tuna. For the eastern stock - including the Mediterranean Sea - the quota was kept at 32,000 tonnes, 23% higher than the maximum level that would avoid further depletion of the population, and even further above a quota that would allow the species to recover.

The real quantity of tuna ratched in the Mediterranean is impossible to know based on current data. Similarly, the true numbers of tuna caught to provide live fish for the ranches cannot be estimated with any certainty. Even so, estimates can be made based on the existing data. These force an alarming conclusion: [bluefin tuna catches in the East Atlantic and Mediterranean Sea may have been over 40,000 tonnes in 2004 and as high as 45,000 tonnes in 2005. This is 12,000 tonnes above or 37.5 % more than the Total Allowable Catch of 32,000 tonnes.](#)

If correct this means that fleets operating in the region may have fished in excess of 18,000 tonnes (69%) more than the scientifically recommended catch level. This irresponsible and uncontrolled pirate fishing in the region is a huge threat to the already depleted tuna population. This must be brought under control and overfishing eradicated if the northern bluefin tuna stock is to have any chance of recovery, and indeed a chance of being saved from commercial extinction.

2006 is a vital year for the fate the tuna population in the Mediterranean Sea. This year the current quotas expire, and new ones must be set. No longer can the parties to ICCAT act solely in the interests of the powerful industry that is profiting from the destruction of the tuna stock. ICCAT must finally take strong measures to protect the northern bluefin tuna. And that means that the signatory parties including the European Community and the other countries of the Mediterranean must not just accept such measures, they need to demand them in their own long-term interests

Instead of allowing or even supporting overexploitation, countries must take a stand to protect the tuna of the Mediterranean. Rather than bowing down to pressure from countries whose fishing fleets ignore and break the rules, they must support the future of the hundreds of fishermen who rely on bluefin tuna for their legitimate livelihood. Pirate fishing fleets catching juvenile tuna, exceeding their quotas, and misreporting their catches must not be allowed to steal this. The illegal trade in tuna must be stopped and urgent and strong measures taken to reduce unrealistic quotas if the bluefin tuna of the Mediterranean Sea is to stand a chance of survival.

Large-scale marine reserves are needed to protect the tuna in their breeding grounds like the Balearic Islands and give these great fish a chance to recover. According to a recent study 90% of all the big predatory fish in the ocean, including tuna, are already gone. A global network of properly enforced marine reserves covering 40% of the world's oceans and including 40% of the Mediterranean Sea will begin the process of recovery. Without such measures the future of tuna and the integrity of the ecosystem of which they are part are in serious doubt.

In addition, independent observers are needed on board tuna fishing vessels to record and report their catch and ensure that under-sized fish are not caught and the quota is not exceeded. The Mediterranean tuna fishing industry has clearly demonstrated that without independent management they do not follow the rules or report the true nature and extent of their catches.

Finally, the expansion of tuna ranching must be stopped until the bluefin tuna population recovers and the fishery is properly managed. At present it provides a barely regulated loophole that is exploited by those within the industry who value short-term gain over the survival of the tuna population and the future of the fishery.

With marine reserves and good management of the fishery, the tuna of the Mediterranean Sea and the people that rely upon them have a future.

Without these measures, the commercial extinction of bluefin tuna in the Mediterranean Sea is just around the corner.



Defending **Our** Mediterranean

"Greenpeace is committed to defending the health of the world's oceans and the plants, animals and people that depend upon them."





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Greenpeace is an independent, campaigning organisation which uses non-violent, creative confrontation to expose global environmental problems and to force solutions essential to a green and peaceful future.

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