

REVIEW ARTICLE

**Legally protected species in Turkish Seas according to the fisheries legislation between 1973-2023 and some recommendations**

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**Abstract**

Between 1973 and 2023, a total of 63 species had been protected in Turkish marine areas according to national legislation 1380 (Official Notice for Regulating Commercial Fisheries of Water Resources, No. 5/1). Notably, sturgeon species were at the forefront of these conservation efforts, with initiatives beginning in 1976 and continuing to the present day. Among marine flora, only two species (*Posidonia oceanica* and *Zostera noltii*) were granted protected status, while the other species were not accorded such protection. The protected fauna included 13 marine mammal species and 22 species of sharks and rays, the latter representing the most extensively protected category. In addition, three species of sea turtles, seven species of corals, six species of mollusks, one species of crustaceans, and three species of fish are also under protection. Comprehensive details regarding the years when these species were protected, the rationale behind their protection, their IUCN Red List statuses, and the institutions advocating for their protection are summarized. Turkish Marine Research Foundation (TUDAV) has been the main driver for the protection of

sharks and rays, corals, and mollusks, successfully placing 18 species under protection in recent years. The first coralligenous species to be protected was the black coral *Savalia savaglia*, while the first size limitation was established for *Huso huso*, and the first protected species was the Mediterranean monk seal (*Monachus monachus*).

**Keywords:** Legally protected marine species, fisheries legislation, marine conservation, species protection, Türkiye

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There is no comprehensive study on protected marine species according to the years and threats in Turkish waters. The aim of this paper is to make an inventory study about protected species for the last 50 years by species according to the Fisheries law 1380.

### *Sea Grasses*

Five species of seagrass are known in Turkish waters: *Posidonia oceanica*, *Zostera noltii*, *Zostera marina*, *Cymodocea nodosa*, and *Halophila stipulacea* (Taşkın *et al.* 2024). These species create meadows, unique habitats, supporting diverse marine life through the structural complexity they contribute to their local environments (Duarte 1999). The Mediterranean has been significantly impacted by the industrial revolution and the subsequent human activities, with marine ecosystems also experiencing these profound effects (Boudouresque *et al.* 2009). Recognising the growing vulnerability of these seagrass meadows, two species, *Posidonia oceanica* and *Zostera noltii*, were placed under protection, first by the Bern Convention and subsequently by the Barcelona Convention (Taşkın *et al.* 2024). Türkiye, as a signatory to these conventions, incorporated these protections into its national legislation through the Regulation on the Organisation of Commercial Fishing of Aquatic Products by the Ministry of Agriculture and Forestry, which took effect in 1999. Besides, further extension of *P. oceanica* in the Sea of Marmara has already been reported (Gönülal *et al.* 2023).

### *Sponges*

Sponges *Spongia officinalis* Linnaeus, 1759, *Spongia agaricina* Pallas, 1766, and *Hippospongia communis* (Lamarck, 1814) were legally protected in Türkiye between 1994 and 2000. These species are also protected according to the Bern and Barcelona Conventions. Sponge hunting, which had been banned on the Turkish coast since 1986, was permitted in the area between the Meriç River's estuary and Babakale (Anonymous 2017).

### *Corals*

Corals, both soft (octocorals) and hard (hexacorals), known as ecosystem engineers at different levels, constitute diverse ecosystems. Habitats that they form provide essential shelter, feeding, nursery, and spawning grounds for a number of marine organisms. While hard corals significantly contribute to biodiversity through their reef-building capabilities, it is soft corals that enhance

habitat complexity by increasing its three-dimensional structure. Currently, in Türkiye five species from octocorallia and two species from hexacorallia are legally protected according to the national legislation (Anonymous 2024) (Table 1). Recently protected species in 2022 were recommended based on scientific research and advice conducted by the Turkish Marine Research Foundation (TUDAV).

The red coral, *Corallium rubrum* (Linnaeus, 1758), endemic to the Mediterranean Sea and the nearby Atlantic region, considered highly commercial species and is commonly found in the coralligenous habitats of the western Mediterranean, ranging from shallow waters to depths of 1000 meters (Weinberg 1976). It is listed as ‘Endangered’ on the IUCN Red List (Garrabou *et al.* 2015). This species is under legal protection since 1991 in Turkish waters (Çınar *et al.* 2018).

Zoanthids *Savalia savaglia* (Bertoloni 1819) are commonly found at the hard substrates of the Çanakkale Strait and the Sea of Marmara (Öztürk and Bourguet 1990). Although knowledge about this species is still limited, *S. savaglia* is listed as ‘Near Threatened’ on the IUCN Red List (Cerrano *et al.* 2015), is considered a key species in the Çanakkale Strait, forming rich biodiverse areas primarily at depths greater than 39 meters (Topçu and Özalp 2016). This species is the first coralligenous species protected in Turkish seas since 1992.

The stony coral *Cladocora caespitosa* (Linnaeus, 1767) is the only scleractinian known for being a hermatypic reef-builder endemic to the Mediterranean Sea (Zibrowius 1974; Laborel 1987). Such remarkable bioconstructions can be observed in Türkiye along the Southeast of Çanakkale Strait within the Turkish Straits System (TSS). As a result, this region was declared as the Dardanos Coral Marine Reserve/Protected Area (Özalp and Casado-Amezua 2024) under the protection of the Turkish Ministry of Agriculture and Forestry General Directorate of Fisheries and Aquaculture, as stated in the Official Gazette on 27 August 2021 (Anonymous 2021). Özalp (2023) with his book entitled “Dardanos Coral Reef of the Çanakkale Strait, Biodiversity and Underwater Biota” significantly contributed to the collection of quantitative data in the same area (Özalp and Alparslan 2016). According to Barraud and Öztürk (2022) latest inventory, 397 infaunal taxa are associated with *C. caespitosa* colonies. Unfortunately, *C. caespitosa* colonies are subjected to mass mortalities events in the Mediterranean (Morri *et al.* 2001; Kersting *et al.* 2013; Guresen *et al.* 2015; Jiménez *et al.* 2016; Kružić *et al.* 2016; Mačić *et al.* 2019; Kersting *et al.* 2023) and their biomass is becoming scarcer due to illegal harvesting and marine heatwaves (Öztürk *et al.* 2004; Özalp 2019). Nevertheless, *C. caespitosa* was reported to showcase resistance to marine thermal stress and acidosis up to a certain degree thanks to its mixotrophism (Kersting *et al.* 2013; Jimenez *et al.* 2016; Kersting *et al.* 2015; Hulver *et al.* 2024). However, even if the stony coral is capable of higher heterotrophy than tropical corals (Ferrier-Pagès *et al.* 2011), the coral physiology may still be compromised with the climate change. Hence

collecting baseline data on the distribution and health of *C. caespitosa* should be the first requirement to design protective measures for vulnerable Mediterranean marine ecosystems. Due to their fast decline and low capacity of recovery from disturbances, *C. caespitosa* was categorised as ‘Endangered’ on the IUCN Red List (Casado-Amezúa *et al.* 2015). It is also considered as a species of interest by CITES Annex II. The stony coral was also taken under protection by Turkish authorities under the recommendation of TUDAV, as stated in the Official Gazette published on 10 September 2022 (Anonymous 2022).

*Spinimuricea klavereni* (Caprine & Grasshoff, 1975), is a Mediterranean endemic gorgonian, found on hard and soft substrates, attaching to stones or shells. While it is relatively rare in the western Mediterranean, occurring between 50 and 80 meters deep (Carpine and Grasshoff 1975; Bo *et al.* 2012), it is considered a common species in the north-eastern Sea of Marmara, where it forms dense populations (Topçu and Öztürk 2016).

Mediterranean endemic *Eunicella cavolini* (Koch, 1887), commonly known as the yellow gorgonian, is a common species found in the Mediterranean hard-bottom communities, from the western Mediterranean and Tunisian coasts to the Aegean Sea, and the Sea of Marmara (Öztürk *et al.* 2004; Topçu and Öztürk 2013). This species plays a crucial role in contributing to the biodiversity of coralligenous habitats. It is generally found on vertical walls between 10-30 meters, but it can reach depths of up to 150 meters (Carpine and Grasshoff 1975; Weinberg 1976).

The red gorgonian, *Paramuricea clavata* (Risso 1826), is a long-lived, slow-growing marine invertebrate, endemic to the Mediterranean Sea (Coma *et al.* 1998, 2004; Linares *et al.* 2007, 2008). This species plays an important role in the Mediterranean coralligenous community founding from depths of 6-7 meters in the Mediterranean, and it is generally abundant between 40-60 meters, preferring vertical walls and rocks as substrates (Ballesteros 2006). It is typically found at greater depths than *E. cavolini*, reaching up to 100 meters (Carpine and Grasshoff 1975; Weinberg 1976). In the Sea of Marmara, *P. clavata* colonies were observed between 30-40 meters on hard substrates, however its population was highly affected from the recent pressures (e.g. sedimentation, mucilage) (Topçu *et al.* 2019; Topçu and Öztürk 2021).

The Mediterranean endemic white gorgonian *Eunicella singularis* (Esper, 1791) is one of the most common species in the western Mediterranean (Carpine and Grasshoff 1975; Weinberg 1976; Gori *et al.* 2011). In the Turkish coast, it is widely distributed along the northern coasts of the Aegean Sea (Saros Bay) (Öztürk *et al.* 2004).

### *Molluscs*

*Tonna galea* (Linnaeus, 1758) is one of the largest gastropods in the Mediterranean and typically inhabits sandy or muddy bottoms and seagrass beds, at depths ranging from a few meters to 120 meters (Katsanevakis *et al.* 2008). *Tonna galea* is a rare species protected under Annex II of the Bern Convention, and it is also protected under the provisions of the Barcelona Convention Protocol (Katsanevakis *et al.* 2008). In Türkiye, this species has been protected since changes made to the "Regulation on the Organization of Commercial Fishing of Aquatic Products" published in the Official Gazette No. 31949 on 10 September 2022 (Anonymus 2024). This large gastropod is particularly threatened by small-scale fishers, divers, and collectors (Tunesi *et al.* 2006).

*Cerithium vulgatum* Bruguière, 1792 can reach adult sizes of 5-7 cm in height, found abundantly in various habitats, especially in muddy substrates, rocky and gravel sediments, and seagrass beds. It is commonly seen in areas like lagoons and bays, having a wide distribution in the Mediterranean and eastern Atlantic, from the British Isles to the coast of Senegal. In the Greek Seas, it is abundant in most coastal areas. It has also been recorded in all seas of Türkiye (Marion 1898; Pallary 1917; Tortonese 1959; Kocataş 1978; Bakır and Öztürk 2016; Bitlis *et al.* 2017). It has been protected in Türkiye since 2006.

*Haliotis tuberculata* has a slightly curved, flat, and oval shell that can reach lengths of up to 9 cm and widths of 6.5 cm. Its exterior varies in colour from greenish brown to red and often exhibits a speckled appearance. In Türkiye, it has been reported from the Mediterranean, Aegean Sea (Aartsen and Kinzelbach 1990; Demir 2003), and the Sea of Marmara (Bitlis *et al.* 2024). This species are facing significant threats, such as diseases, which have had serious effects on the populations and caused substantial losses between 1995 and 2010 (Huchette and Clavier 2004). In Türkiye, fishing has been prohibited since 1998-1999, and it is legally protected. Illegal fishing continues to negatively impact the populations. It is estimated that the population decline over the last twenty years is between 30-50% (Huchette and Clavier 2004).

Lamellariidae, now referred to as Velutinidae (formerly the Lamellariidae family), are gastropods belonging to the class Caenogastropoda (MolluscaBase 2021). Two species are known in Türkiye: *Marsenia perspicua* (Linnaeus, 1758) and *Lamellaria latens* (O.F. Müller, 1776) (Öztürk *et al.* 2023). In Türkiye, velutinids have been legally protected since 2006. *Marsenia perspicua* is primarily found on hard substrates and in areas where ascidians are present, particularly around species such as *Botryllus* sp., *Polyclinum* sp., *Leptoclinum* sp., and *Trididemnum* sp. In Türkiye, it has been reported from the Aegean and Mediterranean coasts (Buzzurro and Greppi 1996; Demir 2003). *Lamellaria latens* is commonly found beneath stones, with its distribution extending to bathyal zones. It has been reported in Türkiye from the Aegean Sea (Öztürk *et al.* 2023).

*Pinna nobilis* Linnaeus, 1758, known as fan mussel, inhabits areas with depths ranging from 0.5 to 60 meters. It is commonly observed in soft-bottomed areas covered by seagrass beds, particularly those of *Posidonia oceanica* (Linnaeus) Delile, 1813 and *Cymodocea nodosa* (Ucria) Ascherson, 1870. This species can also inhabit sediment areas where plant cover is absent (Katsanevakis 2006). It is the largest bivalve in the Mediterranean, reaching lengths of up to 120 cm (Katsanevakis *et al.* 2008). Once abundant in the Mediterranean, this species has experienced a dramatic decline in recent years, primarily due to habitat loss and human activities (Basso *et al.* 2015). Additionally, since October 2016, repeated mass mortality events (MMEs) have also impacted its status (Vázquez-Luis *et al.* 2017; Cabanellas-Reboredo *et al.* 2019). Most of these events occurred due to the parasite *Haplosporidium pinnae* (Catanesi *et al.* 2018). This species is classified as 'Critically Endangered' on the IUCN Red List (Kersting *et al.* 2019). It is listed as a threatened species and is protected under the EU Habitats Directive 92/43/EEC (Appendix IV) and the Special Protected Areas and Biodiversity Protocol of the Barcelona Convention (Appendix II). In Türkiye, it has been under protection since 1998-1999 (Acarlı *et al.* 2018). It has been reported from the Aegean Sea, Mediterranean Sea, and Sea of Marmara in Türkiye (Forsskål 1775; Marion 1898; Buzzurro and Greppi 1996; Demir 2003; Acarlı *et al.* 2020; Öndes *et al.* 2020a, b; Özalp and Kersting 2020; Acarlı *et al.* 2021; Turan and Dogdu 2021; Karadurmuş and Sarı 2022; Acarlı *et al.* 2024; Karadurmuş *et al.* 2024).

#### *Crustacean*

*Maja squinado* (Herbst, 1788) is a species of migratory crab found in the north-east Atlantic and Mediterranean Sea. Most are scavengers, especially of dead flesh. Majids, a widely distributed marine group, are fished commercially in temperate waters, such as in the North Pacific. Environmental degradation and mismanagement of fisheries have led to the decline of stocks of this species (Born *et al.* 2004). Commercial fishing of *M. squinado* was banned in Türkiye after 2006 (Harlıoğlu *et al.* 2018).

#### *Echinoderms*

*Echinaster sepositus* (Retzius, 1783), the red Mediterranean starfish, is widespread in the Mediterranean and the eastern Atlantic, and lives at depths ranging from 2 to 250 meters. It can be found in various habitats, but its distribution is influenced by factors such as algal cover and depth (Entrambasaguas *et al.* 2008). This species feeds on detritus and small organisms, and sometimes on sponges as well (Waddell and Pawlik 2000). Reproduction in *Echinaster* species is influenced by external factors, such as photoperiod (Basch and Pearse 2022). Due to collection for ornamental aquariums, some populations of this species have declined in recent years (Villamor and Becerro 2010). Red starfish (as *Asterina pancerii*) has been under protection in Türkiye until 2024. The real red starfish, however, is *Echinaster sepositus*. This mistake was corrected in the last circular published in 2024 and *Echinaster sepositus* is protected as red starfish (Table 1). *Echinaster sepositus* is one of the most

common and abundant sea stars in the Mediterranean Sea. Asteroids of the genus *Echinaster* are key predators in benthic coastal ecosystems.

### *Sharks and Rays*

Concerning shark and rays (cartilaginous fishes), fishing, collecting, keeping on ships, landing, transportation and sale of 22 shark and ray species are currently banned in Turkish marine waters (Table 1). Following the National Action Plan Workshop for the Conservation of Cartilaginous Fishes organized by TUDAV in 2017, with the decision taken in 2018 (Öztürk 2018), 12 more sharks and rays were added to the 5 shark species currently under protection. Among these species, only four of the 22 species are rays (*Raja clavata*, *Mobula mobular*, *Glaucostegus cemiculus* and *Rhinobatos rhinobatos*).

*Alopias superciliosus* Lowe, 1841, bigeye thresher shark, is epipelagic strong-swimmer shark that can be found also in depths of 500 meters, but inhabits primarily coastal waters. This species has oophagusy (uterine cannibalism). Its size at birth is 60-100 cm. They are caught in small numbers, usually by floating longline and considered as highly esteemed fish. No attacks on humans have been reported (Golani *et al.* 2006). Fishing of this species has been banned in Turkish water since 2020.

*Alopias vulpinus* (Bonnaterre, 1788), thresher shark, is an epipelagic active species, swimming usually close to surface, but it was also recorded at 350 meter depth. It is most abundant close to shores but found also in oceanic waters. It uses its long slender caudal fin to stun the prey (Golani *et al.* 2006). It has been under protection in Türkiye since 2018.

*Carcharhinus falciformis* (Bibron, 1839), silky shark, is a large and fairly slender shark, occurring in oceanic and coastal waters, from the surface down to at least 500 meters (Ebert and Stehmann 2013). Although, it was recorded in several localities in the eastern Mediterranean (Azab *et al.* 2019; Kabasakal and Bilecenoğlu 2020), its occurrence in the region is considered as very rare (Ergüden *et al.* 2022). The silky shark has been protected in Türkiye since 2020.

*Carcharhinus longimanus* (Poey, 1861), oceanic whitetip shark, is a large pelagic requiem shark inhabiting tropical and warm temperate seas. It has a stocky body with long, white-tipped, rounded fins. The species is typically solitary, though they may gather in large numbers at food concentrations (Kamal and Baeza 2024). Fishing of this species is banned in Turkish water since 2020.

*Carcharhinus plumbeus* (Nardo, 1827), sandbar shark, is an active swimmer on sandy or muddy substrate but occasionally rise to the surface to feed on fishes, crustaceans and cephalopods (Golani *et al.* 2006). The population of sandbar sharks has been plummeted dramatically across the world due to fishing pressure. Yumurtalık Cove is a second breeding and nursery grounds for this species after

Boncuk Cove in Gökova Bay in Türkiye (Başusta *et al.* 2021). It has been protected in Türkiye since 2006.

*Carcharodon carcharias* (Linnaeus, 1758), great white shark, is a large, fierce and very active pelagic shark. It is mainly solitary species but they may form aggregations around food source. They feed mainly on fish but eats almost any creature found in its vicinity including marine mammals (Golani *et al.* 2006). Great white shark has been protected in Türkiye since 2022.

*Cetorhinus maximus* (Gunnerus, 1765), basking shark, is a gigantic slow-moving epipelagic shark. They are observed usually near the surface in coastal waters. They feed on plankton, which are filtered through its uniquely structured gill rakers. Periodically the gill rakers are shed and soon replaced by a new set (Golani *et al.* 2006). Basking shark has been protected in Türkiye since 2004.

*Galeorhinus galeus* (Linnaeus, 1758), tope shark, is a large coastal pelagic shark species, occasionally found near sea bottom. It feeds on a great variety of fishes as well as on large invertebrates. Life expectancy is over 20 years (Golani *et al.* 2006). It has been protected in Türkiye since 2012.

*Glaucostegus cemiculus* (Geoffroy Saint-Hilaire, 1817), blackchin guitarfish, is a benthic, soft substrate dweller, usually found in shallow waters but frequently descending to 100 m depth. It feeds on small fish and benthic invertebrates (Golani *et al.* 2006). This species is widely found on the Aegean and Mediterranean coasts of Türkiye (Bengil *et al.* 2018). The blackchin guitarfish exhibits an ovoviviparous reproductive mode, where females produce one or two litters annually and give birth to 4-6 pups per litter (Golani *et al.* 2006; Başusta *et al.* 2020). This species has been protected in Türkiye since 2020.

*Isurus oxyrinchus* Rafinesque, 1810, shortfin mako, is an extremely active epipelagic shark that swims near the surface but also descends to 500 meters. It preys on a great variety of fish, some as large as their predator. They can be very dangerous as many attacks on humans have been reported around the world. It is highly esteemed game fish and a target species for commercial fisheries (Golani *et al.* 2006). Shortfin mako has been protected in Türkiye since 2020.

*Lamna nasus* (Bonnaterre, 1788), porbeagle, is an active epipelagic shark found in all depths to 700 meters usually in water colder than 18°C. It is solitary or forms small groups, feeding mainly on small and middle-size schooling fishes such as sardines, mackerels, etc (Golani *et al.* 2006). It has been protected in Türkiye since 2020.

*Mobula mobular* (Bonnaterre, 1788), devil ray, is a very large semipelagic fish that often swims near the surface but also descends to the substrate. They feed on zooplankton with the help of two cephalic flaps that extend anteriorly and



resemble horns (Golani *et al.* 2006). It is very similar to *M. japonica* and they are often confused with each other (Başusta and Özbek 2017). *Mobula japonica* (Müller and Henle 1841) has been reported from Türkiye (Sakalli *et al.* 2016; Yucel *et al.* 2017), it was, however, misidentification. *Mobula mobular* has been protected in Türkiye since 2018.

*Oxynotus centrina* (Linnaeus, 1758), angular rough shark, is a demersal shark species inhabiting depths of 50-500 meters. It lives solitary or in small groups. They are caught by trawlers but have very little commercial value (Golani *et al.* 2006). It has been rare in the eastern Mediterranean waters but widely found in the Aegean and Marmara Seas (Başusta *et al.* 2015). This species has been under protection in Türkiye since 2018.

*Prionace glauca* (Linnaeus, 1758), commonly known as the blue shark, is a swift-swimming, epipelagic species that occasionally descends to depths of up to 150 meters. It is often observed cruising near the surface with its first dorsal fin protruding above the water. This species has been caught as bycatch in swordfishing using pelagic long-lines. Despite its oceanic habitat, there have been several reports of attacks (Golani *et al.* 2006). *Prionace glauca* has been protected in Türkiye since 2020.

*Raja clavata* (Linnaeus, 1758), thornback ray, is benthic on sandy or muddy substrate to the depths of 300 meters. It feeds on benthic crustaceans and other invertebrates (Golani *et al.* 2006). This species is very common in Turkish seas. It is a very important component of demersal fisheries in the Black Sea, caught by trawls, gillnet and purse seines, particularly as bycatch (Başusta and Başusta 2014). It has been protected in Türkiye since 2018.

*Rhinobatos rhinobatos* (Linnaeus, 1758), common guitarfish, is benthic on sandy or muddy substrate to the depth of 100 meters. It lives most of the time in unisex schools of fish of the same size. It feeds on small benthic invertebrates and fish. They use its strong pointed snout to dig the substrate to expose prey (Golani *et al.* 2006). The common guitarfish is extremely vulnerable to capture by coastal fisheries because all pregnant females and adult males congregate for parturition and mating in the inshore areas (Başusta *et al.* 2008). It has been protected in Türkiye since 2018.

*Sphyrna zygaena* Linnaeus, 1758, smooth hammerhead, is an epipelagic active swimmer, found close to shore but swims also in oceanic waters to the depths of 50 meters. It has a very unique hammer-like head, flattened dorsoventrally and widely expanded sideways, with eyes and nostrils on the extreme sides of head (Golani *et al.* 2006). It was captured or sighted in Turkish Aegean and Mediterranean waters between 1977 and 2015. Three individuals were recorded in the Aegean Sea and two in the north Levantine Sea (Kabasakal and Bilecenoğlu 2024). Smooth hammerhead shark has been protected in Türkiye since 2018.

*Squalus acanthias* Linnaeus, 1758, piked dogfish or spiny dogfish, is found from the water surface to the bottom but usually swims close to the substrate to the depths of 500 meters. They often form huge unisexual schools. Spiny dogfish feeds chiefly on schooling fishes such as sardines, anchovies, gadids and flatfishes. They also consume crustaceans and cephalopods (Golani *et al.* 2006; Demirhan *et al.* 2007). In the Black Sea, the largest catches of dogfish are along the coasts of Türkiye, although this fish is not a target species of fisheries, being yielded as bycatch in trawl and purse seine operations (Galatchi *et al.* 2024). Piked dogfish has been protected in Türkiye since 2016.

*Squalus blainville* (Risso, 1827), longnose spurdog, is a benthic shark species inhabiting the depths of 50-70 m. It feeds chiefly on crustaceans and mollusks and reaches sexual maturity at 50 cm. Their potential breeding ground has been reported in the Sea of Marmara (Kabasakal *et al.* 2024). They are caught by trawler but is not considered to be a highly esteemed fish. (Golani *et al.* 2006). Longnose spurdog has been under protection in Türkiye since 2018.

*Squatina aculeata* Cuvier, 1829, sawback angelshark, is demersal on sandy or muddy substrate at the depths of 30-500 meters. They are captured as bycatch by trawl fishing in the northeastern Mediterranean (Başusta 2002, 2016). It feeds on benthic fish and invertebrates (Golani *et al.* 2006). It has been under protection in Türkiye since 2018.

*Squatina oculata* Bonaparte, 1840, smoothback angelshark, is demersal on sandy or muddy bottom at the depths of 40-400 meters. It feeds mainly on benthic fish but supplements its diet with large invertebrates. Single specimens are caught by trawls (Başusta and Erdem 2000; Golani *et al.* 2006). This species has been protected in Türkiye since 2018.

*Squatina squatina* (Linnaeus, 1758), angelshark, is demersal, inhabits sandy or muddy bottom, to the depths of 150 meters. During the day, it often lies buried in substrate. It becomes active at night, swimming in the water column searching for prey. They feed on benthic fishes, crustaceans and mollusks (Golani *et al.* 2006). Angelshark has been protected in Türkiye since 2018.

### *Sturgeons*

There are a total of 27 species of sturgeon, represented by two families and four genera. Some of these species are globally endangered or extinct according to the IUCN Red List. Ten species belonging to the genus *Acipenser* are ‘Critically Endangered’, three species is ‘Endangered’, one species is ‘Extinct in Wild’ and three species are classified as ‘Vulnerable’. The two species found in the genus *Huso* are classified as ‘Critically Endangered’. In Türkiye, it is historically known that six sturgeon species (five from the genus *Acipenser*: *A. gueldenstaedtii*, *A. nudiventris*, *A. stellatus*, *A. sturio*, *A. ruthenus*; one from the genus *Huso*: *H. huso*) were native to Turkish coastal waters and rivers in the late 1970s (Çelikale

1994). The number of species decreased to four at the end of the 1980s (*H. huso*, *A. gueldenstaedti*, *A. stellatus*, and *A. sturio*) (Edwards and Doroshova 1989), and three at the beginning of the 2000s (*H. huso*, *A. gueldenstaedti*, *A. stellatus*) (Zengin *et al.* 2010). All these species are migratory and spend most of their lives in the sea, but use natural rivers to breed (Çelikkale 1994).

*Acipenser stellatus* (Pallas, 1771), known as stellate or star sturgeon, is an anadromous species found in the marine, coastal, and estuarine zones. The Black Sea and Sea of Azov subpopulation of *A. stellatus* is listed as ‘Critically Endangered’ globally (Mugue *et al.* 2022). In Türkiye, this species is considered an “extant resident” along the Black Sea coast. Reports indicate “irregular reproduction” in the Sakarya River. This species is protected under various conventions, including the Bern Convention, CMS, and the Bucharest Convention and was listed in CITES Appendix II in 1998. National legislation also protects this species.

*Acipenser nudiventris* (Lovetsky, 1828), known as ship sturgeon, is noted for having the highest relative fecundity among sturgeon species. Although some potamodromous populations are described, it primarily behaves as an anadromous species. It is listed as “Critically Endangered” in the Black Sea on the IUCN Red List (Freyhof *et al.* 2022). The ship sturgeon ascended the Rioni River (Georgia), with the last adult individual recorded in 1997 and six juveniles caught in 2020 as bycatch (Simonovic *et al.* 2005). In Türkiye, this species is classified as “extinct” along the Black Sea coast and in rivers flowing into it. This species was listed in CITES Appendix II in 1998.

*Acipenser sturio* (Linnaeus, 1758), known as European sturgeon, is an anadromous species and listed as ‘Critically Endangered’ globally on the IUCN Red List (Gessner *et al.* 2010), but in Türkiye, it is classified as “extinct” along the Black Sea coast. Historically, *A. sturio* was among the most fished species in Turkish waters, but it is now absent (Chandra and Fopp-Bayat 2021). This species was listed in CITES Appendix II in 1975, and moved to Appendix I in 1983.

*Acipenser gueldenstaedtii* (Brandt & Ratzeburg, 1833), known as Russian sturgeon, has both anadromous and freshwater populations. The freshwater populations in the Danube and the Volga Rivers are likely extinct. This species is listed as ‘Critically Endangered’ globally on the IUCN Red List (Gessner *et al.* 2022a). In Türkiye, it is considered “Extant (non-breeding)” along the Black Sea coast, although no spawning migrations are observed (Gessner *et al.* 2022a). This species is fully protected across its range under the Bern Convention, the EU Fauna-Flora-Habitat Directive and CITES Appendix II, and is included in the Pan European Action Plan. Gene bank and cryopreservation efforts are ongoing in several range countries.

*Acipenser ruthenus* (Linnaeus, 1758), known as sterlet sturgeon, has most recently been assessed for the IUCN Red List of Threatened Species in 2019. This species is potamodromous and can be found only in rivers and their estuaries occurs in the Black, Azov and Caspian seas; in Siberia from the River Ob eastward to the Yenisei drainage. Its current strongholds are the Volga, Ural and Danube systems. However, no detailed information is available on *A. ruthenus* in the Black Sea coast of Türkiye.

*Huso huso* (Linnaeus, 1758), known as beluga sturgeon, belongs to Family Acipenseridae and is one of the largest anadromous fish in the world. It was once widespread in many river basins of the Caspian, Black, Azov, and Adriatic Seas (Paraschiv *et al.* 2006). Today, it is globally listed as ‘Critically Endangered’ in the IUCN Red List (Gessner *et al.* 2022b). In Türkiye, it is classified as “extant (non-breeding)” along the Black Sea coast and “extinct” in the rivers where it once reproduced (Gessner *et al.* 2022b). The beluga was recorded in the Küçükçekmece Lagoon in 1986 (Meriç 1986) and reappeared 35 years later in 2020. A dead specimen measuring 250 cm in length and of reproductive age was reported in the same lagoon (Memiş *et al.* 2024). The species is now fully protected by national laws that prohibit commercial fishing and is safeguarded under various legislations, including the Bern Convention, and CITES Appendix II in 1998.

Sturgeon fishing was first banned on 6 March 1959, and the fish were protected under the fisheries circular No: 5 in Türkiye (Zengin 2019). The same prohibitions were also found in the circular, 20 April 1968 on 12880 on the Official Gazette dated 22 April for the regulation of fisheries (Anonymous 1968) These circular prohibited fishing of all ages of fish entering or exiting the Yeşilırmak, Kızılırmak and Sakarya rivers for breeding, including the capture of *A. nudiiventris* under 15 kg and *H. huso* under 10 kg at any time (Anonymous 1968; Zengin 2019).

Türkiye signed the CITES agreement to protect sturgeons worldwide in 1996, and the capture and sale of sturgeons were banned as of 1 April 1988 (Memiş *et al.* 2020). For the moment, sturgeon species are protected under the Circular on Fisheries Regulation, published every four years, which cites *Acipenser* spp. In 2024, the regulation of commercial fisheries continued the ban on fishing *Acipenser* spp. and beluga in both marine and riverine waters (Anonymous, 2024).

#### *Bony Fish*

Besides, *Hippocampus hippocampus*, *Epinephelus marginatus* and *Salmo labrax* also protected species in Turkish waters. *Epinephelus marginatus* is overfished for many years and recovery of the stocks are important for the ichtiyofaunal diversity of Türkiye.

### *Sea Turtles*

Türkiye's extensive Aegean and Mediterranean coastline hosts several crucial nesting sites for sea turtles, especially the endangered loggerhead (*Caretta caretta*) and green turtle (*Chelonia mydas*). Reports of the leatherback turtle (*Dermochelys coriacea*) from the Aegean and Mediterranean (Türkozan and Kaska 2010) and the Sea of Marmara (Türkozan and Tonay 2024) are irregular. Sea turtle conservation efforts in Türkiye began in response to growing threats to these species, such as coastal development, pollution, and tourism (Baran and Kasperek 1989). The journey of protecting these ancient mariners has evolved over the decades, blending scientific research, environmental advocacy, and legal protections to ensure the survival of Türkiye's sea turtle populations.

Scientific research on sea turtles started in Türkiye in the 1970s. (Hathaway 1972; Sella 1982; Geldiay *et al.* 1982). Hathaway (1972) reported in his scholarly work, utilising official fishing statistics, that 286,505 kg of sea turtles were taken in 1968 and 52,355 kg in 1969. This amount corresponds to about 2,300 and 400 sea turtles, respectively (Baran and Kasperek 1989). During the 1950s and 1960s, the Çukurova area witnessed the seizure of around 10,000 to 15,000 sea turtles annually (Hathaway 1972; Sella 1982). Turtle fishing was formerly prevalent in the eastern region of the Turkish Mediterranean. A fishing enterprise in İskenderun acquired and purchased sea turtles from local residents throughout the 1950s and 1960s. The turtles' destination was Central Europe (Baran and Kasperek 1989).

The first preliminary data on Turkish nesting beaches were collected in the years 1978-1982, when a few beaches were surveyed along the Mediterranean coast of Türkiye (Geldiay *et al.* 1982). The most comprehensive coastal survey in Türkiye was done in 1988 which identified 13 major and 4 secondary nesting grounds for loggerhead and green turtles along the Mediterranean coasts (Baran and Kasperek 1989). At that time, one of the first documented nesting sites to draw international attention was İztuzu Beach, near Dalyan. Researchers discovered that this beach was a prime nesting area for loggerhead turtles (Geldiay *et al.* 1982; Canbolat 2004; Türkozan and Kaska 2010), but it was under threat from a planned hotel and tourism complex. This would eventually lead to one of the first major battles in Türkiye's turtle conservation history. The fight to protect İztuzu Beach in the mid-1980s became one of the most iconic stories of sea turtle conservation in Türkiye. Local and international support led to a successful campaign to halt the development project. With support from the public and key figures in the Turkish government, İztuzu Beach was designated as a Specially Protected Area (SPA), in the framework of Barcelona Convention of 1988 and the proposed tourism complex was canceled.

Scientific studies carried out up to date to elucidate the life cycles of sea turtles and their interrelations have significantly enhanced our understanding of their biology and ecology. In addition, institutions such as the Sea Turtle Research,

Rescue, and Rehabilitation Centers were founded to treat injured turtles, and conduct outreach programs to educate the public about sea turtle conservation (Kaska *et al.* 2011; Ergene *et al.* 2021).

Coastal development for tourism, which began to flourish in this era, led to habitat loss, and the artificial lighting from new resorts interfered with turtle nesting and hatchling navigation (Canbolat and Nalbantoglu 2003; Canbolat 2004; Türkozan *et al.* 2003). Furthermore, increasing industrial developments, particularly throughout the eastern Mediterranean coasts of Türkiye, started to threaten sea turtle populations in the region. As Türkiye's tourism industry grew, efforts were made to train beach managers and tourism operators on minimizing human impacts on nesting sites.

Local communities also began to play a larger role in conservation efforts. Many residents who once viewed turtles as an obstacle to tourism came to understand the importance of protecting these animals, not only for biodiversity but also for the local economy. Volunteer-based programs sprang up, allowing both residents and visitors to help monitor nests, reduce light pollution, and even assist with injured turtle rehabilitation. The best case of local community practice is Çıralı, where local people have been monitoring and protecting their beaches almost for two decades (Sönmez *et al.* 2021a).

Türkiye has continued to build its legal framework to protect sea turtles, including regulations that limit beachfront construction, mandate darkened lighting on turtle nesting beaches, and restrict beach access during the nesting season. Over the years, Turkish environmental laws have undergone updates, and public awareness campaigns have contributed to a shift in attitudes towards supporting sea turtle conservation (Guclu and Karahan 2004). Furthermore, Turkish law now includes penalties for harming sea turtles or disturbing nests, which has significantly reduced threats to sea turtle populations.

Both loggerhead and green turtles are protected under the Bern Convention and CITES, and classified globally as 'Endangered' and 'Vulnerable', respectively, by IUCN. The Turkish Government thus is obligated to protect sea turtles as well as their nesting beaches along the Turkish coasts. The General Directorate of Nature Conservation and National Parks of Ministry of Agriculture and Forestry is responsible for sea turtle conservation in Türkiye. The coastal law of Türkiye protects the nesting habitats, and the circular on the protection of sea turtles (2009/10) determines sea turtle nesting areas, zoning, and the conditions of protection and land use in these areas. Furthermore, with notification no. 6/1 on the regulation of commercial fishing, it is prohibited to hunt, collect, keep on ships, land, transport, and sell sea turtle species included in the schedule in all our waters, including inland waters. Furthermore, the government funds support beach monitoring studies on key nesting areas such as Dalyan, Fethiye, Patara, Belek and Göksu Deltası beaches in the last 20 years without interruption. The

studies in those beaches are not limited to scientific projects. The research groups from different universities carry out public awareness activities, visit hotels and inform the hotel managers and guests about conservation activities. Research and conservation efforts, both past and ongoing, extend beyond these beaches and monitoring studies.

With the contribution of scientific knowledge and expertise from Türkiye and other Mediterranean countries the Action Plan for the Conservation of Mediterranean Marine Turtles was published by UNEP MAP RAC/SPA (2007). Türkiye, as a part of the Mediterranean regional management unit (RMU) (Wallace *et al.* 2023), provides important contribution for the conservation of loggerhead and green turtles. The Mediterranean loggerhead turtle population has achieved sufficient improvement to be classified as ‘Least Concern’ on the IUCN Red List (Casale 2015), while the green turtle populations in the Mediterranean are currently designated as ‘Near Threatened’ (Broderick *et al.* 2024). The adult populations of both species are deemed dependent on ongoing conservation initiatives.

The sea turtle nesting beaches in Türkiye are still struggling with light pollution, unhindered vehicle access, coastal development, sand extraction, lack of management and protection and touristic development (Türkozan and Baran 1996; Türkozan 2000; Ergene *et al.* 2016; Sönmez *et al.* 2021b). The research groups working on the beaches are trying to reduce the negative impact of those problems with some actions such as nest relocation, caging nests, informing people, preventing beach access and calling for law enforcement. The Bern Convention opened files to the Turkish government for the solution of some of these problems which have been raised by international and national NGO’s. Although some positive progress has been made by the Turkish government, there are still open complaints about the situation on some beaches.

### *Marine Mammals*

Cetacean fishery started in Anatolia in ancient times, increased in the 20th century, especially in the 1950s and 1970s, and continued for more than 2300 years until it was banned in the USSR in 1966 and in Türkiye in 1983 (Tonay and Amaha Öztürk 2012). The abundance of Black Sea cetaceans was considerably reduced by this massive direct killing. Also, they have been harmed by pollution, bycatch, diseases, overfishing of prey species, etc. even after the fisheries were outlawed. According to the national legislation, hunting of all cetaceans is prohibited, and they are also protected under international agreements such as Bern Convention and ACCOBAMS.

The IUCN status of the most common eight cetacean species out of 12 marine mammal species recorded in Turkish waters (Notarbartolo di Sciara and Tonay 2021; DMAD 2024) are as follows: Black Sea harbour porpoise (*Phocoena phocoena relicta*) (Birkun and Frantzis 2008), Black Sea bottlenose dolphin

(*Tursiops truncatus ponticus*) (Birkun 2012), Mediterranean subpopulations of common dolphin (*Delphinus delphis*) (Bearzi 2003), Risso's dolphin (*Grampus griseus*) (Lanfredi *et al.* 2021), sperm whale (*Physeter macrocephalus*) (Pirrotta *et al.* 2021), fin whale (*Balaenoptera physalus*) (Panigada *et al.* 2021) are 'Endangered', Black Sea common dolphin (*Delphinus delphis ponticus*) (Birkun 2008), Cuvier's beaked whale Mediterranean subpopulation (*Ziphius cavirostris*) (Cañadas and Notarbartolo di Sciara 2018) are 'Vulnerable', Mediterranean subpopulations of bottlenose dolphin (*Tursiops truncatus*) (Natoli *et al.* 2021) and striped dolphin (*Stenella coeruleoalba*) (Lauriano 2021) are 'Least Concern'.

The Mediterranean monk seal (*Monachus monachus*) is a mammal species facing the danger of extinction and listed as 'Vulnerable' in global review of IUCN Red List (Karamanlidis *et al.* 2023). Their status was 'Critically Endangered' until 2015, then change to 'Endangered' due to population trend assumed as increasing. However, the eastern Mediterranean subpopulation is still 'Endangered' (Karamanlidis *et al.* 2019). The species has been protected in national legislation by fisheries laws since 1978 and land-hunting law and international agreements (Dede *et al.* 2015).

#### *Species no longer under protection*

Decapods *Scyllarides latus* (Latreille, 1803) and *Scyllarus arctus* (Linnaeus, 1758) were protected between 2000 and 2004; the mollusks *Eledone cirrhosa* (Lamarck, 1798) were protected between 2006 and 2016, and *Eledone moschata* (Lamarck, 1798) was protected between 2008 and 2012; and the echinoderm *Asterina pancerii* (Gasco, 1876) was protected between 1998 and 2004. Currently, however, the protection status of these species is no longer in effect.

#### *Conservation Effort*

According to Annex II of the Barcelona Convention SPA/BD Protocol, as amended by COP20 (Decision IG.23/10), 36 fish species, 6 reptile species, 25 bird species, and 19 mammal species have been listed as endangered or threatened in the Mediterranean. From these listed species, 14 fish species (*Acipenser sturio*, *Carcharodon carcharias*, *Cetorhinus maximus*, *Galeorhinus galeus*, *Hippocampus hippocampus*, *Huso huso*, *Isurus oxyrinchus*, *Mobula mobular*, *Oxynotus centrina*, *Rhinobatos rhinobatos*, *Sphyrna zygaena*, *Squatina aculeata*, *Squatina oculata*, and *Squatina squatina*), 3 reptile species (*Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*) and 11 marine mammal species (*Balaenoptera acutorostrata*, *Delphinus delphis*, *Steno bredanensis*, *Grampus griseus*, *Monachus monachus*, *Phocoena phocoena*, *Physeter macrocephalus*, *Pseudorca crassidens*, *Stenella coeruleoalba*, *Tursiops truncatus*, and *Ziphius cavirostris*) are also legally protected in Türkiye. These conservation efforts are essential for the preservation of marine biodiversity and the sustainable management of marine ecosystems in the region.



Table 1 presents a list of species that are currently under protection in Türkiye, including their common names, IUCN status, and years of protection. Only species with an active conservation status are included. These species are protected under national conservation laws and regulations and are subject to monitoring efforts.

In order to effectively protect these threatened species, it is crucial that relevant public institutions and organizations, including the Coast Guard and other regulatory bodies, are actively informed and provided with training. Increasing the awareness of these institutions regarding protected species and sustainable marine resource management will ensure the effective implementation of regulations. Furthermore, it is important for the public to be informed about these species, as it supports the conservation efforts. In particular, direct communication with fishing communities and providing information about legal regulations on protected species play a critical role in preventing illegal fishing and ensuring that conservation measures are properly implemented.

Regulations and implementation of the regulations are the starting points for those threatened and vulnerable species. More comprehensive and thorough conservation action plans and/or recovery plans, however, are needed to ensure effective conservation of these species. Moreover, protection of habitats, not just single species, is essential, thus more MPAs should be established. For some species mentioned above, such as sturgeons, have already such initiatives in place, although there are many other species which still have a long way to go.

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## **1973-2023 yılları arasında ulusal mevzuata göre Türkiye denizlerinde yasal olarak korunan türler ve bazı öneriler**

### **Öz**

1973 ile 2023 yılları arasında, Türkiye denizlerinde toplamda 63 tür, 1380 sayılı ulusal mevzuata (Su Ürünleri Ticari Balıkçılığını Düzenleme Resmî Tebliği, No. 5/1) göre korunmaya alınmıştır. Özellikle, mersin balığı türleri koruma çalışmalarında ön planda yer almakta olup, koruma girişimleri 1976 yılında başlamış ve günümüze kadar devam

etmektedir. Deniz florasında yalnızca iki tür (*Posidonia oceanica* ve *Zostera noltii*) korunma statüsü kazanmışken, diğer türler koruma statüsüne girememiştir. Korunan fauna arasında on üç deniz memelisi türü ve yirmi iki köpekbalığı ve vatoz türü yer almakta olup, bunlar en geniş kapsamda korunan kategori olarak öne çıkmaktadır. Ayrıca, üç deniz kaplumbağası türü, yedi mercan türü, altı yumuşakça türü, bir krustase türü ve üç balık türü de korunma altına alınmıştır. Bu türlerin koruma altına alındığı yıllar, koruma gerekçeleri, IUCN koruma statüleri ve bu korumayı öneren kurumlarla ilgili kapsamlı bilgiler sağlanan listede yer almaktadır. TÜDAV, köpekbalıkları ve vatozlar, mercanlar ve yumuşakçaların korunmasında başlıca rolü üstlenmiştir. Bu kapsamda 18 tür vakfın önerileriyle koruma altına alınmıştır. Koruma altına alınan ilk korallijen tür, siyah mercan *Savalia savaglia* iken, ilk boy sınırlaması *Huso huso* için belirlenmiş ve ilk korunan tür ise Akdeniz fokudur (*Monachus monachus*).

**Anahtar kelimeler:** Yasal koruma altındaki deniz türleri, balıkçılık mevzuatı, deniz koruma, tür koruma, Türkiye

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**Table 1.** Currently Protected Species in Türkiye, common names, IUCN Status, and the year of protection in Türkiye.

\*IUCN status –EN: Endangered, CR: Critically Endangered, NT: Near Threatened,

VU: Vulnerable, DD: Data Deficient LC: Least Concern, NE: Not Evaluated,

Glo: Global assessment, Med: Mediterranean population, BS: Black Sea population

Species	Common Names	IUCN Status*	Year
<b>Sea Grasses</b>			
<i>Posidonia oceanica</i> (L.) Delile, 1813	Neptune grass, Mediterranean tapeweed	LC	1999-2000
<i>Zostera noltei</i> Hornemann, 1832	Dwarf eelgrass	LC	1999-2000
<b>Corals</b>			
<i>Cladocora caespitosa</i> (Linnaeus, 1767)	Mediterranean pillow coral	EN	2022
<i>Corallium rubrum</i> (Linnaeus, 1758)	Red coral	EN	1992
<i>Eunicella cavolini</i> (Koch, 1887)	Yellow gorgonian	NT	2022
<i>Eunicella singularis</i> (Esper, 1791)	White gorgonian	NT	2022
<i>Paramuricea clavata</i> (Risso, 1827)	Red gorgonian	VU	2022
<i>Savalia savaglia</i> (Bertoloni, 1819)	Gold coral, False black coral	NT	1991
<i>Spiniuricea klavereni</i> (Carpine & Grasshoff, 1975)	Tall white gorgonian	DD	2022
<b>Molluscs</b>			
<i>Cerithium vulgatum</i> Bruguière, 1792	Common cerith	NE	2006-2008
<i>Haliotis tuberculata</i> Linnaeus, 1758	Green ormer, Abalone	VU	1998-1999
<i>Lamellaria latens</i> (O. F. Müller, 1776)		NE	2006-2008
<i>Marsenia perspicua</i> (Linnaeus, 1758)		NE	2006-2008
<i>Pinna nobilis</i> Linnaeus, 1758	Fan mussel, Pen shell	CR	1998-1999
<i>Tonna galea</i> (Linnaeus, 1758)	Giant tun	NE	2006-2008 & 2022
<b>Crustacean</b>			
<i>Maja squinado</i> (Herbst, 1788)	Spider crab	NE	2006-2008
<b>Echinoderms</b>			
<i>Echinaster (Echinaster) sepositus</i> (Retzius, 1783)	Mediterranean red sea star	NE	2024

**Table 1.** Continued

<b>Species</b>	<b>Common Names</b>	<b>IUCN Status*</b>	<b>Year</b>
<b>Sharks and Rays</b>			
<i>Alopias superciliosus</i> (Lowe, 1841)	Bigeye thresher, Bigeye thresher shark, False thresher, Long-tailed shark, Whiptail	VU	2020
<i>Alopias vulpinus</i> (Bonnaterre, 1788)	Atlantic thresher, Fox shark, Grayfish, Green thresher, Sea fox, Slasher, Swingletail, Swiveltail, Thintail thresher, Thrasher, Whip-tailed shark	VU	2018
<i>Carcharhinus falciformis</i> (Bibron, 1839)	Silky shark	VU	2020
<i>Carcharhinus longimanus</i> (Poey, 1861)	Oceanic whitetip shark, White-tipped shark, Whitetip oceanic shark, Whitetip shark	CR	2020
<i>Carcharhinus plumbeus</i> (Nardo, 1827)	Sandbar shark	EN	2006-2008
<i>Carcharodon carcharias</i> (Linnaeus, 1758)	White shark, Great white shark	VU	2022
<i>Cetorhinus maximus</i> (Gunnerus, 1765)	Basking shark	EN	2004-2006
<i>Galeorhinus galeus</i> (Linnaeus, 1758)	Tope, School shark, Snapper shark, Soupfin shark	CR	2012
<i>Glaucostegus cemiculus</i> (Geoffroy Saint-Hilaire, 1817)	Blackchin guitarfish	CR	2018
<i>Isurus oxyrinchus</i> Rafinesque, 1810	Shortfin mako	EN	2018
<i>Lamna nasus</i> (Bonnaterre, 1788)	Porbeagle	VU	2012
<i>Mobula mobular</i> (Bonnaterre, 1788)	Spinetail devil ray, Giant devil ray, Spinetail devilray	EN	2018
<i>Oxynotus centrina</i> (Linnaeus, 1758)	Angular roughshark	EN	2018
<i>Prionace glauca</i> (Linnaeus, 1758)	Blue shark	NT	2020
<i>Raja clavata</i> (Linnaeus, 1758)	Thornback skate	NT	2018
<i>Rhinobatos rhinobatos</i> (Linnaeus, 1758)	Common guitarfish, Violinfish	CR	2018

**Table 1.** Continued

<b>Species</b>	<b>Common Names</b>	<b>IUCN Status*</b>	<b>Year</b>
<i>Sphyrna zygaena</i> Linnaeus, 1758	Smooth hammerhead shark	VU	2020
<i>Squalus acanthias</i> Linnaeus, 1758	Spiny dogfish, Picked dogfish, Spurdog	VU	2016
<i>Squalus blainville</i> (Risso, 1827)	Longnose spurdog	DD	2018
<i>Squatina aculeata</i> Cuvier, 1829	Sawback angelshark, Monkfish, Spiny angelshark	CR	2018
<i>Squatina oculata</i> Bonaparte, 1840	Smoothback angelshark	CR	2018
<i>Squatina squatina</i> (Linnaeus, 1758)	Angelshark, Angel shark, Fiddle fish, Monkfish	CR	2018
<b>Sturgeons</b>			
<i>Acipenser gueldenstaedtii</i> Brandt & Ratzeburg, 1833	Russian sturgeon	CR	1976
<i>Acipenser nudiiventris</i> Lovetsky, 1828	Fringebarbel sturgeon, Ship sturgeon	CR	1976
<i>Acipenser ruthenus</i> Linnaeus, 1758	Sterlet	EN	1976
<i>Acipenser stellatus</i> Pallas, 1771	Stellate sturgeon, Star sturgeon	CR	1976
<i>Acipenser sturio</i> Linnaeus, 1758	European sturgeon, Atlantic sturgeon, Baltic sturgeon, Common sturgeon	CR	1976
<i>Huso huso</i> (Linnaeus, 1758)	Beluga, Giant sturgeon, Great sturgeon	CR	1976-1977
<b>Bony Fish</b>			
<i>Hippocampus hippocampus</i> (Linnaeus, 1758)	Short-snouted seahorse, Sea horse, Short snouted seahorse	DD	1998-1999
<i>Epinephelus marginatus</i> (Lowe, 1834)	Dusky grouper	VU	2006
<i>Salmo labrax</i> Pallas, 1814	Black Sea salmon	LC	1981
<b>Sea Turtles</b>			
<i>Caretta caretta</i> (Linnaeus, 1758)	Loggerhead turtle	VU	1973 (Med) -1974 (All regions)
<i>Chelonia mydas</i> (Linnaeus, 1758)	Green turtle	EN	1973 (Med) -1974 (All regions)

**Table 1.** Continued

<b>Species</b>	<b>Common Names</b>	<b>IUCN Status*</b>	<b>Year</b>
<i>Dermochelys coriacea</i> (Vandelli, 1761)	Leatherback turtle, Coffin-back, Leatherback sea turtle, Leathery turtle, Luth, Trunk turtle, Trunkback turtle	VU	1973 (Med.) -1974 (All regions)
<b>Marine Mammals (Cetacea-Mediterranean Monk Seal)</b>			
<i>Balaenoptera physalus</i> (Linnaeus, 1758)	Fin whale	EN (Med)	1983-1984
<i>Balaenoptera acutorostrata</i> Lacépède, 1804	Minke whale	LC (Glo)	1983-1984
<i>Delphinus delphis</i> Linnaeus, 1758	Common dolphin	EN (Med)	1983-1984
<i>D. d. ponticus</i> Barabash, 1935	Black Sea common dolphin	VU (BS)	
<i>Steno bredanensis</i> (Lesson, 1828)	Rough-toothed dolphin	NT (Med)	1983-1984
<i>Grampus griseus</i> (G. Cuvier, 1812)	Risso's dolphin	EN (Med)	1983-1984
<i>Monachus monachus</i> (Hermann, 1779)	Mediterranean monk seal	EN (East Med)	1981
<i>Phocoena phocoena relicta</i> Abel, 1905	Black Sea harbour porpoise	EN	1983-1984
<i>Physeter macrocephalus</i> Linnaeus, 1758	Sperm whale	EN (Med)	1983-1984
<i>Pseudorca crassidens</i> (Owen, 1846)	False killer whale	NT (Glo)	1983-1984
<i>Sousa plumbea</i> (G. Cuvier, 1829)	Indian humpback dolphin	EN (Glo)	1983-1984
<i>Stenella coeruleoalba</i> (Meyen, 1833)	Striped dolphin	LC (Med)	1983-1984
<i>Tursiops truncatus</i> (Montagu, 1821)	Bottlenose dolphin	LC (Med)	1983-1984
<i>T. t. ponticus</i> Barabash-Nikiforov, 1940	Black Sea bottlenose dolphin	EN (BS)	
<i>Ziphius cavirostris</i> Cuvier, 1823	Cuvier's beaked whale	VU (Med)	1983-1984